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— III. —

B O M B A Y.

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Bombay.

REVENUE LETTER from the Court of Directors to the Government of Bombay,
dated 18 November (No. 20 of 1846).

Our Governor in Council at Bombay.

Para. 1. IN your letter, dated the 17th July (No. 35) 1846, you have submitted for our consideration some important measures, which you have either adopted or propose to adopt with the view of extending and permanently establishing the improved system of cotton cultivation introduced through the medium of the American planters under your Presidency.

2. The success which has attended the exertions of Mr. Mercer and Mr. Hawley in Dharwar, and the reports received favourable to the district of Khandeish, as being suited to the introduction of similar operations, led you to avail yourselves of the services of Messrs. Blount and Simpson, American planters, who had been employed under the respective Governments of Bengal and Madras, to carry the measures now reported into effect.

3. It is stated that the soil and climate of Khandeish are well adapted to the culture of Bourbon cotton, Egyptian, New Orleans and other foreign varieties; and that the introduction of an improved system in the cultivation and in the mode of preparing the cotton for the manufacturers, is likely to be attended with most advantageous results.

4. With the view of giving every facility to the success of the operations of Messrs. Blount and Simpson, you have authorised a small farm to be taken under their immediate control, and a contract to be opened with the natives to cultivate about one thousand acres; you have sanctioned the purchase of cotton in the seed to the extent of five hundred bales on the part of Government; and of cotton, clean, saw-ginned, on account, and at the request of certain mercantile houses. Mr. Simpson, who is stated to be a professed mechanic, has been authorised to construct a cotton press. Some large gins have been supplied, and gins of eight saws each, suited to the means of the native growers, will be made and put into use; the only machinery employed in this district being the foot roller, with which the superior description of cotton, "owing to the tenacity with which the fibres adhere to the seed, and the liability of the latter passing under the roller to be crushed, cannot be cleaned."

5. We are sensible of the difficulties connected with the first introduction of experiments of this nature; the strong adherence of the natives to their own mode of culture and preparation, and the hopelessness of convincing them, except by practical demonstration, of the superiority of any new method; and we fully participate in the "intense interest" which your Government have expressed in the success of the present undertaking. Similar difficulties have, however, been for the most part overcome by the energetic exertions of Mr. Mercer in Dharwar, where the attainment of final success, and the prospect of giving permanency to the new system, are placed almost beyond doubt; and in giving our sanction to the projected operations in Khandeish, we entirely concur in

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the conviction you have expressed of the important advantages to the agricultural and commercial interests, as well as to the public revenue, which must follow a successful result of the measures.

6. Under these circumstances, and after so large an outlay has been expended in furtherance of an object of great public interest, and when the period appears to be approaching for its accomplishment, we should have greatly regretted had it been suddenly abandoned upon pecuniary considerations connected with the claims of the American planters to remuneration for their services.

7. The employment of Mr. Mercer and Mr. Blount under the Government of India was not attended with any successful result, and they were not on that account entitled, according to the terms of the original agreements, to an annual gratuity to be awarded only for "success." Since, however, Mr. Mercer has been transferred to your Presidency, the advantages derived from his exertions have frequently been pointed out by you, and acknowledged by us; and in our despatch, dated the 21st January 1846, we authorised you to award to him 1,000 rupees as a donation.

8. The dissatisfaction expressed by Mr. Mercer at the smallness of this amount, and the disappointment evinced by the other planters in their expectation of reward for future success, led to their resignation, and caused you to suspend the operations in Khandeish; but these were again put in force on the appeal of the local authorities in that district, and on a promise that the claims of the planters should be brought to our special notice.

9. It being obvious, as you have represented, that the resignation of the planters at this moment would be fatal to the success of the experiments remaining to be carried out, we approve of your having retained their services until the commencement of the ensuing year; and on the grounds stated in the 28th paragraph of your letter under reply, we concur in your recommendation to grant to Mr. Mercer, in addition to his ordinary salary, the sum of eighteen hundred (1,800) rupees per annum, retrospectively, from the period when his "services had in your judgment attained the degree of success contemplated;" the same indulgence to be extended to the other planters, according to the degree in which you may consider them entitled to reward.

10. With regard to the retention of Mr. Mercer's services under your Presidency, it is with some surprise we find no allusion made in your letter under reply to our despatch of the 3d December 1845 (No. 28), wherein we conveyed to you our sentiments regarding the operations to be carried on in the district of Goozerat; and authorised you to carry out the plans you had suggested in that country through the agency of Mr. Mercer.

11. This despatch must have been in your possession at the time when your letter under reply was written, and a communication of its contents would have satisfied Mr. Mercer that we fully appreciated his past services, and anticipated the best results from his future employment under your Government

London,
18 November 1846.

We are, &c.
(signed) J. W. Hogg,
(and other Directors.)

EXTRACT of a Letter from the Government of Bombay, dated 1 May
(No. 19 of 1847), to the Honourable the Court of Directors.

Para. 17. WE would here beg to draw your Honourable Court's attention to the letter from the Revenue Commissioner, Southern Division, dated the 12th ultimo, being his report on the condition and prospects of the experiments in Dharwar. It will be observed that, in the 25th paragraph of that document, Mr. Townsend arrives at the conclusion that the cotton experiments in this district are in a very encouraging state.

18. After stating his conclusion above noticed, the Revenue Commissioner proceeds to state his views as to future measures; and with reference to these, he seems to consider that all that is required is to provide for the maintenance and

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and repair of the saw-gins, until the people become familiarised with their use and construction. With this object, he has directed the transfer of Mr. Channing, the cotton planter in Belgaum, to Dharwar, and his being placed in charge of the machinery at the latter place; and he recommends that an experienced mechanic should be placed under him.

19. These measures have, we have informed Mr. Townsend, met with our approval; and we have furnished him with copy of a recent correspondence with the military board on the application of an individual who offered his services as a practical engineer. We have also requested him, with reference to a correspondence which had passed between him and Government regarding a native mechanic now residing at Dharwar, whose services were thought of as available for the repair of the machinery, to submit a plan for the employment of Mr. Channing, with one or both of these persons as assistants, in doing what may be required for the prosecution of the experiments both in the Belgaum and Dharwar Collectorates, and also to state the salaries which he would recommend being assigned to each.

20. The employment of Mr. Channing in this way had before suggested itself to us, as your Honourable Court will observe, by a reference to our proceedings recorded as per margin, and from which your Honourable Court will also learn the arrangements which we have made for the conduct of the cotton experiments, in consequence of the departure of the majority of the American cotton planters.

Rev. Cons. 1846,
3 December.
V. 8325 to 8331.

21. In the 11th paragraph of our despatch, No. 41, dated the 31st October last, we informed your Honourable Court that we had, consequent on Dr. Burn's dismissal from the office of Superintendent at Broach, requested Mr. Mercer to state whether he would undertake the superintendence of those experiments, abandoning his intention of resigning the service of Government. In his reply, Mr. Mercer intimated his willingness to accept the situation; on the condition that he would be allowed leave for one year to America, since he was under obligations to return home; and he added that, if Government consented to this, he would then (in November last) proceed to Broach, and remain there for some months, when he would employ himself in putting matters in such a train that his establishment could go on with only a general supervision by the Collector till his return in the following year.

22. As Mr. Mercer seemed to be of opinion that the experiments at Broach would experience no retrogression, during his absence, and we considered it highly desirable to secure for those experiments the benefit of the experience and aptitude for the duty of superintendence possessed by Mr. Mercer, we sanctioned the leave applied for, and approved of his proposed proceedings.

23. Adverting to the 9th paragraph of your Honourable Court's despatch, dated 18th November last, we beg to forward copies of our proceedings, recorded per margin, from which it will be seen that, under the authority conveyed therein, we have awarded to Messrs. Mercer and Hawley the sum of three thousand and six hundred (3,600) rupees each, after deducting the sums of one thousand (1,000) and five hundred (500) rupees, which they had respectively received when at Dharwar. Mr. Blount also preferred a claim to gratuity; but as we did not consider that the cotton experiments in Khandeish had attained that stage which would warrant the award of a gratuity to those employed in conducting them, we refused to comply with Mr. Blount's request.

Rev. Cons. 1847,
18 February.
V. 887 to 889.
17 March,
V. 1456 to 1459.
17 March,
V. 1569 to 1571.

24. Our proceedings recorded, as per margin, embrace reports submitted by the Collector of Broach and Mr. Mercer on the state of the cotton experiments in that district, in conformity with our instructions on that head, as noticed in para. 10 of our letter to the address of your Honourable Court, dated 31st October last.

Rev. Cons. 1847,
3 March.
V. 1042 to 1045.

25. These reports tend to confirm the impression which we had already entertained, that the late superintendent's plan of operations was little calculated to promote the objects in view. For the instructions which we communicated to the Collector on the different points embraced in these reports, we beg to refer your Honourable Court to our Chief Secretary's letter to the Collector, No. 446, dated the 24th February last.

Rev. Cons. 1847,
17 March.
V. 1418 to 1426.
24 March,
V. 1603 to 1606.

26. We now beg to draw your Honourable Court's attention to our proceedings recorded per margin, as showing the final arrangements which we have

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determined upon for the conduct of the cotton experiments in the four collectorates in which they are now being prosecuted. We would especially notice the letters from the acting Collector of Khandeish, dated the 11th and 13th February last, the former intimating the intention of both the American planters, Messrs. Simpson and Blount in that province, to resign the service of Government, and the latter proposing the arrangements which suggested themselves to the acting Collector for the future prosecution of the cotton experiments.

27. The perusal of the latter document, and its accompaniment from Mr. Simpson, the American planter, impressed us with the great importance of endeavouring, if possible to prevent the interruption of the measures for the improvement of the cotton of the province of Khandeish, which would be caused by Mr. Simpson's intended departure, of which he had given Government intimation; and this impression was strengthened by the satisfaction expressed by your Honourable Court in your despatch, No. 20, dated 18th November last, at our having, on a similar occasion some months ago, abstained, on re-consideration, from carrying out a resolution which had been come to for the abrupt termination of those measures at that time.

28. The terms however proposed by Mr. Simpson, in his letter to the address of the acting Collector, dated 10th March last, for the renewal of his engagement after an intermediate leave of absence, appeared to us, besides being open to objection in some other respects, to involve too long a postponement of operations to be entertained.

29. This consideration, and the inconvenience to which Government would be exposed by the simultaneous departure of Mr. Mercer from Broach, suggested to us the expediency of effectually providing for the wants of both that district and Khandeish, by making it worth Mr. Simpson's while to remain and superintend the operations in both collectorates until Mr. Mercer's return, to whom the same duties might then be transferred.

30. With this view we determined that Mr. Simpson (who had acceded to the arrangement) should be appointed superintendent of operations for the improvement of cotton in the districts of Khandeish and Broach and the northern part of Surat from the date of Mr. Mercer's departure on leave of absence to America; that for this duty he should receive a consolidated salary of 700 (seven hundred) rupees per mensem, to include every thing except his travelling expenses to and fro for two journeys in the year between Khandeish and Broach; that Mr. Laidlaw, the engineer, should superintend the details of the machinery under Mr. Simpson's direction at Broach, and that another person should be procured if possible for the same duty in Khandeish. These subordinate agents will, it may be expected, be eventually capable of doing all that is requisite in the general superintendence of the construction and repair of the machinery when the American superintendents finally leave the country. We further determined that the Superintendent of cotton operations in the Northern Division should be under the immediate directions of the Collectors of Khandeish, Broach, and Surat, as respects the operations in their respective districts, subject to the general control of the Revenue Commissioner; that the operations should be directed mainly to the introduction of a cheap, simple, and efficient machine for cleaning the cotton; the instruction of the native workmen in its construction and repair; the extension of its use and application throughout the districts generally; the demonstration of the advantages of the clean picking of the cotton, and the use of such machines for separating it from the seed; the endeavouring to obtain a character in the local market for cotton so prepared; the construction of presses for facilitating the conveyance of it in a better state to the more distant markets; and generally all measures for improving the condition of the cotton grown by the people of the country, without at present renewing the attempts towards improving the mode of its cultivation, the success of which hitherto appears open to doubt.

31. It is our intention to introduce a similar plan in the collectorates of Belgaum and Dharwar in the Southern Division, as soon as the details can be arranged in communication with the Revenue Commissioner.

32. By such an arrangement as that above described, the cotton operations will be concentrated under two heads instead of several, which at present produces

produces confusion, embarrassment, and needless expense; and we feel convinced that by placing the arrangements on this efficient footing, much greater progress will be made with two men of experience on liberal salaries, and who would give Government the full benefit of their services for a definite period and with a well-defined object, so as to have it eventually independent of their aid, than by frittering away the public money in desultory and unconnected measures, and with the constant risk of having them rendered fruitless by the departure of one or other of the managers.

33. Mr. Mercer, we believe, proposes returning to this country in the early part of next year, and he would then be ready to take the place of Mr. Simpson, if the latter should wish to prosecute his design of returning to America. We also understand that Mr. Mercer proposes availing himself of any opportunity which may offer during his absence in England and America for promoting the objects of our measures for the improvement of cotton, by making them generally known among parties interested in their success, and procuring their co-operation towards it.

34. We have issued the necessary orders for carrying out the above views, and we have intimated to the Collector of Khandeish our acceptance of Mr. Blount's resignation.

35. Mr. Blount, together with Messrs. Mercer and Hawley, proceed to Suez, we believe, by the steamer which leaves this day. On their application, we have paid each of them the sum of 2,260 rupees to cover their travelling expenses from this place to their residences in Mississippi, as provided for in their agreements; and we have obtained from them a formal deed of acquittance in favour of the Honourable East India Company, of all further obligations on this account.

36. In conclusion, we would express our hope, that our proceedings, a sketch of which is above given, will meet with the approval of your Honourable Court, and that we may be favoured with an early communication of your Honourable Court's views and instructions on the several points noticed in this despatch. We shall keep your Honourable Court duly informed of our further proceedings in regard to the important undertaking in which we are now engaged.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 3d. December 1846.—V. 8325 to 8331.

(No. 1414 of 1846.)

From the Acting Collector of Dharwar to Mr. Chief Secretary *Pringle*.

V. 8325-

Sir,

WITH reference to your letter, No. 3504 of 7th instant, I have the honour to forward copy of a letter from Mr. Mercer on the subject.

Collector's Office, Camp Hooblee,
17 October 1846.

I have, &c.
(signed) *S. Mansfield*,
Acting Collector.

(No. 43 of 1846.)

To *S. Mansfield*, Esq., Acting Collector, Dharwar.

Sir,

I HAVE the honour to acknowledge the receipt of a copy of the Chief Secretary's letter to your address, No. 3504, dated 7th instant, and in reply, to inform you that I should be very glad to accept of the appointment to succeed Dr. Burn, in Guzerat, and abandon my intention of leaving the service, if it would suit the views of his Honour the Governor in Council to allow me leave of absence for one year, from the 1st of March next, to visit America. I am now under obligations to return home next year, but not to remain.

2. I presume it is the wish of Government to adopt the same system in Guzerat, as far as practicable, which has been found so successful here. I could go to Broach in November, and by the 1st March have things in such a train, that my establishment could go on with only the general supervision of the collector, till my return the following spring.

3. I also presume that Government will have no objection to my establishing an agency or agencies for the purchase of cotton in connexion with the saw-gins, as, by such means, the great object of improving and extending the production of cotton would be powerfully promoted; and I flatter myself that under such circumstances I could do some good in giving a stimulus to the subject by a short visit to England.

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4. If his Honour in Council approves of these views, I should like to remain here long enough to send off a part of last year's crop, so as to be in Bombay when it arrived. Particularly, because some of the native merchants who have been buying the New Orleans cotton, and ginning it for Government, are desirous of accompanying me to Bombay, with a view to procuring commissions of agency from merchants there, for purchasing and shipping it next year on their own bottom.

I have, &c.
(signed) *W. R. Mercer*,
Supt. Cotton Experiments, S. M. C.

Khoosigul, 16 October 1846.

V. 8326.

MINUTE by the Honourable the Governor, subscribed to by the Honourable Mr. *Blane*.

IN the letter from Mr. Mercer, submitted with that from the Acting Collector of Dharwar, dated 17th ultimo, that gentleman intimates his willingness to accept the situation of superintendent of cotton experiments in Broach, provided he be allowed leave of absence for one year from the 1st of March next to visit America; and states, that if Government consents to this, he would wish to remain in Dharwar long enough to ship to the Presidency a part of last year's crop, and to be in Bombay when it arrives, his object being to assist certain native merchants who have been buying the new Orleans cotton and ginning it for Government, and who are desirous of accompanying him to Bombay in order to procure commissions of agency from merchants here, for the purchase and shipment of cotton next year on their own account. This done, Mr. Mercer proposes to proceed to Broach in the present month (November), and to remain there till the 1st of March, by which time he remarks, things would be in such a train that his establishment could go on with only a general supervision by the Collector, till his return in the following year.

2. As Mr. Mercer states that he is under obligations to return home, and as he seems to be of opinion that the experiments at Broach will experience no retrogression during his absence, and it being highly desirable to secure for the Broach experiments the benefit of the experience and aptitude for the duty of superintendence possessed by Mr. Mercer, I think the leave applied for may be granted, and his proposed proceedings and movements above noticed approved of.

3. Mr. Mercer inquires whether it is the wish of Government to adopt the same system in Goozerat, as far as practicable, as has been so successfully adopted in Dharwar in the cultivation and cleaning of cotton, and also whether he will be permitted to establish an "agency or agencies" for the purchase of cotton in connexion with the introduction of the saw-gins, by which means, he remarks, the great object of improving and extending the production of cotton would be powerfully promoted; and he adds, that he could do some good in giving a stimulus to the subject by a short visit to England.

4. On the first point, Mr. Mercer may be informed that Government is disposed to adopt the system followed in Dharwar, or any other which is calculated to result in the general extension of saw-gins, and an improved system of cultivation amongst the cultivators. Government never doubted that cotton could be produced and cleaned in Broach of a quality capable of competing with the best descriptions brought to the English market, but its object and that of the Honourable Court has all along been to diffuse amongst the ryots of Goozerat a knowledge of the means by which this object could be gained by them, and to induce them to adopt those means. In the attainment of this object we have hitherto entirely failed; and it should therefore be Mr. Mercer's first care, after he has made himself acquainted with the details of the system hitherto adopted in Broach, to devise and carry out some plan whereby this much to be desired consummation could be effected.

5. On the second point, Mr. Mercer does not express himself very clearly, and I cannot exactly gather from his third para. the nature of the agency or agencies to which he refers. If, as I presume he does, he desires to be permitted to purchase for mercantile houses in Bombay or elsewhere, cotton prepared by the saw-gin, I see no objection to this permission being granted. This subject came under consideration last year in connexion with the experiments in Khandeish, and it was decided that the planters there should be allowed to become mercantile agents in the manner above indicated.

6. Mr. Mercer, in his letter now before us, says nothing as to the manner in which the experiments now under his superintendence at Dharwar are to be conducted in future. Mr. Hawley, who is associated with him at Dharwar, applied for, and was granted, under date the 18th March last, his resignation of the Government service from the 1st April following; but on Mr. Mercer's consenting to remain in the service of Government until the 1st January next, he also consented to do so, it having been arranged by both these gentlemen, that they should return to America together. The Acting Collector of Dharwar should be requested to ascertain whether Mr. Hawley again wishes to postpone his departure to his native country for Mr. Mercer (*i.e.*, until the 1st March next); and whether, if so, it would not be the most advisable measure to place him in charge of Mr. Mercer's establishment until then. Should Mr. Hawley consent to remain at Dharwar until the date above indicated, the further consideration of this part of the subject may perhaps be deferred until then. Should he not, Mr. Blount, now in Khandeish, must be sent there, as originally intended when Mr. Hawley first applied for his resignation.

12 November.

(signed) *L. R. Redd*.

MINUTE

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 731

MINUTE by the Honourable Mr. Willoughby.

I CONCUR in the proposed employment of Mr. Mercer in Goozerat. I confess, however, I have great doubts whether Government should permit him, while so employed, to act as the agent for the purchase of cotton in connexion with saw-gins, by which I understand Mr. Mercer is to become the agent of the private merchant. Whilst Mr. Mercer is absent in America for one year, Government ought, I think, to reserve to itself the liberty of appointing some other person to the charge of the cotton experiments in Broach.

14 November.

(signed) J. P. Willoughby.

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Bombay.
V. 8327.

FURTHER MINUTE by the Honourable the Governor.

IT never was my intention that Mr. Mercer, while in America, should receive any portion of his allowances; and of course Government can make what arrangements it pleases for carrying on his duties during his absence.

17 November.

(signed) L. R. Reid.

V. 8328.

FURTHER Minute by the Honourable Mr. Willoughby, subscribed to by the Honourable Mr. Blane.

WITH reference to the second paragraph of Mr. Mercer's letter, I think, to obviate future misunderstanding, he should be so informed.

18 November.

(signed) J. P. Willoughby.

V. 8329.

(No. 3952 of 1846.)

From Mr. Chief Secretary Pringle to the Acting Collector of Dharwar.

Sir,

I AM directed by the Honourable the Governor in Council to acknowledge the receipt of your letter, dated the 17th ultimo, No. 1414, forwarding copy of one to your address from Mr. Mercer, intimating his willingness to accept of the situation of superintendent of cotton experiments at Broach; but at the same time requesting that he may be allowed leave of absence for the period of one year, from the 1st March next, to visit America.

2. In reply, I am desired to inform you, that his Honour in Council has this day appointed Mr. Mercer to the situation of superintendent of cotton experiments at Broach, and is pleased, under the circumstances stated by Mr. Mercer, and as he expects that the experiments at Broach will, by March next, be placed on such a footing as not to fall back during his absence, to grant him leave of absence for the period above indicated. I am here desired to remark, however, that it will of course rest with Government to make such arrangements as may appear necessary or expedient for carrying on Mr. Mercer's duties during his absence; and that while he is away he will be allowed no part of his salary.

3. Adverting to the 2d and 4th paras. of Mr. Mercer's letter, I am directed to state that the Governor in Council approves of Mr. Mercer's proceedings and movements as therein proposed.

4. With regard to Mr. Mercer's inquiry contained in the first of the above-quoted paras. as to what system should hereafter be pursued in the cultivation and cleaning of cotton in Goozerat, I am desired to state that his Honour in Council is disposed to adopt the system followed in Dharwar, or any other system which is calculated to result in the general extension of saw-gins, and an improved mode of cultivation amongst the ryots. No doubt was ever entertained by Government that cotton could be produced and cleaned in Broach of a quality capable of competing with the best descriptions brought to the English market; but the object of Government, and that of the Honourable Court, has all along been to diffuse among the ryots of Goozerat a knowledge of the means by which this object could be attained, and to induce them to adopt these means. The endeavour to effect this has hitherto failed, and it should therefore be Mr. Mercer's first care, after he has made himself acquainted with the details of the system adopted in Broach, to devise and carry out some plan which may hold out a better prospect of success.

5. In respect to the point adverted to in Mr. Mercer's third paragraph, I am desired to observe, that the Governor in Council does not exactly understand the nature of the "agency" to which he refers. If, as his Honour in Council presumes, he desires to be permitted to purchase, for mercantile houses in Bombay or elsewhere, cotton prepared by the saw-gin, there appears no objection to his being authorised to do so. You are, however, requested to intimate to Mr. Mercer the desire of Government to be furnished with some exact information on this point.

6. I am lastly directed to remark that nothing is said in the letters from Mr. Mercer and yourself now before Government, as to the manner in which the cotton experiments in Dharwar are to be conducted in future. Mr. Hawley, who is associated with Mr. Mercer at Dharwar, tendered his resignation of the Government service from the 1st April last, the acceptance of which was intimated to you under date the 18th March last; but on Mr. Mercer's consenting to remain in the service until the 1st January next, he also con-

V. 8330.

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Bombay.

sent to do so, it having been arranged by both these gentlemen that they should return to America together. You are requested to ascertain whether Mr. Hawley again wishes to postpone his departure to his native country for Mr. Mercer (i. e. until the 1st March next), and if so, whether it would not be the most advisable measure to place him in charge of Mr. Mercer's establishment until then.

Bombay Castle,
24 November 1846.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

(No. 3955 of 1846.)

F. 8331.

From Mr. Chief Secretary *Pringle* to *W. R. Mercer*, Esq.

Sir,
I AM directed to acquaint you that the Honourable the Governor in Council is pleased to appoint you Superintendent of cotton experiments in Broach, in succession to Surgeon A. Burn.

Bombay Castle,
24 November 1846.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 18th February 1847.—V. 887 to 889.

(No. 384 of 1847.)

V. 887.

From Mr. Chief Secretary *Pringle* to the Revenue Commissioner, Northern Division.

Sir,
WITH reference to my letter, No. 2552, dated the 11th June last, to your address, regarding the cotton experiments in Khandeish, I am directed by the Honourable the Governor in Council to transmit for your information, and for communication to the Collector, the annexed extract paras. 1 to 9 of a despatch, No. 20, dated the 18th November last, from the Honourable the Court of Directors, on this subject.

2. From the 9th para. of this extract, you will perceive that the Honourable Court has sanctioned the grant to Mr. Mercer of an annual gratuity to the extent of (1,800) one thousand eight hundred rupees, and approved of the same indulgence being extended to the other planters, according to the degree in which Government may consider them entitled to reward. Under the views expressed by the Honourable Court in regard to the prosecution of the experiments introduced into Khandeish, the Governor in Council considers that if this can be accomplished by any means in the power of Government, they should be carried on with all the zeal and energy which can be brought to bear on them; and with this view, he is disposed to allow them to remain under the superintendence of Mr. Blount, who is now in Khandeish, if this can be effected without prejudice to the measures in progress in the districts where the experiments are further advanced, on which point a reference has been made to the officers in charge of those districts.

3. As Mr. Blount as well as the other planters will, in the event of his establishing a satisfactory claim to it, be entitled to participate in the indulgence now sanctioned by the Honourable Court, I am directed to request that you will draw the attention of the Collector to this point, in order that, as soon as he may be of opinion that Mr. Blount is justly entitled to the gratuity, his claim may be submitted to Government.

Bombay Castle,
12 February 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

(No. 385 of 1847.)

V. 888.

From Mr. Chief Secretary *Pringle* to the Acting Collector of Belgaum.

Sir,
IN transmitting to you the annexed extract para. 9, of a despatch, No. 20, dated the 18th November last, from the Honourable the Court of Directors, sanctioning the grant to Mr. Mercer of an annual gratuity to the extent of 1,800 rupees, and the extension of the same indulgence to the other planters according to the degree in which Government may consider them entitled to reward, I am directed by the Honourable the Governor in Council to draw your attention to the latter point noticed in this paragraph, and to request that as soon as you may be of opinion that Mr. Channing is justly entitled to the gratuity contemplated by the Honourable Court, his claim may be submitted to Government, with your opinion as to the amount of gratuity, and date from which it should commence, together with the grounds on which you would recommend the measure.

Bombay Castle,
12 February 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 733

(No. 386 of 1847.)

From Mr. Chief Secretary *Pringle* to the Collector of Dharwar.

Sir,

WITH reference to my letter, No. 2550, dated the 11th June last, to Mr. Mansfield's address on the subject of the cotton experiments in Dharwar, I am directed by the Honourable the Governor in Council to transmit herewith an extract, paras. 7 to 9 of a despatch, No. 20, dated the 18th November last, from the Honourable Court of Directors, and to request that you will submit your opinion as to the exact date from which the gratuity to Mr. Mercer should be calculated, and the amount which will be due to him after deducting the 1,000 rupees already granted to him on the same account.

You are also requested to favour Government with your opinion as to whether the services of Mr. Hawley are such as to entitle him to an annual gratuity, inclusive of the sum he has already received; and if so, in what proportion, and from what date, together with the grounds on which you would recommend the measure.

Bombay Castle,
12 February 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

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V. 889.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 15th March 1847.—V. 1456 to 1459.

(No. 261 of 1847.)

From the Collector of Dharwar to the Chief Secretary to Government.

Sir,

WITH reference to your letter, No. 386, dated the 12th instant, with an enclosure from the Honourable the Court of Directors, No. 20, of the 13th November 1846, directing me to submit my opinion upon two points respecting an increased reward on account of the services of cotton planters:

1. As the exact date from which the gratuity to Mr. Mercer should be calculated, and the amount which will be due to him after deducting the 1,000 rupees already granted to him on the same account; and,

2. Whether the services of Mr. Hawley are such as to entitle him to an annual gratuity inclusive of the sum he has already received.

2. In reply to these questions, I do myself the honour to state, that I have already placed so fully on record my opinion respecting the cotton experimental operations, that I do not think it is necessary to say anything further than respectfully to refer the Honourable the Governor in Council to my letter of the 4th instant, No. 185.

3. Ultimate success is, in my humble opinion, the criterion of merit in an experiment of this description; and as I have recorded my sentiments in the above quoted letter, that the prospect of success is at present further removed than it was two years ago, I am precluded from recommending any increased reward to the American planters; but at the same time, as I believe the system introduced during the last two years, of the Government planting by contract, ginning and holding the saw-gins, exporting cotton, &c., taking, in fact, every thing into its own hands (a plan so wholly different from the operations under which the experiment commenced) has met with the approval of Government, and as the American planters have certainly exerted themselves to carry these measures into effect, I should conceive they were entitled to the increased proposed remuneration for the two last years.

Dharwar, Collector's Office,
17 February 1847.

I have, &c.
(signed) *A. N. Shaw*, Collector.

MINUTE by the Honourable the Governor, subscribed to by the Board.

It was hardly to be expected in Mr. Shaw's recent communications, that he should have given a more favourable opinion of the results of the labours of the American planters; but, looking to the former proceedings of Government on this subject, I think that Messrs. Mercer and Hawley may be fairly considered to have established their claim to the gratuity of 150 rupees per mensem from the period when it was first recommended by Mr. Goldsmid; and as this would correspond with the two years now proposed by Mr. Shaw, the amount for that period, viz. 3,600 each, out of which is to be deducted the sums they have already received, should be paid to them after their amounts have been finally audited previous to their impending departure for America. Messrs. Mercer and Hawley should now be informed of this resolution, and the necessary instructions issued for giving it effect.

15 March 1847.

(signed) *G. Clerk*.

V. 1457.

III.
Bombay.

(No. 624 of 1847.)

From *R. K. Pringle*, Esq. Chief Secretary to Government, to *W. R. Mercer*, Esq.,
Superintendent Cotton Experiment at Broach.

Sir,

V. 1458.

I AM directed to inform you that the Honourable the Court of Directors has been pleased, at the recommendation of this Government, and as a token of its approbation of your successful exertions in extending the culture and improving the mode of cleaning the cotton produced in the districts of the Dharwar collectorate, to grant you an annual gratuity of 1,800 rupees, or 150 rupees per mensem, in addition to your ordinary salary and allowances, and that under this authority the Governor in Council has been pleased to allow you a gratuity for a period of two years, inclusive of the sum which has already been awarded to you under this head, to have effect from the period during which your services have, in the opinion of Government, procured that degree of success which was contemplated in your original engagement with the Honourable East India Company.

2. The acting general paymaster has accordingly been this day authorised to pay to you the sum of 3,600 rupees, after deducting therefrom the sum of 1,000 rupees, which you have already received at Dharwar as gratuity, as soon as your accounts shall have been finally audited.

Bombay Castle, 15 March 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary.

(No. 629 of 1847.)

V. 1459.

From *R. K. Pringle*, Esq., Chief Secretary to Government, to *J. W. Langford*, Esq.,
Acting General Paymaster.

Sir,

I AM directed by the Honourable the Governor in Council to authorise you to pay *W. R. Mercer*, Esq., Superintendent cotton experiment at Broach, and *J. N. Hawley*, Esq., Government cotton planter now in Bombay, the sum of 3,600 rupees each, being the amount of arrears of an annual gratuity which has been awarded to those gentlemen by the Honourable the Court of Directors, after deducting therefrom 1,000 (one thousand) rupees which have already been paid to the former gentleman, and 500 rupees, which have already been paid to the latter gentleman at Dharwar on the same account.

2. The sums to be paid to these gentlemen are respectively shown in the margin,* and these you will be pleased to debit to the Dharwar collectorate.

Bombay Castle, 15 March 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary.

V. 1569.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated the 17th March 1847.—V. 1569 to 1571.

From the Government Cotton Planter to Mr. Chief Secretary *Pringle*.

Sir,

I HAVE the honour to forward you the following statement of my success, and the prospect of the cotton experiments in Khandeish, and beg to request it may be laid before his Honour the Governor in Council with reference to my claiming the gratuity promised in my contract of service, and which was made contingent on the success attendant on my labouing.

For that portion of the district of Khandeish in which the factory is situated, formerly under my charge, the establishment of the saw-gin for cleaning cotton has been attended with the most complete success, and I have no hesitation in asserting, that had a sufficient number of machines been available, that a large portion of the crop of that portion of the district would have been saw-ginned.

On the first erection of the gins, the natives, as I expected, urged objections to them; and although the gins were of very inferior description, these objections were soon dissipated, after witnessing the working of the machines, and I was immediately offered cotton for cleaning on them, and did gin a quantity of cotton, which was shipped to England, and was sold at a considerable advance on the price of Indian churkaed cotton.

During the whole of the past season, and even before the crop was grown, I had frequent applications from natives for the use of the gins, but had in every instance to decline cleaning for them, as it was expected that the crop grown on account of Government would more than keep in constant employment the gin at Julgaum, which proved to be the case, as I had to send near 40,000 lbs. to Dhurumgaum factory for cleaning.

From

* Mr. Mercer	-	-	-	-	-	-	Rs. 2,600
Mr. Hawley	-	-	-	-	-	-	3,100

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 735

From the success I have met with, I am convinced that there is no difficulty in the way of the permanent establishment of the saw-gin for the cleaning of cotton in that district, and that if a sufficient number of machines is made available, the use of the churka for cleaning the short staple cotton of Khandeish will cease to exist.

Some of the native sowcars have expressed to me their wishes to become owners of gins, and one man made a written application to me for the purchase of the gins at Julgaum factory, which application I forwarded to the collector.

Bombay, 16 March 1847.

I have, &c.
(signed) S. M. Blount,
Government Cotton Planter.

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Bombay.

MINUTE by the Honourable the Governor, subscribed to by the Board.

V. 1570.

MR. BLOUNT may be informed, that it has already been intimated to the collector that Government did not consider that the cotton experiments in Khandeish had attained that stage which would warrant the award of a gratuity to those employed in conducting them; and as he has, by his voluntary resignation, broken off his connexion with them before they had made the required progress, his claim to gratuity is not considered admissible.

17 March 1847.

(signed) G. R. Clerk.

(No. 678 of 1847.)

From Mr. Chief Secretary *Pringle* to the late Government Cotton Planter in *Khandeish*.

V. 1571.

Sir,

IN acknowledging the receipt of your letter dated the 16th instant, preferring a claim to a gratuity for your services when employed as a Government cotton planter in Khandeish, I am directed by the Honourable the Governor in Council to inform you, that the collector has already been informed that Government did not consider that the cotton experiments in that province had attained that stage which would warrant the award of a gratuity to those employed in conducting them, and that as you have, by your voluntary resignation of your situation broken off your connexion with these operations before they had procured the degree of success contemplated in your original engagement, your claim to gratuity is therefore inadmissible.

Bombay Castle, 17 March 1847.

I have, &c.
(signed) R. K. Pringle,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 3d March 1847.—V. 1042 to 1045.

(No. 31 of 1847.)

To Mr. Chief Secretary *Pringle*.

V. 1042.

Sir,

I HAVE the honour to submit a report from Mr. Mercer, recently appointed by Government to the superintendence of the Broach cotton farm, with such impressions and opinion as I have been able to form upon the subject.

2. From conversing with Mr. Mercer, as well as from the results of independent inquiry, I am quite prepared to concur in that gentleman's proposition for entirely getting rid of the farm. As a model farm, its appellation is a misnomer, if by that term the failure of every object proposed by its establishment can be expressed; the result of its general management no less than of particular experiment (the wheat growing experiment of 1844, for instance) have done nothing to advance the science of cultivation, nor to profit the Government. As Mr. Mercer has justly observed, the crops, whether of cotton or grain, are in no respect better than those of the surrounding country, whilst, in lieu of furnishing the ryots with improved implements of husbandry, experience has only taught us to fall back upon their own. It will be well, indeed, if the results of the experiment can be quoted only in a negative sense, and that those for whose amelioration and benefit the experiment was attempted do not altogether lose heart at witnessing its failure.

3. The lands which now comprise the farm belong exclusively to one village, Kookuwara; they amount to 577½ beegas, which are annually assessed at Rs. 1,485. 6. 6., which sum is debited to the farm; but as almost, if not every article raised on the farm can be purchased in the bazar at a less cost than that of production, the additional annual charge on account of the land appears to be so much revenue sacrificed to no purpose.

4. I therefore quite agree with Mr. Mercer that steps should be taken for getting rid at once of the whole trammels of the farm, and this can be best effected so soon as the crops now upon the ground are removed. The engagement with the villagers leaves it optional with Government to cancel the same at any time, by restoring the lands; I would even go farther, and

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Bombay.

and recommend that a similar step be taken with regard to the live stock of the farms. There are now kept up no less than 20 pairs of bullocks for the gin-house, of which only those in actual work receive a full allowance of provender for the time they are so engaged, (the two gins which only have been for some time past at work, requiring but a limited application of power), and the consequence of this is now visible in the wretched condition of the cattle. It would be preferable, however, in my opinion, to dispose of them for what they would fetch than keep up the establishment. Resort can be much more economically had to hired cattle, as the demands of the gin-house may require, and of those there is abundance to be procured at all times. The buildings at the Umjud Bagh demand more deliberate consideration, and at all events there would, as Mr. Mercer has observed, be no object gained in getting rid of them now.

5. Mr. Mercer's views appear to me to be eminently practical. He considers that everything short of extending the means of adapting the cottons to the English market is money and time thrown away. In this I quite concur with him. It is not the ryots themselves, the cotton growers, whose immediate benefit there is any prospect of attaining by the introduction of improved modes of cleaning the cotton. Under present circumstances, they appear to be as little interested in that as in the ultimate use to which their wheat may be destined. They grow both one and the other in the hope of immediate profit, and seldom look beyond the village purchaser for that. Neither are the local commission agents a class from whom much can be expected in extending the demand for cleaned cotton. It must be to a firm, not to an occasional and capricious demand that we must look forward, in the first instance; that secured to them, the "wukharias" or middle-men of the country will not be slow to perceive their own evident interests. Time bargains must be got rid of, and their place supplied by a more steady demand.

6. But even time bargains between the "wukharias" and the Broach brokers, however objectionable as securing to the former only a small and precarious profit, do not always offer, and the "wukharias" are then left to dispose of their cotton as the circumstances of the Bombay market fluctuate; the temptation to expedite, adulterate, and get rid of the article being but too commonly prompted by self-defence against inevitable loss. But the able letter addressed to Government by the Bombay Chamber of Commerce, on cotton cultivation, bearing date the 21st January 1841 (paragraphs 28 to 34), make it equally evident that the evils of time bargains are not confined to the zillah towns, and that the "wukharias" profit or loss depends, in fact, upon the English market, with the circumstance of which he can have no possible acquaintance.

7. With the object of improving this state of things, Mr. Mercer advocates the experiment of substituting orders direct from home for the present blind bargains made upon the spot. He would, in the interim, or rather I should say as a contemporary measure, prepare the parties most likely to be interested by this important change, by diffusing more generally the advantages open in a commercial view, without hampering them with those of an agricultural nature. In this I entirely agree with Mr. Mercer; and the success with which I am given to understand the hand-gins have been introduced at Dharwar, gives every encouragement to the anticipations that they will succeed here also. At all events, the impression upon my mind is, that Mr. Mercer's proposal embraces the only practical scheme within the scope of his superintendence.

8. In speaking upon the subject, Mr. Mercer hinted, indeed, his doubts upon one point connected with his proposed innovation. He feared to excite alarm and jealousy amongst those who now earn a livelihood during a considerable part of the year by cleaning cotton with the native "churka." These are mostly women, girls and boys, the proportion of grown men so employed being to these as but 5 to 20; that is to say, out of 20 cotton cleaners there are generally 10 women, five girls or boys, to but five grown men. It is obvious that to whatever extent (worthy of the term, that is to say), the improved hand-gins may become introduced, a proportionate number of women and children would be thrown out of employment; upon discussing the matter, however, Mr. Mercer admitted that, if his experiment succeeded, a much more suitable occupation would be found for the persons thus driven from the churka, in picking the cotton in the fields, an operation in which the greater neat-handedness of the women and children would have an immense advantage (and that in a very important stage of the process) over the present pickers, who are generally bheels, wurtuneas, wagreees and colees. With these sentiments I beg, therefore, to take leave of Mr. Mercer's paper, convinced that his suggestions, so far as they have developed themselves, are quite as practical, and as much to the point, as the present state of the question admits of.

9. Mr. Mercer concludes his proposition with a recommendation that Mr. Laidlaw, his engineer, be empowered to make up 20 hand-gins, the cost of which he estimates at 200 rupees each, and for which there are spare saws to the amount of 505. He also suggests that Mr. Laidlaw be left in charge to carry out his views during his, Mr. Mercer's, absence on a year's leave. The first suggestion might, I am respectfully of opinion, be adopted with advantage, limiting the number of hand-gins to five, at a rough cost (to be hereafter carefully ascertained and submitted for the sanction of the Honourable the Governor in Council) of 1,000 (one thousand) rupees; with regard to the second proposition, viz., of leaving Mr. Laidlaw in charge, it would be premature in me to offer an opinion until I learn the sentiments of Government upon what has been suggested by Mr. Mercer, and concurred in by me. I may remark, however, that if the proposal for doing away with the farm and farming stock is

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 737

is approved of by Government, together with that of setting up the spare drain-gins and the hand-gins (the latter quite as an experiment); Mr. Laidlaw is well acquainted with the business, and appears to be in other respects a careful person, and fitted to superintend the establishment.

Broach,
Collector's Camp, Unklesur,
3 February 1847.

I have, &c.
(signed) J. M. Davies,
Collector.

III.
Bombay.

(No. 6 of 1847.)

From the Superintendent of the Cotton Experiment, Broach, to Mr. Chief Secretary Pringle.

V. 1043.

Sir,

I HAVE the honour of forwarding you, for the consideration of Government, the following minute of the state of the cotton experiment at this place, and the plan I would propose for future operations.

1. The farm at Kokurwara, I find, contains about 200 acres of growing cotton and about 80 acres of jowaree, &c., both of which crops are first-rate of their kind. The same, however, may be said of the most of the crops in the neighbourhood. I would recommend, after the present crop is gathered, that this farm be given up as a cotton farm, inasmuch as the implements of cultivation now in use on it are precisely the same as those used by the ryots; the mode of cultivating and the description of cotton cultivated are also the same; and I consider this mode and this description of cotton both better suited to the soil and climate than any I am acquainted with, and that, therefore, it seems to me the keeping up of this as a pattern farm is without a proper object.

2. In regard to the gin-house, &c. at the Umjud Bagh, I find only two gins set up in the house, though there are stations for two more, and large running gear enough, with some trifling additions, for driving them. These additions Mr. Laidlaw, by my orders, is now making, and the two extra gins will be ready for work when the new cotton comes in. Twelve pairs of bullocks will be required for working the whole. Although all the information I have been able to gather here only strengthens my previously conceived opinion of the entire unsuitableness of such large establishments with cattle-power machinery for the accomplishment of the main object, viz., a wide-spread improvement of the country, still I do not recommend giving up this establishment at present, for the following reasons:

1. From the agreement with the owner of the ground, Merwanjee Kormusjee; by giving it up at once, a heavy sacrifice will be entailed upon Government, in the loss of the improvements.

2. With the two additional gins now being put up, the establishment, if kept fairly employed, will cover its expenses, and leave a balance of profit.

3. The dealers here say they are prepared to keep it employed throughout the cotton cleaning season, after the farm cotton is ginned.

4. There is also another set of large running gearing lying here, which can be put up and worked in the same house, by the addition of a shed to one end thereof, which will drive four more gins. This can be added next year, after my return, when I hope to be able to keep the whole employed; and I trust that the consequence will be, in the end, that it may be given up with a profit, instead of a loss.

3. I find nothing here to prevent the introduction of hand-gins; on the contrary, all I can learn seems to promise even greater success with them than in the Southern Mahratta country. All the arguments in their favour applicable to that region apply with equal or greater force to this. The cuppas can be cleaned with them as cheaply here as at Dharwar, and 15 to 20 per cent. cheaper than by the Guzerattee churka; at Rs. 2. 8. per "bhar," the price now charged for ginning the hand-gins will pay a good interest on the capital invested in them, and leave a profit on the expense of working; thus, the cost of ten gins will be, say rupees 2,000:

Then interest on this amount, at 10 per cent. per annum	-	Rs. 200
Wear and tear of machines, at 10 per cent. per annum	-	200
Rent of house for working them in, per annum	-	24
One man to keep the machinery clean, per annum	-	60
Cost of working 6 months, or 150 days	-	1,875
Total expenses	-	Rs. 2,359
Value of cleaning 1,200 bhars of cuppas, at Rs. 2. 8. per bhar	-	3,000
Balance profit	-	Rs. 641

The above facts, demonstrated by actual experiment to the capitalists here, will be certain to induce them to embark in the speculation, and I trust also on my return from England next winter to give an additional impetus to this by fetching with me a large demand for cotton

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Bombay.

cotton cleaned by the gins. With a view to test the above to a certain extent before my departure, I have set the workmen under Mr. Laidlaw to building two gins of 25 saws on the model of those made at Dharwar. I would recommend that I be allowed to direct Mr. Laidlaw to go on making up the same kind of machines to the extent of all the spare saws lying here, amounting to 505. I would also recommend that I be allowed to give Mr. Laidlaw charge of the establishment till my return next winter, in preference to Government appointing a special superintendent, with some addition to his pay to insure his zeal. I feel satisfied the business would be in a more satisfactory state of forwardness at my return than under the superintendence of an inexperienced person.

4. In regard to the cotton ginning company here, to which I am directed to afford assistance, I would observe, that the machinery in their gin-house has proved too weak to drive even one gin, and that unless they go to the expense of getting a new set on a stronger principle, or they should choose to adopt the hand-gins, I will be unable to afford them my assistance. One of the best and most powerful of the large gins is lying in the company's gin-house unemployed, and must, for the reason above stated, remain so all this season: it could be well employed as one of the two I am adding to the house at the Umjud Bagh, and indeed is absolutely required to start them in time for the first of the coming crop, as those last got from England, now in godown, require a large number of alterations, which would take some months to complete. The company, however, refuse to let me have it, though I promise to put it back, or another better adapted to the strength of the machinery, should such be required.

Broach,
1 February 1847.

I have, &c.
(signed) *W. R. Mercer*,
Superintendent Cotton Experiments.

V. 1044.

MINUTE by the Honourable the Governor, subscribed to by the Honourable Board.

THESE reports go to confirm the impression already entertained by Government, that the late Superintendent's plan of operations was little calculated to promote the objects in view.

Mr. Mercer proposes to discontinue the farm, as soon as its concerns can be wound up, and to direct his attention to the extended use of the hand-gin, and the general introduction of an improved mode of cleaning; the success which has attended his endeavours towards effecting these objects in the Dharwar collectorate justifies the expectation that it would be the most advantageous direction of his labours in his new position.

The discontinuance of the farm, and disposal of the cattle and other stock as soon as the present crops are off the ground, may be sanctioned.

The premises at the Umjud Bagh may be retained for the present, and the two additional gins brought into operation.

The four other gins for which there are the materials may be put up on Mr. Mercer's return.

Five hand-gins may be constructed by Mr. Laidlaw as proposed, on the model of those at Dharwar, at an estimated cost of 1,000 rupees.

The general superintendence of the experiments may be conducted by the Collector himself during Mr. Mercer's absence, and he can ascertain and report hereafter to what extent it would be advisable to intrust Mr. Laidlaw with the management of their details.

Under the circumstances stated in Mr. Mercer's 4th para., the saw-gin company do not seem disposed to profit at present by his advice or aid; but it is to be hoped that the practical evidence of the success of his system may lead them eventually to adopt his views.

An application has already been made to the Honourable Court for an additional supply of saws. In the meantime, all those not required at Broach for the construction of the machines now sanctioned should be forwarded at once to Belgaum, and their distribution between that collectorate and Dharwar may be arranged according to the plan which may eventually be adopted for carrying on the experiments in the latter district.

3 February 1847.

(signed) *G. Clerk.*

(No. 446 of 1847.)

V. 1045.

From Mr. Chief Secretary *Pringle* to the Collector of Broach.

Sir,

I AM directed by the Honourable the Governor in Council to acknowledge the receipt of your letter, No. 31, dated the 3d instant, submitting, with your own observations thereon, a report from Mr. Mercer on the present state of the cotton experiments in Broach, and the plan which he would propose for future operations.

2. In reply, I am desired to observe, that these papers tend to confirm the impression already entertained by Government, that the late Superintendent's plan of operations was little calculated to promote the objects in view.

3. In his report, Mr. Mercer proposes to discontinue the farm as soon as its concerns can be wound up, and to direct his attention to the extended use of the hand-gin, and the general introduction of an improved mode of cleaning. The success which has attended his endeavours

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endeavours towards effecting these objects in the Dharwar Collectorate induces the Governor in Council to believe that this would be the most advantageous direction of his labours in his new position.

4. His Honour in Council therefore sanctions the discontinuance of the farm, and the disposal of the cattle and other stocks, as soon as the present crops are off the ground; the premises at the Umjud Bagh may, I am desired to state, be retained for the present, and the two additional gins, for which there are materials being put up on Mr. Mercer's return.

5. With reference to your 9th para., I am desired to inform you that the Governor in Council authorises the construction of five hand-gins by Mr. Laidlaw, as proposed by you, on the model of those at Dharwar, at an estimated cost of 1,000 rupees.

6. The Governor in Council considers that the general superintendence of experiments should be conducted by yourself during Mr. Mercer's absence, and you are requested to ascertain and report hereafter to what extent it would be advisable to entrust Mr. Laidlaw with the management of their details.

7. From the circumstances stated in Mr. Mercer's 4th para., the saw-gin company do not seem disposed to profit at present by his advice or aid; but it is to be hoped that the practical evidence of the success of his system may lead them eventually to adopt his views.

8. An application has, I am desired to state, already been made to the Honourable Court for an additional supply of saws. In the meantime, the Governor in Council directs that all those not required at Broach for the construction of the machines now sanctioned be forwarded at once to Belgaum to await the instructions which may hereafter be communicated to the Collector of that district regarding their disposal.

Bombay Castle,
24 February 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 17 March 1847.—V. 1418 to 1426.

(No. 154 of 1847.)

From the Acting Collector of Khandeish to Mr. Chief Secretary *Pringle*.

V. 1418.

Sir,

I HAVE the honour to submit, for the consideration of the Honourable the Governor in Council, the accompanying letter, No. 5, of the 18th ultimo, from Mr. Blount, one of the Government cotton planters in this province, tendering his resignation of his situation, and expressing his desire of being relieved from his duties on the 1st proximo, in accordance with the terms of his engagement with Government, for the purpose of proceeding to Bombay for eventual departure to America.

2. This gentleman, as well as his coadjutor in office, Mr. Simpson, solicits that a commuted equivalent may be granted to him for the expenses of his voyage home. The question regarding this application might, I would respectfully suggest, be settled at the Presidency simultaneously with that of Mr. Simpson.

Khandeish, Collector's office, Camp Dhurrungaum,
11 February 1847.

I have, &c.
(signed) *H. Young*,
Acting Collector.

(No. 5 of 1847.)

To *H. Young*, Esq., Acting Collector of Khandeish.

V. 1419.

Sir,

I HAVE the honour to request that you will communicate to Government my desire to resign my situation as Government cotton planter, for the purpose of returning to America, and that I may be relieved of the charge of this factory on the first day of March next; that I may proceed to Bombay, for the purpose of making necessary preparations, and for taking passage by the first steamer that may leave after my arrival at the Presidency.

2. Having fulfilled the terms of my agreement with the Honourable Company, I am, according to the terms of said agreement, entitled to a passage to my native country free of expense to myself. I beg, therefore, that Government will grant me a sum equivalent for such passage at Bombay, as it is not my intention to proceed further than Cairo direct or by the usual route to London.

Camp Julgaum,
18 January 1847.

I have, &c.
(signed) *J. M. Blount*,
Government Cotton Planter.

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V. 1420.

(No. 164 of 1847.)

From the Acting Collector of Khandeish to Mr. Chief Secretary *Pringle*.

Sir,

WITH reference to my letters to your address, Nos. 48 and 154, of the 12th ultimo, and 11th instant respectively, transmitting the resignations of Messrs. Simpson and Blount, of the situations held by them in the Government cotton experiment in Khandeish, I beg permission to forward, for the consideration of his Honour in Council, some observations on the inexpediency of bringing the experiment to an abrupt termination, and at the same time to submit such expedients as occur to me for providing for its efficient prosecution.

2. That the subject may be placed before Government in a clear light, it seems necessary that I should give a brief sketch of the progress of the experiment since its institution in these districts, in the month of May 1845.

3. At that period Mr. Blount arrived in Khandeish, and was followed in the subsequent month by Mr. Simpson. It was too late in the season to undertake any cultivation on the part of Government; and the attention of these gentlemen was therefore turned to the cleaning of cotton to be purchased from the native traders or growers. Mr. Simpson proceeded to Bombay in September, to superintend the alteration and adaptation of some saw-gins imported from England, with which he returned to this province in the month of November. No progress whatever seems to have been made in the experiment up to the date just quoted, further than smoothing the way for its introduction by inquiries and the preparing of machinery. Four gins were set to work at the end of the year 1845, two being located at Dhurrungaum, and two at Julgaum. They were found to answer admirably, and 150,000 lbs. of seed cotton of the ordinary produce of the district were subjected to them during the season.

4. The quality of the cotton thus cleaned, will be best tested by the price which it may realise in the English market, to which it has been consigned, an encouraging opinion given by the Chamber of Commerce being all that we have, in the meantime, to produce in its favour.

5. The progress of the experiment during the present season has been much more extensive, notwithstanding that several contemplated improvements were arrested by the stringent orders of Government received in September last, by which I was positively directed to incur no further outlay whatever on the object of the experiment. This progress has been marked by the cultivation by contract, on account of Government, of no less than 2,000 beegas of indigenous cotton, while 135 beegas were sowed with New Orleans seed on land farmed by the cotton planters themselves on Government account. Much of the produce has been already subjected to the gin, and the whole will, it is estimated, be cleaned by the end of this month. The quantity which I expect to be able to consign to Bombay before the rainy season commences may be computed at—

	Candies.	Mds	Tuccas (or pounds).
Khandeish cotton	134	7	35
New Orleans cotton	1	10	97 $\frac{1}{2}$
TOTAL	135	18	12 $\frac{1}{2}$

If this produce should bring anything near the price which I hope for, the expenses of the experiment will be very materially reduced. I cannot, however, produce a balance sheet for the inspection of Government until the out-turn of our past and prospective consignments to Liverpool may be known.

6. The objects for which the experiment was introduced, though they may have been shown to be attainable, can hardly be said to have, as yet, been gained in a single instance.

7. The attention of the native traders, it is true, has been attracted to the great advantages of gin-cleaned cotton over that cleaned in the churka. These advantages are fully admitted by the natives, and there has been considerable interest shown by them in the subject, and an earnest desire has been displayed to be allowed the use of gins. There are, however, only five gins in this province, excluding a small one of ten saws, which has been lately constructed entirely by Mr. Simpson. This insufficient supply, with the intended retirement from service of the American gentlemen, and the want of a single mechanic to repair any casual injury received by the machines, threatens to render abortive all that has been hitherto done towards the object of introducing the improved machines; and convincing the natives of their superiority.

8. As regards the improvement of the culture of the indigenous cotton, or the introduction of foreign varieties, the experiment has not yet had scope to effect anything. The New Orleans seed sown last rains has produced a deficient crop, and it is the opinion of the planters that its staple is inferior, both in length and toughness, to the produce of the indigenous plant; but I need hardly observe, that nothing conclusive can be established from an isolated trial, such as has been afforded by this experiment.

9. I hold

9. I hold it essential to the prosperity of the cotton culture in this remote district, that a press should be established inland, by which the cotton can be packed in regular bales, and thus preserved from the deterioration and adulteration to which it is exposed in transit to the coast, when packed in loose bags. This is the opinion, also, of the American gentlemen, who have been employed in the experiment. Indeed, it must be the opinion of every one who has given the subject a thought; and I regret that our preparations to erect such a press, as might form a model for future imitation, should have been put a stop to.

10. Under these circumstances, I have respectfully to urge, that every endeavour be made to render the money and pains which have been already expended on this experiment, fruitful of advantage to the Government and the native community. If the experiment be now abandoned, all that has hitherto been done is thrown away, and I feel assured that even if it be suspended, the progress of events is such as will render its resumption at no distant day quite certain. All that has now been done must then be done over again; whereas, if persevered in from the point now attained, its progress will, I feel confident, be such as fully to meet our most sanguine expectations.

11. But the means of superintending the experiment, if continued, must be provided, and I have been anxious to secure for this object the services of at least one of the gentlemen now conducting it, both of whom have declared their wish to leave the country. I have, with this view, placed myself in communication with Messrs. Simpson and Blount; and I have now the honour to append an abstract of the conditions which these gentlemen severally attach to their resumption of service.*

12. If we could, by any means, not involving an unreasonable expenditure, provide for the superintendence of the experiment during the 18 months for which Mr. Simpson desires leave of absence, it is my opinion that the terms which he proffers should be accepted. I cannot speak too highly of the zeal and intelligence which this gentleman has undeviatingly displayed in the performance of the duties intrusted to him. He possesses, in addition to a long experience in the culture and preparation for market of Indian cotton, qualities which singularly fit him for the services required of him. His natural mechanical talents have been long directed to the construction of the mechanism of the saw-gin; and I think that the report which I append† gives ample proof of his well-directed efforts towards the improvement of that machine. He has, unaided, except by the village blacksmith, turned out of hand a saw-gin, which is not only the first ever constructed in India, but also one which leaves all competition behind in the cheapness and efficiency of its work.

13. The offer which Mr. Simpson makes to place his services while in England at the disposal of Government, in superintending the construction of a number of saw-gins on the tried principles which he has found most effective, is one which should not, in my humble opinion, be neglected. The merits of the machine are already well known in this country, and a supply is urgently required. If, as may be easily provided for, an artisan or two be supplied from Bombay, capable of repairing them when accidentally out of order, there remains no doubt that any number which may be supplied will be fully and permanently occupied.

14. Mr. Simpson would, before leaving the country, if his design had not been frustrated by the orders received to avoid further outlay, have supplied Khandeish with an efficient cotton press, a desideratum which, I fear, we shall hardly be able now to provide, and his return to the country is desirable for this object among others. It is true that there may be in India men capable of constructing a cotton press, whose services may be procured, but I doubt whether there be any person available whose experience and practical knowledge fit him for the task, in so great a degree as the peculiar advantages enjoyed by Mr. Simpson in those respects.

15. Mr. Simpson's terms are not, I think, on the whole exorbitant. He stipulates that he be allowed an allowance of rupees (250) two hundred and fifty per mensem, during his absence of 18 months from this country, which he will not require until he has returned. If Mr. Simpson's time and attention are to be given to the construction of saw-gins in England and America, I cannot but think that they will not be dearly purchased at the rate proposed by him. On his return to India, he states that he will be content to be placed on the same footing with Mr. Mercer, whatever that may be; but he also makes a definite proposal, by which he states that he would require rupees (700) seven hundred per mensem as a consolidated salary. He now draws—

Salary	-	-	-	-	-	-	-	-	-	Rs. 250
Tent allowance	-	-	-	-	-	-	-	-	-	80
Horse allowance	-	-	-	-	-	-	-	-	-	30
Deputation allowance, at 5 rupees per diem	-	-	-	-	-	-	-	-	-	150
TOTAL										Rs. 510

So

* Mr. Simpson's letter of 10 February 1847. Mr. Blount's letter of 10 February 1847.

† Report from S. Simpson, Esq., G. C. P., No. 5, of 1 January 1847.

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Bombay.

So that the increase to his emoluments would be under rupees (200) two hundred. This appears to me fair; and while it is liberal towards Mr. Simpson, it is at the same time no more than, in my estimation, his services should be valued at.

16. I am respectfully of opinion, that if Mr. Simpson's services are engaged by Government, those of Mr. Blount may be well dispensed with. His terms are not such as I can recommend for acceptance by Government. If, indeed, he could have been prevailed on to remain in India until Mr. Simpson's return, it might have been matter of consideration whether the salary he asks for might not be accorded. But he declines this proposal; and as his first stipulation is for leave of absence for eight months on an allowance of rupees (300) three hundred, I think that we cannot advantageously close with him. If we can dispense with his services for eight months we can do so for 18; and Mr. Simpson's return after the latter period will enable us altogether to do without him.

17. The question remains, How are we to continue the experiment during Mr. Simpson's absence? taking for granted that it is a temporary one. Under these circumstances, unless Government be acquainted with a disposable person competent to undertake the general experiment in all its branches, I would propose that during the ensuing season (1847-8), the saw-gins be placed under the charge of some native on the present establishment, who has acquired a practical knowledge of their mode of working, and that they be made available to native dealers, at a rate barely sufficient to repay the cost of working the machines. By these means the time would not be wholly lost, but taken advantage of to disseminate a knowledge of the practical advantages of the saw-gin over the native process. The only risk would be to the machines themselves, which might fall into disrepair; but this is a hazard which I think worth encountering.

18. Should Government not think proper to accept of Mr. Simpson's prospective services on the terms submitted by him, I confess that I see no chance of any very satisfactory progress being made in the general objects of the experiment, until his place is supplied by a person with similar qualifications. The saw-gins now in Khandeish might, however, continue to work under native superintendence, or their number might be increased, if an artisan capable of keeping them in repair could be supplied from Bombay. No doubt many are to be found there equal to this duty, though it is beyond the art of our provincial smiths.

19. I have to request that, as the period of Mr. Simpson's and Mr. Blount's departure is at hand, I may be favoured with an early reply to this communication; and I have, with this object in view, thought it advisable to address you direct, instead of through the Revenue Commissioner, to whom, however, a copy of this letter will be dispatched.

Khandeish, Collector's Office,
Camp Dhurrungaum, 13 February 1847.

I have, &c.
(signed) H. Young,
Acting Collector.

V. 1421.

To H. Young, Esq., Acting Collector of Khandeish.

Sir,

In a former communication, I had the honour to inform you of my wish to return to the United States, and to resign my appointment as cotton planter from and after the first of April next, with no view of returning to this country. However, having learnt from you that it is the wish of the authorities to continue the cotton experiment in Khandeish, and that my services, if reasonably valued, might be further engaged by Government here, I beg to state that this is a question that I am rather hastily called on to decide. However, should Government consider my services worth as much as those of Mr. Mercer at Broach, I should not object to engage for similar terms, so far as amount of salary goes; but as I do not know what that is, I therefore beg to substitute the following as a final proposition, viz.:

1. To be allowed 18 months' leave, beginning from the 1st of April next, and ending on the 1st November 1848.

2. That during my absence on leave, as above stated, an allowance of 250 rupees per mensem be granted me, not to be drawn, however, till after my return to India, unless Government should prefer my drawing it monthly.

3. That from and after my return to India a salary of (700) seven hundred rupees (without extra allowance) be monthly disbursed to me for a period of three years, dating from the day on which I re-land in India, and after the expiration of this time I shall be at liberty to retire from the public service, or even sooner should my health require it in the opinion of a medical officer.

4. That Government pay the expenses of my journey home as per original agreement; however, this boon will not be looked for on the returning journey to India.

Note.—As I look upon the introduction of a better description of machine than the saw-gins hitherto imported into this country as a matter of the highest importance, I beg here to suggest that, during my visit to England and America, if Government would authorise me

me to have a number of saw-gins (on improved principles) made up under my superintendence, and to forward them to this country, I have no doubt that much good would result therefrom.

Dhurrumgaum,
10 February 1847.

I have, &c.
(signed) S. Simpson,
Government Cotton Planter.

To H. Young, Esq., Acting Collector of Khandeish.

Sir,

AGREEABLE to your request, I have the honour to state to you the terms under which I am willing to continue my services to Government in the cotton experiments for the next three (3) years following, or until the cotton crop of 1849 and 1850 is cleaned and forwarded to Bombay.

2. That Government grant me the term of eight (8) months leave of absence for the purpose of visiting America, to take effect from the date of my departure from Bombay, which I purpose to be on the 1st of April next, and that during that time I be entitled to an absentee allowance of rupees three (300) hundred per mensem, but which amount is not to be demanded until my return to India.

3. That from and after my return or arrival in Bombay for the term of my future service, to receive a salary per mensem of rupees (700) seven hundred, without other allowances.

4. Government at the time of my departure from Bombay in April next, to furnish me a passage, or an equivalent sufficient to cover all legitimate travelling expenses to my native place of residence, as per conditions of my original agreement with the Honourable Company. On my return to India, I shall, of course, expect to pay the expenses of the journey from my own purse.

5. That should my future residence in India prove injurious, to my health to such an extent as to require it, that I may be permitted to resign the service, after such fact shall have been ascertained.

Khandeish,
10 February 1847.

I have, &c.
(signed) J. W. Blount,
Government Cotton Planter.

(No. 5 of 1847.)

To H. Young, Esq., Acting Collector of Khandeish.

Sir,

I HAVE the honour to report for the month ending 31st December 1846, the progress of the cotton experiments at Dhurrumgaum.

2. Up to this date, the total amount of cotton gathered is 50 candies, 16 maunds, and 79 tuckas. There is still cotton remaining in the fields, and which is being gathered, and will, I apprehend, be finished by the middle of the present month.

3. The fields of New Orleans cotton have thus far only yielded a small crop, but the plants are well stocked with bolls, and are still putting forth flowers and young fruit, and bid fair to produce an average good crop, which will come on in the month of February.

4. I have before informed you of the dispatch of 180 bags of cotton to Colset Bunder, the total amount cleaned up to that date.

5. The repairs mentioned in my last month's report as being required on the 25-saw gins have been made, and considerable improvement in the performance of this machine has been the result. Though this gin is still behind the other about 20 per cent. in the amount of its work, I have discovered its further defects, but have not time to correct them at this busy season of the year. As this establishment is deficient in stowage room, I am obliged to keep the greater part of the cotton in a yard, enclosed by a fence for its protection, which, nevertheless, is somewhat exposed; therefore I am using my utmost endeavours to gin it up as speedily as possible; the two 18-saw gins have improved, that is to say, the coolies have become better acquainted with the work, and therefore are able to clean more in a day than they did last month. This increase of work in the 18-saw gin makes up for the deficiency of the 25-saw gin, and thereby keeps the cost of cleaning the same as stated in my last month's report, viz.; Rs. 4. 8. per candy.

6. The gin of ten saws has been kept steadily at work, and I find the cost of cleaning a candy on this gin is something less than 4 rupees; women not being obtainable, I am obliged to work it by men, one to turn and one to feed, at two annas each, which makes four annas per day. In this respect it works under a disadvantage, and makes the cost of cleaning nearly double

double what it otherwise would be; however, even as it now works, I consider very satisfactory, and it is perhaps cheaper than cotton ever was cleaned in this country on any machine whatever.

7. The cotton seed I am selling at the bazar wholesale rate of four rupees per Dhurrungaum candy, and have, up to the date for which this report is intended, sold 50 candies, for which the money has been paid and credit given in the books of this establishment for the amount. If it is desirable that any portion of the cotton seed should be reserved for Government purposes, you will be so good as to inform me to that effect.

8. As my connexion with the cotton experiments is now drawing to a close, I think it right to dilate upon the success of the saw-gins in Khandeish, and to offer some remarks on the construction of this machine and its performance in my hands. The gins sent to this collectorate in 1845-46 have been almost entirely employed in cleaning cotton for Government, and it might be inferred from this fact, that the natives remained strangers to the superior qualities which they possess over the common churka; however, I am happy to add that such is not the case. I have, from the beginning of these experiments, used my utmost endeavours to acquaint the minds of the people with the peculiarities of this description of machine, and showed them the cheaper rate at which they were capable of cleaning cotton. The gins had not been over two months at work, when a native dealer in cotton offered to give 150 candies of the then ensuing crop to be cleaned on his own account; I partly promised to comply with his wishes, and have only disappointed him because I have been disappointed myself in getting up more gins. During the last month I was offered 50 candies by one individual in the town of Dhurrungaum; in fact he urged me to allow him to put his cotton down in the gin-house compound, in order to secure priority of chance in getting his cotton saw-ginned, after the Government cotton should have been finished. This request of his I have reluctantly been compelled to refuse him, as I fear the Government cotton will not be got through with before the 1st of March. If I had had machines, I think there is very little doubt the native merchants would have employed them this season to the extent of cleaning at least 500 candies of cotton in the single talook of Errondole. Moreover, I have been asked directly, and messages have been sent me by the native merchants, wishing to know, with an unusual earnestness, whether I would sell to them the ginned cotton, of course I told them I could not do so without the authority of Government, and that I believed it was the wish of Government to send the whole of it to England. These are, in my judgment, very important facts, showing, beyond a doubt, that the native merchants have no mistrust whatever regarding the superior quality and enhanced value of saw-ginned cotton.

9. Whatever detractors may have said in disparagement of hand saw-gins, this much I will confidently assert, that hand-gins are the cheapest working machines ever used in India for separating the seed from cotton wool; if they have in any case failed, the cause must be attributed to the want of skill on the part of their manager. Defects in the machine itself is not a sufficient cause, as every person who undertakes to work saw-gins should be capable of correcting all defects; where this cannot be done, of course the person in charge is incompetent to his task. At the same time, I think it right to add, that there is no machine with which I am acquainted, so likely to deceive the uninitiated as the saw-gins (such as I imported into India); to look at, it seems simple and plain enough, but even a good-looking gin may possess a half-dozen faults, either of which sufficient in itself to disappoint all expectations. For instance, the teeth on the saws may be cut at too obtuse or too acute an angle, and however good the other parts of the machine may be it will never work well. Therefore a new set of saws to replace the old ones is the only remedy, and supposing the saw cylinder perfect, the grates or iron ribs may have a bad curve; they may be set so as to make what is technically called "naped cotton," or they may have the opposite defect, and make slow and consequently expensive work; or the spaces may be too wide by the twenty-fourth part of an inch, and thereby let the seed through; or the metal may be too thin, in that case the seed will spring through; the seed-board may be too high or too low, too far off, or too near to the saw cylinder (and it is possible for it to have all these obliquities). The consequence would in the one case be slow work, and in the other a great waste of cotton; and the same may be said of the foot-board, upon which part mainly depends the cleanness or otherwise of the cotton. The brush or fanner is another very important part, which has to perform a double duty; viz. to whip the cotton from the saw cylinder, and to blow it through the flue into the lint-room; much depends on the velocity and diameter of the brush; four-pointed brushes are much better than six-pointed ones, for several reasons: no brush should be over 10 inches in diameter, and should have $3\frac{1}{2}$ revolutions to the cylinders, provided this latter is not over 12 inches in diameter. No gin should be driven over 170 revolutions per minute, and should always be worked by a leather band, and never by cog-wheels.

10. What are now known as hand-gins are very different from what they were when first sent to this country. They were then fitted up with a set of cog-wheels, one on each shaft; viz., cylinder, brush, and winch, which latter was turned by hand, and set the whole in motion; some 25-saw gins of this kind imported into Madras in 1842 were set to work, and after using every possible means, I could at best only get 250 lbs. seed cotton through them per day; this was very unsatisfactory, and I prevailed on that Government to allow me to alter them (three in number), and which I had fitted up with whirls, &c. &c. I built a fly-wheel of $4\frac{1}{2}$ feet in diameter; this fly-wheel I placed about 15 feet from the gin, over which passed

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passed a leather band (five inches wide) to the whirl on the cylinder shaft, and the whole set in motion by turning the cranks of the fly-wheel; and the result was, that instead of 250 lbs. of seed cotton, 1,000 lbs. were obtained from this gin per diem (and the other two were in like manner set to work as soon as they could be got ready, and proved equally good). This was the first fly-wheel contrivance ever adopted in India. My results (with drawings), I communicated to my coadjutors in all three of the Presidencies, and they were generally approved of and adopted by them, and have proved that the saw-gin can be worked cheaper in India than any other species of machine having for its object similar ends. In conclusion, whilst I am undisputedly the original inventor of the fly-wheel system of working hand-gins (and which has proved so eminently successful), I am also the first, and I believe the only individual that have manufactured and put together all parts of a saw-gin in India. If any of the improvements above alluded to should hereafter (as I believe they have heretofore) tend to improve the cotton trade of India and better the condition of its native population, by cheapening the cost of cleaning, and increasing the value of the article, I shall esteem it an extra and satisfactory reward for my feeble but assiduous efforts under difficult circumstances of nearly seven years' duration.

Cotton Planter's Office, Dhurrumgaum,
1 January 1847.

I have, &c.
(signed), S. Simpson,
Government Cotton Planter.

MINUTE by the Honourable the Governor in Council, subscribed to by the Honourable Mr. Reid.

V. 1422.

THE perusal of the letter from Mr. Young, the Acting Collector of Khandeish, No. 164, dated the 13th ultimo, with its accompaniment from Mr. Simpson, the American cotton planter, has impressed me with the great importance of endeavouring, if possible, to prevent the interruption to the measures for the improvement of the cotton of that province, which would be caused by Mr. Simpson's intended departure, of which he has given us intimation; and this impression is strengthened by the satisfaction expressed in a recent despatch from the Honourable Court at our having, on a similar occasion, some months ago abstained, on re-consideration from carrying out a resolution which had been come to for the abrupt termination of those measures at that time.

2. The terms, however, proposed by Mr. Simpson in his letter of the 10th ultimo, to the address of the Acting Collector, for the renewal of his engagement after an intermediate leave of absence, appeared to me, besides being open to objection in some other respects, to involve too long a postponement of our operations to be entertained.

3. This consideration, and the inconvenience to which we shall be exposed by the simultaneous departure of Mr. Mercer from Broach, have suggested to me the idea of effectually providing for the wants of both districts, by making it worth Mr. Simpson's while to remain and superintend the operations both in Khandeish and Broach until Mr. Mercer's return, to whom the same duties might then be transferred.

4. With this view, I would propose that Mr. Simpson be appointed superintendent of operations for the improvement of cotton in the districts of Khandeish, Broach and the northern part of Surat, from the date of Mr. Mercer's departure on leave of absence to America. That for this duty he should receive a consolidated salary of 700 rupees per mensem, to include everything except his travelling expenses to and fro for two journeys in the year between Khandeish and Broach; that Mr. Laidlaw, the engineer, should superintend the details of the machinery, under Mr. Simpson's direction, at Broach, and that another person should be procured, if possible, for the same duty in Khandeish. These persons it might be expected would be eventually capable of doing all that is requisite in the general superintendence of the construction and repair of the machinery, when the Americans finally quit the country; that the superintendent of cotton operations in the Northern Division should be under the immediate directions of the Collectors of Khandeish, Broach, and Surat, as respects the operations in their respective districts, subject to the general control of the Revenue Commissioner of the division; that the operations should be directed mainly to the introduction of a cheap, simple and efficient machine for cleaning the cotton; the instruction of the native workmen in its construction and repair; the extension of its use and appreciation throughout the districts generally; the demonstration of the advantages of the clean picking of the cotton, and the use of such machines for separating it from the seed; the endeavouring to obtain a character in the local market for cotton so prepared; the construction of presses for facilitating the conveyance of it in a better state to the more distant markets, and generally all measures for improving the condition of the cotton grown by the people of the country, without at present renewing the attempts towards improving the mode of its cultivation, the success of which hitherto appears open to doubt.

5. A similar plan might, I think, be introduced in the Collectorates of Belgaum and Dharwar in the Southern Division under the superintendence of Mr. Channing, but the consideration of this may await the result of the call we have made on the Revenue Commissioner of that division for his opinion as to the best plan of future operations there, as an

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immediate division is not pressed on us, as in the Northern Division, by the intended departure of the Americans.

6. By such an arrangement as I have proposed, we should concentrate the operations under two heads, instead of several, which at present produces confusion, embarrassment and needless expense. The saving of the pay of Messrs. Mercer, Hawley and Blount (the resignation of which latter gentleman I would at once accept), together with the recent abolition of Dr. Burn's appointment, would far more than cover the cost of placing the arrangements on this efficient footing, and I am convinced we should make much greater progress with two men of experience on liberal salaries, and who would give us the full benefit of their services for a definite period and with a well-defined object, so as to leave us eventually independent of their aid, than by frittering away the public money in desultory and unconnected measures, and with the constant risk of having them rendered fruitless by the departure of one or other of the managers.

7. Mr. Mercer, I believe, proposes returning to this country in the early part of next year, and he would then be ready to take the place of Mr. Simpson, if the latter should wish to prosecute his design of returning to America; and I understand that Mr. Mercer proposes availing himself of any opportunity which may offer during his absence in England and America for promoting the objects of our measures, by making them generally known among parties interested in their success, and procuring their co-operation towards it.

8. Previous to bringing the above measures under the consideration of the Board, I have ascertained privately that Mr. Simpson would accede to them; and therefore, if my colleagues concur in my views as recorded in this minute, it only remains to issue the necessary orders for carrying them into execution.

7 March 1847.

(signed) G. R. Clerk.

V. 1423.

MINUTE by the Honourable Mr. Willoughby.

I ENTIRELY concur in our Honourable President's proposed arrangements, with the proviso that we are only pledged to Mr. Simpson to continue them until Mr. Mercer's return; and with reference to the possible, though I hope not probable contingency of Mr. Mercer not returning to India, I would make the continuance of these arrangements after a definite period, say 12 or 18 months in the case supposed, entirely dependent on their success in accomplishing the objects Government has in view.

8 March 1847.

(signed) J. P. Willoughby.

(No. 600 of 1847.)

From Mr. Chief Secretary *Pringle*, to the Revenue Commissioner, Northern Division.

Sir,

WITH reference to the letter addressed to Government under date the 13th ultimo (No. 164), by the Acting Collector of Khandeish and its enclosures, copies of which have, that officer states, been transmitted to you, on the subject of the cotton experiments now in progress in that province, I am directed to acquaint you that the perusal of that letter and its accompaniment from Mr. Simpson, the American planter, has impressed the Honourable the Governor in Council with the great importance of endeavouring, if possible, to prevent the interruption of the measures for the improvement of the cotton of the province of Khandeish, which would be caused by Mr. Simpson's intended departure, of which he has given Government intimation; and this impression is strengthened by the satisfaction expressed, in a recent despatch from the Honourable the Court of Directors, at Government's having, on a similar occasion, some months ago, abstained on reconsideration from carrying out a resolution which had been come to for the abrupt termination of those measures at that time.

2. The terms, however, proposed by Mr. Simpson in his letter to the address of the Acting Collector, dated the 10th ultimo, for the renewal of his engagement, after an intermediate leave of absence, appear to the Governor in Council, besides being open to objection in some other respects, to involve too long a postponement of operations to be entertained.

3. This consideration, and the inconvenience to which Government will be exposed by the simultaneous departure of Mr. Mercer from Broach, have suggested to the Governor in Council the expediency of effectually providing for the wants of both that district and Khandeish, by making it worth Mr. Simpson's while to remain and superintend the operations in both collectorates until Mr. Mercer's return, to whom the same duties might then be transferred.

4. With this view, the Governor in Council has determined that Mr. Simpson (who has acceded to the arrangement) be appointed Superintendent of operations for the improvement of cotton in the districts of Khandeish and Broach, and the northern part of Surat, from the date

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date of Mr. Mercer's departure on leave of absence to America. That for this duty he shall receive a consolidated salary of 700 rupees per mensem, to include everything except his travelling expenses to and fro for two journeys in the year between Khandeish and Broach; that Mr. Laidlaw the engineer, shall superintend the details of the machinery under Mr. Simpson's direction at Broach, and that another person be procured, if possible for the same duty in Khandeish. These subordinate agents will, it may be expected, be eventually capable of doing all that is requisite in the general superintendence of the construction and repair of the machinery when the American superintendents finally leave the country. The Governor in Council has further determined that the superintendent of cotton operations in the Northern Division shall be under the immediate directions of the Collectors of Khandeish, Broach, and Surat, as respects the operations in their respective districts, subject to the general control of your department; that the operations are to be directed mainly to the introduction of a cheap, simple and efficient machine for cleaning the cotton; the instruction of the native workmen in its construction and repairs; the extension of its use and application throughout the districts generally; the demonstration of the advantages of the clean picking of the cotton, and the use of such machines for separating it from the seed; the endeavouring to obtain a character in the local market for cotton so prepared; the construction of presses for facilitating the conveyance of it in a better state to the more distant markets, and generally all measures for improving the condition of the cotton grown by the people of the country, without at present renewing the attempts towards improving the mode of its cultivation, the success of which hitherto appears open to doubt.

5. The Governor in Council has it in contemplation to introduce a similar plan in the Collectorates of Belgaum and Dharwar, in the Southern Division; but the decision of Government on this part of the question will be postponed until the receipt of a reply to a reference which has been made to the Revenue Commissioner of that division.

6. By such an arrangement as that above described, the cotton operations will be concentrated under two heads instead of several, which at present produces confusion, embarrassment and needless expense; and the Governor in Council feels convinced that by placing the arrangements on this efficient footing, much greater progress will be made with two men of experience on liberal salaries, and who would give Government the full benefit of their services for a definite period and with a well-defined object, so as to have it eventually independent of their aid, than by frittering away the public money in desultory and unconnected measures, and with the constant risk of having them rendered fruitless by the departure of one or other of the managers.

7. Mr. Mercer, the Governor in Council believes, proposes returning to this country in the early part of next year, and he would then be ready to take the place of Mr. Simpson, if the latter should wish to prosecute his design of returning to America. The Governor in Council also understands that Mr. Mercer proposes availing himself of any opportunity which may offer during his absence in England and America, for promoting the objects of our measures for the improvement of cotton, by making them generally known among parties interested in their success, and procuring their co-operation towards it.

8. You will be pleased to communicate the necessary orders for carrying out the views of Government, as now communicated to the Collectors of Khandeish, Broach, and Surat; and to intimate to the Collector of the former district in reference to his letter to Government, dated the 11th ultimo, No. 154, that Government is pleased to accept Mr. Blount's resignation of the situation held by him.

9. A copy of this letter will be sent direct to the Collector of Khandeish, in order to save time.

Bombay Castle, 12 March 1847:

I have, &c.
(signed) R. K. Pringle,
Chief Secretary to Government.

(No. 603 of 1847.)

From Mr. Chief Secretary *Pringle* to the Revenue Commissioner, Southern Division.

V. 1425.

Sir,

WITH reference to my letter to your address, No. 568, dated the 5th instant, I am directed by the Honourable the Governor in Council to transmit for your information the accompanying copies of a letter from the Acting Collector of Khandeish, dated 13th February 1847, No. 164, its enclosures, and of my communication of this date to the Revenue Commissioner, Northern District, communicating the views of Government on the subject therein noticed, and to request that you will take these views into consideration in framing the report called for in my letter above quoted, and state whether you consider Mr. Channing would be qualified for the performance of similar duties in the Collectorates of Dharwar and Belgaum to those which it is now proposed to assign to Mr. Simpson in those of Khandeish, Broach and Surat.

Bombay Castle, 12 March 1847.

I have, &c.
(signed) R. K. Pringle,
Chief Secretary to Government.

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V. 1426.

(No. 604 of 1847.)

From Mr. Chief Secretary *Pringle* to the Military Board.

Gentlemen,

I AM directed by the Honourable the Governor in Council to transmit for your information the accompanying extract (paras. 3 and 4) of my letter of this date to the Revenue Commissioner, Northern Division, and to request that you will ascertain and report whether the services of an individual to be employed in Khandeish, on duties similar to those which it is proposed to assign to Mr. Laidlaw in Broach, are procurable either here or at any of the out-stations, and if so, at what rate of remuneration.

Bombay Castle, 12 March 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

EXTRACT of a Letter from the Proceedings of Government in the Territorial Department, Revenue, dated 24th March 1847.—V. 1603 to 1606.

(No. 260 of 1847.)

V. 1603.

From the Acting Collector of Khandeish to the Chief Secretary to Government.

Sir,

HAVING been given to understand that Government was desirous of securing the services of Mr. Simpson as Superintendent of the cotton experiment until Mr. Mercer's return to India, I submitted to that gentleman a proposal, in accordance with the terms which I had been informed by you, demi-officially, his Honour in Council was prepared to grant. I have now the honour to forward, for the information of Government, copy of a letter which I have received from Mr. Simpson (No. 19 of the 27th February 1847), in which he communicates his acceptance of the offer made him.

2. I have the honour further to report that Mr. Blount was informed by me that his resignation would be accepted by Government; and that gentleman has accordingly given over charge of the cotton factory at Julgaum to Mr. Simpson, and proceeded *en route* to Bombay.

3. I have informed Mr. Simpson of the nature of the duties which he will be called upon to perform, and directed him to turn his attention exclusively to the improvement of the process of clean-picking, ginning and pressing the cotton of the districts under his superintendence, so as to bring it into the market in the best possible condition. I have also reminded him of the ultimate objects of the experiment, in demonstrating to the natives the advantages of a more careful attention to the processes above noticed, and in making them familiar with the use and construction of improved machinery for these purposes. I have requested him more especially to keep in view the introduction generally throughout the country of a simple saw-gin, the machinery of which the local artisans may be expected, with some tuition, to be able to construct; and above all, to bear in mind that the people are to be taught to rely at as early a date as possible on themselves, for application of the example and lessons which Government lays before them to their own commercial advantage.

4. I feel confident that in Mr. Simpson, Government has secured a most able and zealous agent for promoting the objects which it has in view; and I am sanguine that if that gentleman is duly supported, much benefit will accrue to the country from the practical knowledge and skill which he can bring to bear upon the experiment.

5. I beg respectfully to urge on Government the expediency of forwarding to Khandeish at as early a date as possible a practical mechanic, to be placed under Mr. Simpson; and I would at the same time take this opportunity of requesting that the estimate which I had the honour to forward through the Revenue Commissioner with my letter of the 3d September last, No. 932, for the construction of a press-house, may receive the sanction of Government at as early a date as possible.

6. I should also beg to recommend that Mr. Simpson be permitted to erect this building under his own superintendence, by which arrangement we may look for a more perfect adoption of the details of the building to the objects in view, and also a more speedy accomplishment of the work.

Khandeish Collector's Office, Camp, Nusseerabad,
5 March 1847.

I have, &c.
(signed) *H. Young*,
Acting Collector.

P.S.—I have omitted to give an opinion regarding the principle on which Mr. Simpson's travelling allowances might be fixed, as during one portion of the year there would be neither danger nor difficulty in adopting the direct route from Surat to Khandeish; while, during the remainder, this route would be impracticable, and a circuitous and expensive one, *via* Bombay, would be necessary. It does not seem easy to name a fixed amount of travelling allowance. It might be better, perhaps, to allow Mr. Simpson ten (10) rupees for each regular

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regular day's march for such portion of his trip as may be overland, while the sea voyages between Bombay and Surat, or Tankaria, as the case may be, could be compensated by making good the fare chargeable to first-class passengers per steam vessel.

(signed) *H. Young*, Acting Collector.

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(No. 19 of 1847.)

To *H. Young*, Esq., Acting Collector of Khandeish.

V. 1604.

Sir,
WITH reference to the terms of further service which you offered me, in a conference on Tuesday last, I have the honour to state that I agree to remain to superintend the cotton experiments at Broach and in Khandeish for one year, dating from the 1st proximo, or until Mr. Mercer's return.

2. I am to have a salary of (700) seven hundred rupees per mensem, which is to include everything except travelling expenses twice in the season between my two principal stations (Broach and Dhurrungaun), the amount to be hereafter fixed.

I have, &c.
(signed) *S. Simpson*,
Government Cotton Planter.

Cotton Planter's Office, Dhurrungaun,
27 February 1847.

MINUTE by the Honourable the Governor, subscribed to by the Honourable Board.

V. 1605.

THIS report from the Collector of Khandeish is entirely in accordance with the instructions which had previously been issued on the subject of it to the address of the Revenue Commissioner, Northern Division, copy of which was sent direct to the Collector.

To these the Collector may now be referred, as superseding the necessity for any further orders on the subject generally.

Sanction for constructing the press alluded to in the 5th para. was conveyed in the 6th para. of the Government letter (No. 6259), dated 23d May 1846; and although all permanent expenditure was subsequently suspended, when the discontinuance of the operations was contemplated, yet, now that that resolution has been reversed, there is nothing to prevent the former sanction being acted on. The Collector should be informed to this effect, and also that the Military Board have been requested, if possible, to procure a qualified mechanic, to which point he adverts in the same para.

Copy of this letter and its accompaniment should be sent to the Revenue Commissioner, Northern Division, for information.

The mode of adjusting the travelling allowances proposed in Mr. Young's postscript may be approved.

(signed) *G. R. Clerk*.

18 March 1847.

(No. 692 of 1847.)

From Mr. Chief Secretary, *Pringle* to the Acting Collector of Khandeish.

V. 1606.

Sir,
IN acknowledging the receipt of your letter, dated the 5th instant (No. 260), and of its enclosure relative to the cotton experiments now in progress in Khandeish, I am directed by the Honourable the Governor in Council to refer you to my letter of the 12th instant (No. 600), to the address of the Revenue Commissioner, Northern Division (copy of which was transmitted for your information, by endorsement, on the same date), as superseding the necessity for any further instructions on the subject generally.

2. Adverting to your 5th para., I am instructed to observe that sanction for constructing the press therein alluded to was conveyed in my letter to the Revenue Commissioner, (No. 1259), dated 23d March last; and although all permanent expenditure on account of the experiments was subsequently directed to be suspended, when their discontinuance was contemplated, yet, now that that resolution has been reversed, his Honour in Council is pleased to authorise you to instruct Mr. Simpson to proceed at once to set up the cotton press under notice.

3. With reference to the proposition contained in the same para. of your letter above quoted, I am directed to acquaint you that the Military Board has been requested, if possible, to procure the services of a qualified mechanic to be employed, under Mr. Simpson, in superintending the details of the machinery used in cleaning and packing the cotton produced in Khandeish.

4. The Governor in Council is pleased to approve of the mode of adjusting Mr. Simpson's travelling allowances, proposed in the postscript to your letter.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

Bombay Castle,
20 March 1847.

EXTRACT Revenue Letter from the Court of Directors to the Government of Bombay, dated 8 September (No. 17) 1847.

6. WE approve of the arrangement which, as a temporary measure, you adopted on the coming away of the American planters, Messrs. Mercer, Blount and Hawley, by appointing Mr. Simpson superintendent of the cotton experiments in Broach and Khandeish. The difficulties, however, in travelling from Broach to Khandeish, as shown in the letter from Mr. Young, Acting Collector of Khandeish, dated the 5th March 1847, are so great that it is impossible that the experiments in the latter province can be efficiently superintended by a person habitually resident in Broach, and the results of the measures hitherto pursued in Khandeish have been so satisfactory that we shall be glad to learn that you have been again able to place them under a distinct superintendent.

7. Messrs. Mercer, Blount and Hawley, on their arrival in this country, addressed to us letters* in which they complain of the manner in which their allowances have been adjusted by your Government. We transmit to you copies of their letters and of our replies, from which you will perceive that we have considered Messrs. Mercer and Hawley entitled to the gratuity of 150 rupees per mensem from the date of their respectively joining their station in Dharwar to the date of their quitting it, and that we have caused the amount due to them, after deducting the sums already received by them on that account in India to be paid to them here. We have also granted Mr. Hawley the sum of 500 rupees as a reward for his services under the Madras Presidency. We have considered Mr. Blount to be entitled to the gratuity of 150 rupees per mensem for the period during which he was employed in Khandeish, and have caused the amount to be paid to him here.

8. We have awarded to Mr. Mercer a salary of 700 rupees per mensem for the period during which he held the appointment of Superintendent of cotton experiments at Broach, and we desire that on his return to Bombay you will cause his allowances to be adjusted at that rate, and you will pay to Mr. Mercer whatever amount may be found to be due to him.

9. We have informed Mr. Mercer that on his return to Bombay he will be allowed a consolidated salary of 700 rupees per mensem, to include all allowances whatsoever, except five rupees per diem when travelling beyond the limits of the district to which he may be attached, for two years certain, and until your Government may think proper to dispense with his services.

10. We have re-engaged the services of Mr. Blount, for two years certain from the 1st January 1848, or from the date of his arrival in India, on the same terms which have been granted to Mr. Mercer.

11. Mr. Mercer and Mr. Blount have both visited Manchester during their stay in this country, and the result of their operations in Dharwar and Khandeish has been so satisfactory to the cotton spinners and manufacturers of that district, that, as we have reason to believe, large orders have been already transmitted to Bombay for clean saw-ginned cotton. It is most desirable that the means of enabling the cultivators to execute these orders satisfactorily should not be wanting, and we have accordingly taken measures for supplying you, with the least practicable delay, with 5,000 gin-saws, a sufficient number to make up 200 hand-gins of 25 saws each.

12. We believe that Mr. Blount will shortly proceed to Bombay, and that Mr. Mercer will return at an earlier period than he originally contemplated. It is most desirable that all the districts in which the cotton experiments are in progress, should be, as soon as possible, placed under efficient superintendence. We would accordingly suggest that Mr. Mercer should be replaced in the appointment which he held of Superintendent of cotton experiments in Broach, as we think that the energy and ability which he has hitherto displayed in overcoming obstacles may be advantageously employed in retrieving the ill success which

* From Mr. Mercer, Mr. Blount, and Mr. Hawley, dated 6 July 1847. To Mr. Mercer, Mr. Blount, and Mr. Hawley, dated 2 August 1847.

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which has attended your attempts to improve the cotton produce of that district; that Mr. Simpson, if he should consent to remain in India after Mr. Mercer's return, should be appointed to Khandeish, where he has been already employed; and that Mr. Blount should, immediately on his arrival, be despatched to take charge of the experiments in Dharwar.

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To James C. Melvill, Esq., Secretary to the Honourable Court of Directors
of the East India Company.

Sir,

COMING from India after more than six years' occupation in the cotton experiments there, and with the intention of returning to that country again, after the expiration of a year, for the further prosecution of the same object, I take the liberty of troubling you with a few words for the information of the Honourable Court on what has been accomplished in the experiments under my superintendence; also what seems to me to be necessary for their further prosecution to a successful issue, and also the position in which I desire and think I am entitled to be placed on my return to India.

As my operations in the province of Bundelcund had no permanent result, I will not touch upon that portion of their history, but begin with the commencement of the experiments in Dharwar after my removal to Bombay. I arrived at Dharwar in April 1843, and began operations on a farm, in which I planted several fields of New Orleans and Broach cotton, amounting to about 75 acres, cultivating them chiefly with the American plough and field hoe. I also prevailed on several ryots to plant some New Orleans seed, to be cultivated with their own implements. Having procured from the branch establishment four hand saw-gins sent out by Mr. Laird, of Liverpool, which had been laid aside by the superintendent at Broach as unsuited to the country, these I altered, or rather remodelled, and set to work, with which the crop of farm cotton and the New Orleans produced by the ryots was expeditiously and satisfactorily cleaned, besides some native cotton purchased for a merchant in Bombay. In 1844 I entirely laid aside the American implements, finding the native ones better adapted to the country, being borne out in my opinion upon this subject by that of Mr. Hawley, who had joined me from the branch establishment. This year we took two farms, in different parts of the district; and as with the native implements we were able to cultivate much more land to the pair of bullocks than with the American plough, I divided my establishment, giving one part to Mr. Hawley and the other to Mr. Channing, an assistant who had been placed under me on my first going to Dharwar, I myself being occupied in encouraging the introduction of the American plant among the natives, and in having additional gins altered and prepared for work. The result of the crop was so satisfactory to the natives, that we found them most ready, and in some instances anxious, to take up the new cultivation in the succeeding season. The yield of the farm under Mr. Hawley's superintendence was very large for India, being a little more than 100 lbs. of clean cotton per acre, and which afterwards brought in Liverpool from 6 $\frac{1}{2}$ d. to 6 $\frac{1}{4}$ d. per lb. The farm under Mr. Channing being in a drier part of the district, the plant, too, having suffered more there than usual from worms, the crop was not so good. In 1845 we abandoned altogether the farms, and engaged with the native ryots to cultivate on contract for Government to the extent of 700 or 800 acres. Mr. Hawley superintended this part of the experiment, and I was engaged with further extension of the gins, and in purchasing the cotton grown by the ryots and cleaning it. Mr. Channing had been, in the meantime, sent over into Belgaum to start a farm there. The total quantity of New Orleans cotton planted in this year amounted to upwards of 10,000 acres, and the total crop gathered was nearly 700 candies of 7 cwt. This cotton was in Bombay, preparing for shipment, when we left on the 1st May last, except about 140 candies sold by auction in April last, at the Custom-house in Bombay, and which brought 113 rupees per candy. It only cost Government about 82 rupees. In last year (1846) it was considered no longer useful to plant on account of Government, and our whole efforts were directed to the extension of the culture among the natives, and to procuring saw-gins for cleaning. To facilitate this latter, I determined on attempting to manufacture machines myself, with saws which I had procured from Broach, and, if possible, create a manufactory with native workmen on the spot. In this I succeeded beyond my hopes, having made machines more efficient than any which have been imported, and at a cost of less than one-half. For the efficiency of these machines I would beg to refer to Captain Wingate's report. The establishment of workmen which I left at Dharwar is able to go on manufacturing to any extent, if kept under proper supervision, and is supplied with saws from this country. As the thing progresses they will continue to get cheaper. The gins were wholly in the hands of the native dealers in that district, and the entire crop of this season, amounting to between 20,000 and 30,000 acres, is being bought by them and ginned on their own account, they hiring the machines from Government for the purpose. In November last Government appointed me to the superintendency in Guzerat, in succession to Dr. Burn. I joined and remained till the 10th of March. While there I found no difficulty in having hand-gins made up, which worked equally as well as those made up in Dharwar; and although it has been often said that these machines were totally unsuited to that district, I found nothing more to prevent their successful introduction there than elsewhere. Government, at my suggestion, consented to give up the expensive and useless farm at that place, and

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and to allow me to turn the whole resources of the establishment to the introduction of hand-gins and to cleaning native-grown cotton, both with them and in the large bullock-ginning factory already in operation there. In regard to what should be done for the further prosecution of the experiment by Government, it seems to me the question of improvement in the cultivation is set at rest. The natives of Western and Central India already know thoroughly well how to cultivate, and actually practise the American method with some slight modifications, and with implements adapted to the peculiarities of Indian soils and climate. The great defect in Indian cottons, from the Bombay side particularly, is not owing to its inferior nature or the result of its culture, but to its bad handling after the work of cultivation is done, and, indeed, of the actual and intentional adulteration it undergoes from the time it is extracted from the pod till it reaches the hands of the manufacturer. To remove this defect then, we must commence at the point where cultivation ceases. The introduction of the saw-gins, therefore, which have been proved sufficient to remedy this defect of careless gathering to a large extent, is the main point, and the only one, I conceive, in which the efforts of Government can be any further legitimately and usefully employed in this particular direction. There are, no doubt, other very important questions connected with the subject in general, such as the making of roads, &c., which would have a beneficial influence on the extended culture; but on these it is unnecessary for me to give an opinion. The introduction of capital into the cotton districts will, without question, do as much nearly as the gins; but for that we must look to the mercantile and manufacturing community; and Government has very liberally allowed me to do what I could to induce them to embark in the enterprise. With a view, therefore, to the extensive spread of saw-gins in the cotton district, I recommend that the residency of Bombay be divided into three districts, viz., the Southern Mahratta country, Khandeish, and Goozerat. Let each be under the superintendence of one of the American planters, and in each let there be an establishment for the manufacture of hand-gins; let them be supplied with material for making machines to any extent that they would be able to induce the people to use them; or, in other words, to any extent they would be purchased or hired by the dealers in cotton. With these measures I feel satisfied, in three years more, Government will be able to let the thing fall entirely into private hands, with the satisfaction of seeing a great improvement fully established and progressing in the cotton trade of Western and Central India. With reference to what I consider myself entitled to for the past, and expect for the future, I must first state that the gratuity, as fixed by the Honourable Court, was not allowed to me by the Government of Bombay, in accordance with the terms of my contract. This promises me an annual gratuity, to take place after the first crop is made, which success is attained. The Bombay Government only allowed me the gratuity which the Honourable Court have fixed at 150 rupees per mensem for two years. I consider myself fully entitled to it from the commencement of my operations in Dharwar, in May 1843, which would have been for three years and ten months, or one year and ten months more than I received. Next, I expected, on my appointment to the Broach superintendency, to draw the pay of that appointment, viz., 700 rupees per mensem, and to draw the gratuity, whatever it should be, additional, with the usual travelling allowances; instead of this, however, I found my actual pay no more than it was at Dharwar, Government not allowing me to draw the pay of the appointment, but only 360 rupees, the amount of my pay at Dharwar, without the batta, and the gratuity of 150 rupees. I trust, therefore, that the Honourable Court will allow me to draw 700 rupees, the pay of the appointment, the gratuity of 150 rupees, and the travelling allowances of 150 rupees per mensem or 5 rupees per diem, making, altogether, 1,000 rupees per mensem. This may appear high pay, but as I have no other certainty than it to look to, no final pension or allowance, and as the experiment will only continue two or three years longer, and my pay has been too low to enable me to save much from it, heretofore my object in leaving my own country, I trust it will not be considered unreasonable, and therefore trust the Honourable Court will grant it, and rely on my zealous services in carrying out this experiment to a still more successful result.

32, Bury Street, St. James', London,
6 July 1847.

I have, &c.
(signed) W. R. Mercer.

Sir,

East India House, 2 August 1847.

In reply to your letter of the 6th ultimo, soliciting that some addition may be made to the remuneration assigned to you by the Government of Bombay for your services in the experimental cultivation of cotton under that Presidency, and stating the amount of salary which you expect to receive on your return to India, I am commanded by the Court of Directors of the East India Company to acquaint you with the decision which they have passed on your application.

The Court consider that the success obtained by you in Dharwar was the result of the industry and energy with which you applied yourself to your duties from the time of their commencement, and they are therefore willing to allow you the gratuity of 150 rupees per mensem for the whole period of your employment in that district. The Court believe that you joined your appointment in Dharwar on the 21st April 1843, and left it on the 10th December 1846, on your being nominated to the situation of Superintendent of cotton experiments in Broach. For this period the amount of gratuity would be 6,545 rupees, and

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 753

and deducting the sum of 3,600 rupees, which you have received in India, there remains 2,945 rupees; or, at the exchange of 2s. the rupee, 294*l.* 16*s.*, for which amount a warrant has been made out in your favour, which you may receive on application at the Treasury in this House.

With respect to your allowances as Superintendent of cotton experiments at Broach, the Court are willing to grant you the salary of 700 rupees per mensem, which was drawn by your predecessor in that situation, and which has been granted to Mr. Simpson, who now holds the appointment; and the Court will instruct the Bombay Government to readjust your allowances at that rate, and to pay you whatever may be found to be due to you on your return to India.

The Court are prepared to allow you, on your return to your duties in Bombay, a consolidated salary of 700 rupees per mensem, to include all allowances whatsoever; except 5 rupees per diem when travelling beyond the limits of the district to which you may be attached, for two years certain, and until the Government of Bombay may think proper to dispense with your services.

W. R. Mercer, Esq.,
32 Bury-street, St. James's.

I have, &c.
(signed) James C. Melvill,
Secretary.

To J. C. Melvill, Esq., Secretary to the Honourable Court of Directors of the East India Company.

Sir,

London, 6 July 1847.

BEING, on my return from India, after near seven years' employment in the cotton experiments, both in the Presidencies of Bengal and Bombay, I wish to offer a few remarks as to the progress of the experiments under my charge, as well as to state some matters connected with remuneration for my services, which were refused me, but to which I consider myself as justly entitled, in the hope that my claims may meet with a more favourable consideration from the Honourable Court of Directors.

Until February 1845 I was employed in the Bengal Presidency in endeavouring to introduce the American cotton plant; it is scarcely necessary to give, in detail, the result of each season's operations, but simply to state that I was unsuccessful in getting the American plant to produce a quantity of cotton that would remunerate for its cultivation; this I was convinced of after the first season, and would, had I been left to my own judgment, have given it up, and applied my efforts towards the improvement of the indigenous plant. In Bundelcund the cause of the failure of the American plant was owing, not so much to the insufficiency of the rain during the monsoon, but to a want of moisture at an age at which the plants required it most, and to extreme heat, which caused the plants to drop most of their fruit; and what remained on the plant was almost invariably attacked by insects, which caused the pod to open before it had arrived at maturity, and thereby rendered the produce inferior. The indigenous cotton plant was subject to none of these casualties, or was influenced but slightly by them; and had my efforts been directed towards its improvement alone, together with the introduction of the gin machinery for preparing the cotton for market, I am persuaded the same results would have been attained that has attended the introduction of the experiments in the Bombay Presidency.

In the Goruckpore district, where I carried on the experiments for two years, although a much cooler and more moist climate, the results could only be called a failure; the plant grew finely, but was in both years, during the month of September, entirely destroyed by caterpillars. It did, however, after the setting in of the cool weather in October, reproduce, but not in sufficient quantities to pay for its cultivation. With such results it could not be expected that the native would enter into its cultivation, and I therefore recommended the discontinuance of the experiments in that district. In February 1845 my services were transferred to the Bombay Presidency, and I was ordered to proceed to the Khandeish Collectorate, where I arrived in May, and immediately recommended to Government a plan for establishing the experiments there, which was to try exotic plants only on a limited scale, merely to test their suitableness to the climate, and to allow me to devote my services towards the improvement of the indigenous cotton of the district, and to the introduction of the saw-gin for cleaning it, as I was convinced, from my experience, that it only required more attention to the gathering of the crop, and the introduction of better machinery for cleaning it, to secure for it a favourable reception in the English markets, the quality of the cotton itself being, in fact, but little if any inferior to American uplands. During the season of 1845 my suggestion was not entirely sanctioned, but I was authorised to purchase a quantity of cotton from the ryots, which was cleaned on the gins and dispatched to Bombay; but which, I believe, has not yet reached this country. The gins were not fully employed on the cotton purchased for Government, and it was therefore my endeavour to induce the natives to bring forward their cotton for cleaning; in this I was successful, and prepared for a native dealer a quantity of cotton for which he was offered in Bombay 10 rupees per candy above the marketable value of the cotton of that district. He subsequently shipped this cotton to Liverpool, and it brought him an advance of price over his shipments of cotton cleaned by the churka. The result of this sale induced him to make me a written application for the purchase of the gins at the Julgaun factory. In the season of 1846 I planted, by contract with the ryots, near 700 acres of native cotton, and about 50 of American.

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rican. This cultivation was scattered over a wide extent of the district, particularly the American plant, which turned out, as in the case of its cultivation in Bengal, entirely unsuited to the climate of the district, and the quantity of the cotton secured so small as not to return a tenth of the cost of its cultivation. The produce of the native plant, taking the average, it being planted on lands of all descriptions, was a good one, 300 lbs. of cupas per acre, or near 75 lbs. of clean cotton. This cotton was nearly all cleaned previous to my departure from the district; and a portion of it, sold at public auction in Bombay, brought 132 rupees per candy, an advance of from 40 to 50 rupees over the quotations for the best descriptions of native churkaed cotton. This season the prejudice of the native to innovation of old customs has been so far removed, by seeing the machine in operation, and becoming acquainted with the facility, cheapness, and superior cleanliness of the cotton when cleaned by the saw-gins in comparison with the churka, that large quantities were offered to me by them for cleaning; and in several instances dealers who had come from Bombay, with a view of purchasing and getting their cotton cleaned by the gins, refused to invest their money, when informed that the gins were in such constant employment on account of Government, that they could not be placed at their disposal. I think I am safe in asserting that I could have kept 50 gins in operation last season cleaning cotton, not for Government, but for native dealers alone. I consider the initiation of the saw-gin into the district of Khandeish as fairly established by the result of these two years' operations; all prejudice to their use is removed, and it only requires a further prosecution of the experiments for a few years longer under competent superintendence. The establishment of a manufactory for gins in connexion with the experiments is, I consider, absolutely necessary to the permanent establishment of the use of the machines in the district. A class of mechanics would thus be created for their manufacture, so as to render the natives independent of foreign countries either for a supply of new gins or for repairing them. The introduction of presses for screwing the cotton at one or two central positions would also be of immense benefit, as I think it would not only have a tendency to cheapen transportation, by rendering the packages less bulky, but would entirely obviate all chance of adulteration whilst in transit to the coast, and eventually, I think, they would be disposed of with no loss to Government.

In the first part of this letter I stated that I had not received that remuneration for my services which I considered myself entitled to, and I therefore wish to state wherein I think myself aggrieved, in the hope that the Honourable Court will award to me what I consider my due. On my arrival in Bengal, my allowance, in addition to salary, was fixed at 30 rupees for horse allowance and 80 for tent, making my whole pay per mensem 360 rupees. These allowances I was assured by Captain Bayles, who was at that time superintendent of the experiments, would be continued to me during the term of service for which I was engaged, and that it was given as an equivalent for privileges usually enjoyed by managers of estates in America (viz. use of house, furniture, servants, and board), but which it was not advisable to stipulate for in my agreement, as the amount could not be fixed at a definite sum; but that a sum sufficient to cover such expense would be allowed by the India Government, and a further allowance whenever it should be necessary for me to travel on business connected with the experiment. These allowances were continued to me until November 1843, at which time, during Lord Ellenborough's administration, the allowance of 80 rupees was ordered to be discontinued; and until February 1845, at which time my services were transferred to the Bombay Presidency, a space of 15 months, it was withheld from me; thereby reducing my pay to 280 rupees per mensem, or a reduction amounting in the aggregate to 1,200 rupees, which amount I hope the Honourable Court of Directors will award me here.

For the success that has attended my efforts in introducing and establishing the experiments in the district of Khandeish, I am entitled to a gratuity of 150 rupees per mensem (the same as given to the other planters in that Presidency), for 21 months, the time I was actually engaged in that Collectorate, but which gratuity was refused me by the Bombay Government. I hope the Honourable Court, taking into consideration what I have done towards the introduction of the experiments in Khandeish, will be pleased to grant me this gratuity. My duties were as arduous, and the difficulties to be encountered and removed as great, as in the other parts of the Presidency; the gins sent to the district were extremely faulty, and several parts of them had to be reconstructed and otherwise altered by me so as to render them efficient for cleaning the indigenous cotton, and were so successfully worked as to remove all prejudice on the part of the natives to their use. And to render the further extension of the use of the gins for cleaning the cotton crop of the district certain, I wish to state, that I am willing to again place my services at the disposal of the Honourable Court for the further prosecution of the experiments, should they be required, and will engage to be in India on or before 1st of January 1848, which will be in time for cleaning the present growing crop. I should, however, expect to have my pay for future services raised to 700 rupees per mensem, and to draw the same allowance as heretofore granted whilst in the employment of the Bombay Government.

Messrs. Grindlay & Co.'s Rooms,
8, St. Martin's Lane, Charing Cross.

I have, &c.
(signed) John M. Blount.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 755

III.
Bombay.

Sir, East India House, 2 August 1847.
IN reply to your letter, dated the 6th ultimo, soliciting that some addition may be made to the remuneration assigned to you by the Government of Bombay for your services in the experimental cultivation of cotton in India, and offering to enter into a new engagement for similar employment, I am commanded by the Court of Directors of the East India Company to acquaint you with the decision which they have passed on your application.

The Court cannot admit your claim to the allowance of 80 rupees per mensem, which was assigned to you on your first employment in the North Western Provinces of Bengal, and subsequently discontinued, as they consider that allowance to have been properly withdrawn.

They are, however, willing to grant you a gratuity at the rate of 150 rupees per mensem, for the period that you were employed in Khandeish; and as it appears that you joined your appointment in that district on the 15th May 1845, and quitted it on the 1st March 1847, the amount due to you under this decision will be 3,235 rupees, or, at the exchange of 2 s. the rupee, 323 l. 10 s., for which amount a warrant has been made out in your favour, which you may receive on application at the treasury in this House.

The Court are prepared to accept the tender of your services for two years certain, from the 1st January 1848, or from the date of your arrival in India; and they will assign you, for that period, a consolidated salary of 700 rupees per mensem, to include all allowances whatsoever, except five rupees per diem when actually travelling beyond the limits of the district to which you may be attached.

I am, &c.
(signed) James C. Melwill, Secretary.
J. M. Blount, Esq.,
Messrs. Grindlay & Co., 8, St. Martin's Lane,
Charing Cross.

To James C. Melwill, Esq., Secretary to the Honourable Court of Directors of the East India Company.

Sir, London, 6 July 1847.
HAVING just returned from India after being a long time there engaged in assisting to improve the culture of its cotton, I take the liberty of bringing to your notice a circumstance connected with my remuneration, in which I think the Government of Bombay have misinterpreted the extent of my claim under my contract with the Honourable Court of Directors.

It is promised in that to give me an annual gratuity, to take effect after the first crop is made in which success is attained. This took place in the first crop I made at Dharwar, in 1844, which would have entitled me, therefore, to receive it for three years; that is, from the commencement of my operations at Dharwar, in May 1844, up to my leaving India, in May 1847.

The Bombay Government, however, only awarded it to me for two years; I trust, therefore, that it will please the Honourable Court to allow me the gratuity for the other twelve months, as I have been able to save but very little of my salary, and am leaving the service in consequence of my advanced age and my constitution not being able to withstand the severe climate of India.

I also consider myself entitled to the same gratuity (viz. 500 rupees), the amount granted to the other planters in Madras, as that was distinctly promised me by the superintendent, Dr. Wight, when I consented to go to Bombay from that presidency. I append an extract from Dr. Wight's letter to me on the subject at the time:

"In regard to allowances, whoever goes will of course retain all he now has, have the whole of his travelling expenses from Coimbatore to his new station paid; and should the Bengal planter be allowed any thing extra, ours will have the same. To this I am authorised to add, that whoever goes does so, without prejudice to any advantage he may be expecting to derive from his success at Madras; that is, he will be entitled under all circumstances to the same amount of gratuity his friends in Madras receive; and in the event of success there, where hitherto it has been looked upon as more doubtful, he will become entitled to a more liberal reward than if he remained where it is no longer doubtful. In a word, I anticipate that should he succeed there, he will be held to have earned a double reward, from having twice succeeded under unpromising circumstances."

I have, &c.
(signed) Q. N. Hawley.
Messrs. Crawford, Colvin & Co.,
71, Old Broad-street, City.

III.
Bombay.

East India House, 2 August 1847.

Sir,

IN reply to your letter of the 6th ultimo, soliciting that some addition may be made to the remuneration assigned to you by the Government of Bombay for your services in the experimental cultivation of cotton in India, I am commanded by the Court of Directors of the East India Company to acquaint you with the decision which they have passed on your application.

The Court consider that the success obtained by you in Dharwar was the result of the industry and energy with which you applied yourself to your duties from the time of their commencement, and they are therefore willing to allow you the gratuity of 150 rupees per mensem for the whole period of your employment in that district. The Court believe that you joined your appointment in Dharwar on the 19th April 1844, and quitted it on the 10th February 1847. For this period the amount of gratuity would be 5,055 rupees, and, deducting the sum of 3,600 rupees, which was paid to you in India, there remains 1,455 rupees, to be paid to you in this country.

The Court also admit your claim to a gratuity of 500 rupees for your services at Madras, being the amount that was awarded to the other planters under that presidency.

For these sums, amounting together to 1,955 rupees, or, at the exchange of 2s. the rupee, to 195l. 10s., a warrant has been made out in your favour, which you may receive on application at the treasury in this House.

Q. N. Hawley, Esq.,
Messrs. Crawford, Colvin & Co.,
71, Old Broad-street.

I am, &c.
(signed) *James C. Melville*, Secretary.

No. 9 of 1848.—Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

Honourable Sirs,

WITH reference to paragraphs 24 and 25 of our despatch in this department (No. 19), dated 1st May last, we do ourselves the honour to transmit to your Honourable Court copy of a letter from the Revenue Commissioner of the Northern Division, dated 14th July last, submitting a report from Mr. Davies, the Collector of Broach, on the productive capability of cotton lands in that district, under the system of cultivation pursued by the ryots, compared with that shown in the result of the experiments conducted under the Superintendence of Dr. A. Burn.

2. Mr. Davies' calculations are ingenious, but would appear to be founded on data too conjectural to admit of being implicitly relied on. Their tendency, however, is to confirm the impression we were already disposed to entertain as to the little success of our attempts at improving the native mode of cultivating the cotton.

We have, &c.
(signed) *George Clerk*.
Willoughby Cotton.
L. R. Reid.
J. P. Willoughby.

Bombay Castle, 29 January 1848.

(No. 1146 of 1847.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Escombe*.

Sir,

I HAVE the honour to submit a letter, No. 141, of 5th instant, from the Collector of Broach, offering some remarks on the result of the Broach cotton experiment during Dr. Burn's superintendence, which I doubt not will be read with interest.

2. In taking the average of the four years' produce as the standard of the return from superior cultivation, allowance should be made for the unproductiveness of the sowing of the same crop for consecutive years, which must be viewed as experimental; but assuming even the rate of the highest year, if the expense be estimated as double, it would seem to be very questionable how far Dr. Burn's system of cultivation can be made remunerative.

Revenue Commissioner's Office, Poona,
14 July 1847.

I have, &c.
(signed) *D. A. Blane*,
Revenue Commissioner, N. D.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 757

(No. 141 of 1847.)

III.
Bombay.

To D. A. Blane, Esq., Revenue Commissioner, Northern Division, Poonah.

Sir,

HAVING, by direction of Government, quoted in the margin,* closed the experimental cotton farm at Kookurwara, in this collectorate, lately under the superintendence of Dr. Burn, I am desirous of recording some remarks, which have suggested themselves upon the results of that trial, which, as affecting the important question of cotton production in this district, will not, I hope, be considered importune.

2. The financial results of Dr. Burn's experiment are too well known to Government to need recapitulation; but as that officer would appear to have brought his operations to an end without recording the superior productiveness of his farm "under a better managed rotation of crops, keeping the land in a higher condition, to be brought about mainly by better cattle, better implements, and a larger expenditure of capital in working the land," contrasted with the results obtainable by the people at large upon their own scanty resources, I trust, that in following out the comparison purely for the sake of future application, I shall not be held desirous of reflecting in the slightest degree upon the general merits of Dr. Burn's experiment; my sole object being to secure a fair consideration towards the native growers, founded upon such data as the experiment at Kookurwara has bequeathed to us.

Letter of 2 August
1844, No. 100.

3. I need hardly premise that the trial was to be made upon the indigenous cotton of the country, though Dr. Burn appears to have been led into the anticipation of greatly surpassing the average results obtained by the native mode of cultivating it. These he estimated at 170 lbs. of "kuppas," or seeded cotton (equal to about 56 lbs. of cotton wool), to the beega † of land, while by his improved method of tillage, he calculated upon increasing the return to 250 lbs. of "kuppas," or about 83 lbs. of cotton wool; a reference, however, to the subjoined Statement, No. 1, conveys a refutation of this proposition; for, taking the results of each of the (4) four years' farming operations (1843-44 to 1846-47 inclusive), it will be seen that the average outturn of an unrestricted expenditure of time, capital, skill, and labour fell short of Dr. Burn's anticipations by a third, and that the quantity of cotton-wool sought to be obtained under all these advantages, fell to only 54 lbs. to the beega, being rather less than the average produce assigned at the outset to the comparatively unassisted ryot.

Letter to Govern-
ment of 23 January
1844, No. 13.
‡ 2,477 square
yards.

4. The following appears to have been the mode of Dr. Burn's farming operations. During the first (2) two years, 1843-44 and 1844-45, the whole of the lands at the farm (537½ to 560 beegas) were, with the exception of a trifling portion (23 beegas of grass land), put under cotton cultivation. The outturn of the first season was 60 ¾ lbs. of cotton-wool to the beega, the second year gave only 51 ¼ lbs. as the produce of the same land. In the third season (1845-46), Dr. Burn would appear to have been bent upon determining the question, whether greater labour and superior tillage could overcome the difficulty of raising cotton upon the same land during two or more consecutive seasons. The attempt is regarded very generally as impracticable by the people at large; and Major M. Williams records, in his notes upon Broach, the received axiom in the terms quoted in the margin.† If this was really Dr. Burn's object in continuing about two-thirds of the land at Kookurwara under cotton during the third season, the result showed most clearly that the general opinion was well-founded. In this year the amount of cotton-wool obtained was but 32 lbs. to the beega, or little more than half the quantity had from the first year's crop. It should be considered, moreover, that the land during these successive efforts may safely be presumed to have undergone every stimulative process known to the experienced superintendent of the trial, a process placed far beyond the reach of the ryot, whose only restoratives for his exhausted land are rotation of crops, and occasional rest.

5. During the last season, 1846-47, of the experiments, the farm derived the advantage of having had upwards of one-third (194 beegas) of its land converted into grain during the previous year, and even this extent of relaxation fully justified the benefits of the rotation system. The crop of cotton wool obtained per beega during this last season, averaged 72 ¾ lbs., and the cotton is pronounced to be of a superior kind. To return, therefore, to the general result of the experiment at Kookurwara, the average outturn of the four years amounts to 54 ¾ lbs. of cotton-wool to the Broach beega.

6. To compare this amount of produce with that which the restricted means of the ryots enable them to obtain, would, under authentic data, be highly desirable; neither are such data wanting; they may be found to a great, various, and detailed extent in the annual "kurebunds,"

* Government letter, No. 446, of 24 February 1847.

† "Kuppas is seldom sown more than once in three years in the same ground; to repeat it oftener, would be attended with no immediate advantage, and with certain prospective loss; a second year's crop does not turn out more than one-half that of the first," p. 42.

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No. 26 of 28 January 1847.

"kurebunds," or returns showing under the former mode of settling the yearly jumma; the estimated produce of the Tulput, or Government lands, as ascertained by the stipendiary and hereditary revenue officers. Derived from these compilations, I have elsewhere assumed (if it is permitted me to refer here to a letter quoted in the margin, addressed upon the subject to the chairman of the late cotton committee), that a Broach beega yields, upon a general average of soils and of seasons, from 111 to 120 seers of "kuppas," or seeded cotton, equal to from 37 to 40 lbs. of cotton-wool. Extract of the letter referred to, viz., paras. 11 to 13 inclusive, is subjoined, accompaniment, No. 3, to which I respectfully beg to refer you.

7. To test this assumed average amount of production, there is another source available in the returns of cotton exported from the ports of the Broach Collectorate, which (as production and exportation have become synonymous terms), reserving a trifle for cotton retained in the zilla for domestic manufacture, may be held to form a tolerably accurate criterion. With a statement of this description, comprehending a period of (12) twelve years, I have been favoured by the Deputy Collector of Continental Customs and Excise, and to which (marked No. 2) I would beg to refer you. To the returns of the cotton exported, I have added a column showing the extent of cotton cultivation in Broach during the same years; and the column of remarks gives the calculation to which I am about to refer.

8. Mr. Jones's statement does not distinguish the cotton produced in the zilla from that grown in the neighbouring Baroda territory, nor from that imported from territories beyond Baroda, though the latter is inconsiderable, all of which, notwithstanding, finds its way to the ports of Broach. Neither do Mr. Jones's returns show (it is impossible, indeed, that they should) the portion of cotton raised upon the alienated lands within the collectorate, although the latter are very inconsiderable in extent. I have, however, spared no pains to arrive at a correct opinion upon these points, and have been materially aided in this endeavour by the officer just named, and by his native deputy at Broach. (The result of my own inquiries tallies very much with the estimate given in Mr. Jones's letter (copy of which is appended, accompaniment, No. 4), viz., that a full moiety of the entire quantity of cotton yearly exported from the ports of Broach and Tunkaria may be set aside as the growth of foreign territory. My estimate, however, includes in the foreign cotton the produce of the alienated lands of the collectorate. On the other hand, the opinion quoted by Mr. Jones of Hurreebhae Oomeashunker, dufturdar of Surat, and a very competent judge of the question, leans to one-third as representing the proportion of cotton assumed to be imported from foreign territory, although this is exclusive of the produce raised upon domestic alienated lands. A medium estimate therefore between these two extremes would probably approach the truth as nearly as the absence of actual data will permit.

9. The quantity added on account of cotton converted into country manufacture I have taken at five per cent. upon the assumed produce of the collectorate. This may be considered high, indeed, under the present condition of native manufacture, which scarcely exists throughout the towns and villages of the interior. In Broach itself and its immediate neighbourhood it still survives to an inconsiderable extent. The sails of the country vessels employed in the coasting trade continue to be made of home-spun cloth, as well also as a few kinds of coarse fabrics, in which strength and durability outweigh with the agricultural and labouring classes the superior appearance and cheapness of British manufacture. To these may be added, though to an exceeding trifling extent, the manufacture of table linen adapted to European taste, and the consumption of a small quantity of the raw material in stuffs prepared in the gaol, such as prisoners' clothing, peons' belts, &c. &c.

10. Assuming, therefore, the data given in the Statement, No. 2, there appears to have been, during the 12 years quoted, an average annual exportation of cotton from Broach of 2,06,726 Indian maunds. The same statement gives the annual average cultivation of cotton (in Government lands) at 2,67,676 beegas; from this let ($\frac{2}{5}$) two-fifths, as a compromise, be deducted for cotton, foreign grown, including the produce of the alienated lands of the zillah, and there will remain 1,24,036 Indian maunds as the exported produce of the Tulput, or Government lands; to this quotient add five per cent., or 6,201 Indian maunds for cotton retained for home manufacture, there will then remain 1,30,237 Indian maunds to represent the average crop of Government lands. Converted into pounds avoirdupois, at $82\frac{1}{2}$ to the Indian maund, this quantity would amount to 1,07,16,551 lbs., which, divided by 2,67,676 beegas, would give about 40 lbs. to the beega, as the average production of the soil.

11. I am far from upholding the infallibility of these data, though I have done my best to submit them in as fair a shape as possible. Taken together with the result of working up the other class of data before alluded to, I am, however, respectfully of opinion, that a comparison sufficiently probable for practical purposes has been arrived at of the average produce of the Broach cotton lands, under two very different aspects; viz., under the fostering application of scientific management, backed by unlimited means, and under the humble thrift and comparatively stinted appliances of the poor peasant; and if, in endeavouring to draw the comparison, I shall be held to have thrown any light, however faint, upon the subject, or to have added anything, however slight, to the data already in existence regarding this important product, I shall consider myself fortunate in having touched upon the question, abrupt as the mode of doing so may perhaps appear.

12. Placing

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12. Placing these results in juxtaposition, therefore, we have 54 lbs. of cotton-wool to the beega, the result of four years of an expensive farming experiment, against what would appear, from different sources, extending over 12 years, to be the average amount; viz., 40 lbs., yielded by the soil of Broach, under ordinary circumstances, that is to say, less by about one-fourth, though Dr. Burn estimated that of tillage his mode was at least twice as expensive as that of the common ryots. If, then, the farm may in itself be looked upon as having failed in attaining the specific objects held out at its commencement, it will not have been altogether without its useful lesson, in teaching us, when regulating the public demands upon them, not to over-estimate the produce of the district at large, nor the productive powers available to the people for raising this important article of commerce.

Collector's Office, Broach,
5 July 1847.

I have, &c.
(signed) J. M. Davies,
Collector.

ABSTRACT STATEMENT, No. 1, exhibiting the Extent of Land cultivated with Cotton at the Broach Experimental Farm, in the Years 1843-44, 1844-45, 1845-46, and 1846-47, and the Amount of Cotton Wool Produced, and the Average of the same per Broach Beega and English Acre in Avoirdupois.

Season.	Extent of Beegas of 2,477 Square Yards.	Proportion of Beegas cultivated with Cotton and other Product.	Amount of Cotton Produced.				Average Weight in Cotton Wool.	
			Native Weight of Kuppas.			English Weight in Cotton Wool.	To the Beega.	To the English Acre.
			Bhars of 20 Durries.	Durries of 48 Seers.	Seers of 9,333 lbs.			
1843-44	583 ½	Cotton beegas - - - 560 ¾	108	5	12	34,001	68 ½	118 ½
		„ acres - - - 287 ½						
		Grain and pulse - - - „						
		Grass - - - - - 23						
1844-45	577 ½	Cotton beegas - - - 537 ½	86	1	15	27,486	51 ½	100
		„ acres - - - 275						
		Grain and pulse - - - 10						
		Fallow - - - - - 7						
		Grass - - - - - 23						
1845-46	577 ½	Cotton beegas - - - 360 ½	36	4	3 ½	11,638	32 ½	63
		„ acres - - - 184 ½						
		Grain and pulse - - - 194						
		Grass - - - - - 23						
1846-47	577 ½	Cotton beegas - - - 396 ½	90	11	18	23,870	72 ½	142 ½
		„ acres - - - 203						
		Grain and pulse - - - 158						
		Grass - - - - - 23						
TOTAL -	2,316 ½	Cotton beegas - 1,185 ½	321	2	-	1,01,995	54 ½	105 ½
		„ acres - - - 950						

Collector's Office, Broach,
5 July 1847,

(signed) J. M. Davies, Collector.

760 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

STATEMENT No. 2, showing the Extent of Cotton Cultivation for 12 Years in the Broach Collectorate, and its Proportion to other Products; also the Cotton Exported from Broach during the same Period.

Seasons.	Extent of Cultivation in Beegas of 2,477 Square Yards.		Total Beegas.	Per Centage of Cotton to whole Cultivation.	Cotton Wool Exported from Broach from 1st January to 31st December in Indian Maunds.	REMARKS.
	Cotton.	Other Products.				
					<i>S. Dec.</i>	
1834-35	1,98,015	3,92,698	5,90,693	33	2,46,673 15 60	
1835-36	2,74,609	3,68,232	6,42,841	42	90,777 20 0	Average amount exported - 2,06,726
1836-37	2,42,086	3,42,233	5,84,319	40	2,15,454 28 0	Deduct (?) two-fifths for foreign growth - - - 82,690
1837-38	2,81,667	3,28,328	6,09,995	46	1,22,038 10 60	Remaining - - 1,24,036
1838-39	3,22,640	2,64,803	5,87,443	54	2,04,871 4 20	Add 1/5th for home manufacture - - - 6,201
1839-40	3,07,591	3,10,804	6,18,395	49	1,72,305 25 40	Remaining for Broach } 1,30,237
1840-41	2,89,182	3,21,693	6,10,875	47	3,12,491 36 40	
1841-42	2,59,499	3,69,285	6,28,784	40	2,41,783 9 60	Reduced to lbs. avoirdupois, at 82,285 lbs. to Indian maund, 1,07,16,551,545 lbs.
1842-43	2,68,760	3,72,250	6,41,010	40	2,55,582 2 0	Divided by the average number of beegas cultivated with cotton, viz. 2,67,676) 1,07,16,551,545 (40 lbs. to the beega nearly.
1843-44	2,17,546	4,08,216	6,25,762	34	2,75,536 5 40	
1844-45	2,73,480	3,46,525	6,20,005	44	1,38,024 39 20	
1845-46	2,77,043	3,33,895	6,10,938	45	2,05,172 23 20	
	32,12,118	- - -	- - -	- - -	24,80,711 0 0	
Average	2,67,676	- - -	- - -	- - -	2,06,726 0 0	

Collector's Office, Broach,
5 July 1847.

(signed) J. M. Davies, Collector.

Accompaniment, No. 3.

EXTRACT of a Letter from the Collector of Broach to the President of the Cotton Committee, dated 28th January 1847, No. 26.

Para. 11. IN so extensive a cotton-growing district, possessing soils of considerable variety of fertility, it may be considered difficult, perhaps, to say what should be considered an average crop of cotton to the beega. I have, however, spared no pains to ascertain this, and in assuming 2 1/2 "durrees" of "kuppas" (equal to 40 seers, or 39,199 lbs. of cotton), for all soils and in all ordinary years, inclusive of course of years of partial failure, I do not think that I am far wrong. The marginal extract* from Major Williams' valuable statistical memoir proves that that officer estimated eight "durrees," or 384 seers of kuppas to the koombha in 1817-18, "when the crops were uncommonly good." The koombha is as 187 to 100 compared with the Broach beega, and therefore the proportion to the latter would be, under similar circumstances, 205 seers of kuppas. This may be regarded, therefore, as a high average in Jumboosur.

12. On the other hand, a reference to the paper marked Accompaniment, No. 1, in which the average of three villages of Oclesur purgunna is given in successive years (the villages being taken with reference to their respective classes in point of fertility) will show that the average

* The whole of the kuppas, or uncleaned cotton, produced in the Jumboosur purgunna in the season 1817-18 was taken by the commercial department; it amounted, both from the Government and alienated lands, to 7,468 "bars"; the price paid for it was 67 1/2 rupees per bar, and therefore the sum brought by this article of the produce of the purgunnah came to 5,05,957 rupees. The cotton crops of that season were uncommonly good, and it may be assumed that the lands produced at the rate of eight durrees, or 391 pounds "of kuppas" per koombha.

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average of this purgunna is not equal to that of Jumboosur. In 1837-38, a fair year, the estimate of the village Undara (1st class) was given at - 228 seers.
Soorwaree, a second class village - 196 "
And Awadur, a third class village - 137 "
3)561 "
of which the mean is - 187 seers.

In 1839-40, when the produce of cotton was never probably finer, the same village Undara, was rated at - 234 seers.
Soorwaree - 166 "
And Awadur - 128 "
3)528 "
or a mean of - 176 seers.

While in the intermediate year 1838-39, a very bad one,
Undara gave - 86 seers.
Soorwaree - 117 "
And Awadur - 25 "
3)228 "
or only upon an average per beega - 76 seers.

13. Then again, while Broach and Wagra purgunnas may be justly held to be of a higher productive standard than Oclesur (probably equalling Jumboosur), yet the purgunna of Hansote is below them all in growing cotton. Moreover, the actual returns (Kurebunds) of 45 villages of every district but Jumboosur, taken for three years, together give but 111 seers of "kuppas" as the average produce of a beega (see column 7 of General Statement). In adopting, then, the average of 120 seers of kuppas to the beega, I do not, I conceive, widely depart from a fair mean, not only of all soils, but of all seasons.

(True extract).
(signed) J. M. Davies, Collector.

Accompaniment No. 4.

EXTRACT of a Letter from the Deputy Collector of Continental Customs and Excise, dated 21st June 1847, No. 210.

Para. 3. I have no means of ascertaining with any accuracy the quantity of foreign cotton exported through the bunders of your zilla. Last year the Sir Carcoon reported to me, that, from the best information he could get from the merchants of Broach, he understood it amounted to rather more than half the quantity exported; but, speaking on the subject a few days ago to Hurreebhaee, the duffurdar of the Surat Collectorate, who is well acquainted with the Broach zilla, he told me that he thought not more than one-third of that exported was the produce of foreign territory.

(True extract).
(signed) J. M. Davies, Collector.

Territorial Department, Revenue, 12th April (No. 28) 1848.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WE do ourselves the honour of transmitting* to your Honourable Court our Cotton experiments proceedings connected with the resignation of Mr. Simpson, Superintendent of the

* Reporting the resignation of Mr. Simpson, superintendent of cotton experiments in Khandeish and Broach, and the receipt of two applications from a Mr. James Landon for the assistance of Government in introducing extended and improved means of cleaning, &c. cotton. Rev. Cons. 1848; 29 March; v. 3558 to 3561.

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the Cotton Experiment in Khandeish and Broach, and with two applications which we have received from a Mr. James Landon, soliciting the assistance of Government to his efforts in introducing into this country extended and improved means of cleaning cotton, and bringing it to market.

2. In the letter from this department, No. 35, dated 17 July 1846, your Honourable Court were informed of the engagement by this Government of Mr. Simpson (on the termination of his stipulated period of service under the Madras Government) for employment as a cotton planter, which was approved in your despatch No. 20, of the 18th November following.

3. In February 1847 the two cotton planters in Khandeish, Messrs. Blount and Simpson, tendered their resignations. As great inconvenience was apprehended from the departure of both these gentlemen simultaneously with Mr. Mercer from Broach, it was considered advisable to retain the services of Mr. Simpson, who was consequently re-engaged on a higher salary (for one year from the 1st March 1847, or until the return of Mr. Mercer) to superintend the operations for the improvement of cotton in the districts of Khandeish and Broach, as reported to your Honourable Court in paras. 23 and 30 of letter No. 19, dated the 1st May 1847, and approved of in para. 6 of your reply, No. 17, dated 8th September last.

4. On the 6th ultimo Mr. Inverarity, the First Assistant Collector of Khandeish in charge, submitted a letter from Mr. Simpson, tendering his resignation of his appointment, and expressing his desire to leave this country on the 1st proximo, and soliciting permission to leave Khandeish on the 4th instant.

5. Mr. Simpson also preferred the following claims for our consideration :

1st. To be allowed, as in the case of Messrs. Mercer, Blount, and Hawley, to draw the full salary of his appointment up to the date of his leaving Bombay.

2d. To the grant of an allowance similar to that assigned to each of the above gentlemen as passage-money to America, namely, 2,260 rupees.

3d. The grant of a donation to the same extent as was awarded to Mr. Blount by your Honourable Court, as intimated in para. 7 of your despatch (No. 17) dated 8th September last.

6. We informed the Collector of Khandeish that we sanctioned Mr. Simpson being allowed to draw pay only up to the 4th instant, the date on which he wished to resign his appointment; and that the same amount of passage-money as was granted to the other planters will be granted to him, provided the terms of his covenant are the same as theirs. Until the appointment of a successor to Mr. Simpson, that gentleman's assistant, Mr. Price, has been ordered to carry on the details in Khandeish, the Collector of Broach attending to the operations in his collectorate.

7. Mr. Inverarity, in handing up Mr. Simpson's resignation, expressed his opinion that success has attended the exertions of that gentleman, and that he had proved himself an able and valuable officer. Mr. Inverarity has been called upon to state the grounds on which he bases this opinion; and upon the receipt of that reply, we will consider whether Mr. Simpson's request for a gratuity can be favourably entertained.

8. We now beg to draw the attention of your Honourable Court to the applications alluded to in para. 1 of this letter, addressed to us by Mr. Landon.* In February last this gentleman intimated to us his arrival in this country, for the purpose of purchasing and cleaning cotton for the market, and requested that instructions might be issued to the local officers in the cotton districts to afford him the necessary facilities for accomplishing his objects.

9. Mr.

* Rev. Cons. 1848, 16 February; v. 1906 to 8. Letter from Mr. James Landon, dated 22 March 1848. Letter from the Secretary to the Chamber of Commerce, No. 37, dated 25 March 1848. Letter to Mr. James Landon, No. 2058, dated 7 April 1848. Ditto, ditto, to the Secretary to the Chamber of Commerce, No. 2059, dated 7 April 1848.

9. Mr. Landon also stated, that as it would be necessary for him to spend some time in the country, in order to acquire such local information as would enable him to prosecute his object to the best advantage; and as he was well acquainted with the best modes of cultivating, picking, and cleaning cotton practised in the southern states of America, he was ready to offer his services to Government for a few months in any way that could be made available consistent with the prosecution of his object, either gratuitously or for such compensation as Government might be pleased to grant him.

10. We informed Mr. Landon that we were unable at present to avail ourselves of his services; but the Revenue Commissioners and the Collectors of the cotton districts were instructed to afford him every assistance in their power, and furnish him with all information which they possessed on the important subject to which he was turning his attention.

11. We have now received a further letter from Mr. Landon, stating that he has visited the cotton districts of Guzerat, with the view of ascertaining the practicability of establishing to advantage, at any point convenient to navigation, a large number of saw-gins for cleaning cotton; that he has selected the town of Broach as a suitable place for that purpose, and contemplates importing and putting up there, in time for the cotton crop of the next year, from 50 to 100 of the most approved American sixty saw-gins, to be worked by steam-power, with suitable presses, &c.

12. That he purposes commencing with a sufficient number of saws to gin about 10,000 bales of cotton next year, and increasing the number from year to year, and putting up at once a steam-engine of sufficient surplus power to admit of such augmentation in the number of gins.

13. That, in conducting this enterprise, he will use his utmost exertions to abolish the present careless and deleterious mode of picking and handling the cotton, and to induce the cultivators and others to adopt such a system as will best tend to preserve its colour, quality, and staple, and that he will at all times be ready to afford the ryots and others interested any advice or assistance in his power.

14. As the benefit that would result to the cotton interests of this country from the success of the enterprise contemplated by Mr. Landon would be obviously great, and as it will require a large sum of money to carry it out, that gentleman has solicited that Government will lend its aid to his efforts in its establishment, by granting him the free use of the gins, machinery, buildings, &c. now belonging to the cotton experiments in Broach, and by a loan of from 5,000*l.* to 10,000*l.* for a few years, without interest.

15. In forwarding this application, we beg to state that we are of opinion that if Mr. Landon, who is about to proceed to England, can satisfy your Honourable Court as to his qualifications for the superintendence of an establishment of the kind he proposes, a favourable answer may be given to his request for the use of the gins, machinery, and buildings at Broach, but that we cannot support his application for a loan of money.

We have, &c.
(signed) *L. R. Reid.*
J. P. Willoughby.

Bombay Castle, 12 April 1848.

EXTRACT from the Proceedings of Government in the Territorial Department of Revenue dated 29 March 1848.—V. 3558 to 61.

(No. 290 of 1848.)

From the First Assistant Collector in Charge, Khandeish, to Mr. Deputy Secretary *Erskine*.

Sir,

6 March 1848.

I DO myself the honour to transmit, for the information and instructions of the Honourable the Governor in Council, copy of a letter, No. 41, of the 2d instant, from Mr. Simpson, Superintendent of Cotton Experiments, tendering his resignation of his appointment, and expressing his desire to leave this country for Europe on the 1st of May next.

V. 3558.

2. Mr. Simpson's appointment as superintendent of the experiments in this province and Broach was intimated in Mr. Chief Secretary Pringle's letter to the Revenue Commissioner,

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Bombay.

Government letter
to the Revenue
Commissioner,
N. D., No. 317 of
18 January 1848.

2.
No 43 of 4 March
1848.

sioner, No. 600, bearing date the 12th March 1847, and with reference to the correspondence alluded to at the commencement thereof, it will be in the recollection of his Honour in Council that Mr. Simpson's agreement with the Government extended only to the 1st of the present month, or until the return of Mr. Mercer from America.

3. The Honourable the Court of Directors, in their despatch to the Bombay Government, No. 17, of the 8th September last, expressing their desire that one of the American planters should remain as Superintendent in each of the great cotton districts; I forwarded copy of that communication to Mr. Simpson, for his information; and copy of his reply to my indorsement I also beg to transmit, for the perusal of Government; from this it will be observed, that Mr. Simpson is urgent in his wish to leave India, and I do not now suppose that any consideration would induce him to prolong the period of his services; much, therefore, as the loss of such an able and valuable officer is to be regretted, it remains for Government to take such steps as may appear to them expedient, in order to supply his place.

4. Mr. Simpson will leave at a time when the operations of the season will be drawing to a close; and as the construction of the press and press-house at Dhurrungaum will, before his departure, have been completed, less inconvenience will be felt than if he had fixed his time of leaving for an earlier period; his assistant, Mr. Price, will therefore be competent to take charge of the office until a successor has been appointed, which I hope will be before the lapse of much time; for much as I value Mr. Price's activity and intelligence, I fear that he is not yet quite qualified for the management of so extensive and important an establishment.

5. Mr. Simpson, in the first para. of his letter, No. 41, urges his claim to draw the full salary of his appointment up to the day of his departure, as also to an allowance as passage money, and house similar to that granted to Mr. J. Blount, his former coadjutor in the province; noticing, at the same time, his title to a donation to the same extent as was awarded to that gentleman: there can, I imagine, be no objections to Mr. Simpson's drawing his salary of seven hundred (700) rupees per mensem, up to the date of his quitting the country: and as Messrs. Mercer, Hawley, and Blount were all permitted to receive the sum of two thousand two hundred and sixty (2,260) rupees each, as travelling allowances from Bombay to their residences in the Mississippi (*vide* Mr. Chief Secretary Pringle's letter to the Acting General Paymaster, No. 728, of the 26th March 1847), a similar indulgence may, I presume, be granted to Mr. Simpson: the subject of the donation will rest with Government; but as the present Superintendent has fulfilled, to the utmost degree, the conditions required of him, and as all the correspondence in the matter of the experiments will have brought already to the notice of Government the success which has attended Mr. Simpson's exertions, I have only to add, in his own words, that his more extended term of service and greater success fully entitle him to a donation on the same principle as was granted to Mr. Blount, and as detailed in the 7th para. of the Honourable Court's despatch, above alluded to.

6. The suggestions contained in the 2d para. of the Superintendent's letter, No. 43, are somewhat premature; I shall therefore pass them over without any remark, otherwise than the expression of a hope that Government will, as early as practicable, provide an able successor to Mr. Simpson, as the state of the experiments in the province is such as demands the attention of an experienced, diligent, and practical officer.

7. This letter, properly, ought to have been transmitted through the Revenue Commissioner; but, to save time, I have, agreeably to Mr. Simpson's request, taken the liberty of despatching it direct, forwarding at the same time a copy for the information of the first-named officer.

Khandaish, Collector's Office,
Camp Mulligaum, 6 March 1848.

I have, &c.
(signed) G. Inverarity,
First Assistant Collector in Charge.

(No. 41 of 1848.)

To George Inverarity, Esq., First Assistant Collector in Charge, Khandaish.

Sir,

V. 3559.

I HAVE the honour to request that you will be so good as to acquaint Government, at your early convenience, that it is my wish to leave this country for Europe on the 1st of May next, and to be allowed to quit Khandaish on the 4th April, *en route* to Bombay, preparatory to my departure. As Government has granted the indulgence to the other American planters, I trust the same may be allowed me, *viz.*, to draw my salary up to the day of my departure from Bombay, and also a similar sum as paid them as passage-money; and as I understand that the Honourable Court of Directors, with great liberality, were so indulgent as to grant Mr. J. M. Blount an annual donation for the time he was employed in Khandaish, I trust his Honour the Governor in Council may be pleased to favour me with a similar reward, as my more extended term of service and greater success fully entitle me to entertain this hope.

In making the foregoing announcement of a desire to resign my appointment, I am happy in being able to state that I have now consummated all that I promised to do towards the erecting

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 765

erecting of machinery, &c.; the screw-press has been in successful operation for the last 10 days; the press-house is being roofed in, and will be finished in a few days, when the accounts will be made out; and I may here premise that a saving of perhaps 500 rupees in the cost of this building has been effected from the estimate made out by the civil engineer of Khandeish, and sanctioned by Government, notwithstanding the work has been executed in the best possible manner for work of its character. The entirely new plan which I suggested, of supporting the press on arches, has succeeded in the most perfect manner.

On leaving Khandeish, I beg to suggest that my present assistant, Mr. Thomas Price, be authorised to receive charge of this establishment. With regard to Broach and Surat, from the attention given to the details of what is going on there by the Collectors, there appears to be not the slightest necessity for my making another visit; therefore I trust Government will take such measures as it may think fit in the matter of providing for future supervision.

May I request the favour of your handing up a copy of this letter direct to Government, by which means the orders of Government on the subject may be received in due time.

I have, &c.
(signed) S. Simpson,
Superintendent Cotton Experiments, N. D.

Superintendent's Office, Dhurrumgaum,
2 March 1848.

(No. 43 of 1848.)

To George Inverarity, Esq., First Assistant Collector in Charge, Khandeish.

Sir,

I HAVE the honour to acknowledge the receipt this day of your endorsement (No. 281, of 1848), forwarding copy of a letter (No. 317 of 18th January last) from Mr. Secretary H. E. Goldsmid to the Revenue Commissioner, Northern Division, with extract of a letter from the Honourable the Court of Directors (No. 17), dated 8th September 1847, detailing the Honourable Court's instructions with regard to the manner in which the cotton experiments in Dharwar, Belgaum, Broach, and Khandeish are to be conducted in future, offering the superintendship of the latter to me. Here I beg to remark, that I feel most grateful to the Honourable Court for this offer, and the confidence they have thought fit to repose in me; but you will have learned, from my letter of yesterday's date, that it is my wish to retire from my present employ, feeling at the same time assured that Government will be able to procure the services of persons much abler than myself to carry out its views; and should his Honour the Governor in Council be further inclined to secure the agency of the American planters in this business, I have no doubt that Mr. S. J. Finnie, formerly employed under the Bengal and now under the Madras Government, in Tinnevely, would be most willing to take charge of the Broach concern, as I have reason to believe that Mr. Finnie is desirous of such a change. I should have stated, that I am informed by Mr. Mercer himself, from Liverpool, under date 23d December last, that he had quite abandoned the idea of returning to India, and under this impression I have named Mr. Finnie.

2. I have already proposed Mr. Price as my successor in Khandeish. However, should Government decide on retaining Mr. Price in his present position, and filling mine in another manner, I would, in that case, respectfully beg to propose Dr. Vitruvius Laines, Assistant surgeon at Dhoolia, as being likely to give Government greater satisfaction in the management of the cotton experiments in Khandeish than any officer of my acquaintance. I may add that Dr. Laines has, in passing Dhurrumgaum on two occasions, examined what was going forward, and evinced a greater interest and a clearer judgment of the nature and objects of the cotton experiments than any person (unconnected therewith) that I have met in this part of the country. The management of the cotton experiments requires a superintendent of active and industrious habits, both of which Dr. Laines pre-eminently possesses.

I have, &c.
(signed) S. Simpson,
Supt. Cotton Experiments, N. D.

Superintendent's Office, Dhurrumgaum,
4 March 1848.

MINUTE by the Honourable the Governor, without date, subscribed to by the Honourable Board.

V. 3560.

MR. SIMPSON to draw pay up to the 4th April, the date on which he wishes to resign his appointment.

The same amount of passage-money as was given to the cotton planters to be granted to Mr. Simpson, provided the terms of his covenant are the same.

The appointment of a successor to Mr. Simpson to be hereafter considered. In the mean time Mr. Price must carry on details in Khandeish, and the Collector of Broach attend to the operations in his collectorate.

Mr. Simpson will, of course, obtain from the Collectors of Broach and Khandeish certificates to the effect that all his accounts have been adjusted before the passage-money to be awarded to him is paid.

Mr. George Inverarity should be instructed, through Collector of Khandeish, to state the grounds on which he bases his opinion that success has attended the exertions of Mr. Simpson (para. 5), and that that gentleman has proved himself to be an able and valuable officer (para. 3). On receiving a reply to this question, we may consider whether the request for a gratuity is to be favourably entertained.

As the above remarks correspond with the opinion expressed by the Honourable President when the papers were placed before him on the Council-table, the proposed instructions may be issued without awaiting any further communication on the subject from his Honour, and the reference may be made direct to Collector, a copy being sent to Revenue Commissioner, Northern Division.

(signed) G. R. Clerk.

(No. 1703 of 1848.)

From Mr. Deputy Secretary *Erskine* to the Collector of Khandeish.

V. 3561.

Sir,

WITH reference to your First Assistant (Mr. George Inverarity's) letter, No. 290, dated the 6th instant, forwarding copy of one from Mr. Simpson tendering his resignation of the appointment of Superintendent of Cotton Experiments in Khandeish and Broach, and claiming to be allowed to draw his salary to the date of his leaving India, and passage-money, &c., as granted to Messrs. Mercer, Hawley, and Blount, I have been directed by Government to inform you that Mr. Simpson will be allowed to draw pay only up to the 4th April, the date on which he wishes to resign his appointment.

2. His Honour in Council also desires me to state that the same amount of passage-money as was given to the other planters will be granted to Mr. Simpson, provided the terms of his covenant are the same as theirs. The appointment of a successor to that gentleman will be hereafter considered; and in the meantime his assistant, Mr. Price, should carry on details in Khandeish, and the Collector of Broach attend to the operations in his collectorate.

3. Mr. Simpson will, of course, obtain from the Collector of Broach and yourself certificates to the effect that all his accounts have been adjusted before the passage-money to be awarded to him is paid.

4. His Honour in Council has also desired me to request that you will instruct Mr. G. Inverarity to state the grounds on which he bases his opinion that success has attended the exertions of Mr. Simpson, and that that gentleman has proved himself to be an able and valuable officer. On receiving a reply to this question, Government will then consider whether Mr. Simpson's request for a gratuity can be favourably entertained.

Bombay Castle, 23 March 1848.

I have, &c.
(signed) C. J. Erskine,
Deputy Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 16th February 1848.—V. 1906 to 1908.

V. 1906.

Sir,

From Mr. *Landon* to Mr. Secretary *Goldsmid*.

I HAVE come to India with the intention of establishing myself in the country, for the purpose of purchasing and cleaning cotton for market; and, being a stranger to the people, I shall feel obliged if Government will be pleased to give instructions to its local officers in the cotton districts to afford me the necessary protection and facilities for accomplishing my object.

As

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 767

As it will be necessary for me to spend some time in the country to enable me to acquire such local information as will enable me to prosecute my object to the best advantage, and being well acquainted with the best modes of cultivating, picking, handling, cleaning and packing cotton in the Southern States of America, I respectfully tender my services for a few months to the Government, in any way they can be made available, consistent with the prosecution of my object, either gratuitously or for such compensation as it may be pleased to give.

Bombay, 8 February 1848.

I am, &c.
(signed) J. Landon.

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MINUTE by the Honourable the Governor, subscribed to by the Honourable Board.

MR. LANDON to be informed that we are unable at present to avail ourselves of his services; but the Collectors of the cotton districts and Revenue Commissioners will be instructed to afford him all the information they possess on the important subject to which he is turning his attention, and also to give him their assistance.

The necessary instructions to be issued to the two Revenue Commissioners and Collectors of Broach, Surat, Khandeish, Ahmedabad, Kaira, Dharwar, and Belgaum.

9 February 1848.

(signed) G. R. Clerk.

(No. 911 of 1848.)

From Mr. Deputy Secretary *Erskine* to Mr. J. Landon.

Sir,

HAVING laid before the Honourable the Governor in Council your letter of the 8th instant, requesting that the local officers may be instructed to afford you assistance in connexion with the inquiries you are about to make on the subject of cleaning cotton, and offering your services to Government for a few months, I have been directed to inform you, in reply, that his Honour in Council is unable at present to avail himself of your services; but that the Revenue Commissioners and the Collectors of the cotton districts of this Presidency, viz., Broach, Surat, Khandeish, Ahmedabad, Kaira, Dharwar, and Belgaum, will be instructed to give you their assistance, and to afford you all the information they possess on the important subject to which you are turning your attention.

V. 1907.

Bombay Castle,
12 February 1848.

I have, &c.
(signed) C. J. Erskine,
Deputy Secretary to Government.

(No. 912 of 1848.)

From Mr. Deputy Secretary *Erskine* to the Revenue Commissioner, Northern Division.

Sir,

I HAVE been directed by the Honourable the Governor in Council to transmit to you copy of a letter from Mr. J. Landon, of the 8th instant, and of my reply thereto (No. 911), of this day's date, on the subject of certain information which that gentleman requires, connected with the cleaning and purchasing of cotton, and to convey to you the request of his Honour in Council, that you will afford Mr. Landon every assistance in your power, and furnish him with all the information which you possess on the important subject to which he is turning his attention.

V. 1908.

Bombay Castle,
12 February 1848.

I have, &c.
(signed) C. J. Erskine,
Deputy Secretary to Government.

From Mr. J. Landon to Mr. Secretary *Goldsmid*.

Sir,

IN accordance with intention expressed in the note which I had the honour to address to you on the 8th ultimo, I have visited the cotton districts of Guzerat, with the view of ascertaining the practicability of establishing, to advantage, at any point convenient to navigation, a large number of saw-gins for cleaning cotton. I find the town of Broach a suitable place for that purpose, and I contemplate importing and putting up there, in time for the cotton crop of next year, from 50 to 100 of the most approved American 60-saw gins, to be worked by steam power, with suitable presses, &c.

I purpose commencing with a sufficient number of saws to gin about 10,000 bales of cotton next year, and to increase the number from year to year, as fast as practicable, and to put up, at once, a steam-engine of sufficient surplus power to admit of such augmentation in the number of gins.

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In conducting this enterprise, I beg to assure the Government that my utmost exertions shall be used to abolish the present careless and deleterious mode of picking and handling the cotton, and to induce the cultivators and others to adopt such a system as will best tend to preserve its colour, quality, and staple; and as a means of accomplishing this very desirable end, I shall be most willing to pay such an advance upon the ordinary price of the kupas as will be an equivalent for the extra trouble, and shall take care that my contracts are fulfilled accordingly. I shall also at all times be ready cheerfully to afford the ryots, and others intrusted, any advice or assistance in my power. Having been very particular in my inquiries on the subject, through the Collector, Mr. Davies, and others, I have no doubt whatever of being able to procure, at fair prices, a sufficient quantity of kupas of the quality, and picked in the manner I wish.

As the benefit that would result to the cotton interests of the country from the success of such an enterprise as the one here contemplated, would be obviously great, and as it will require a very large sum of money to carry it out, I trust the Government will be willing to lend its aid to my efforts in its establishment, by granting me the free use of the gins, machinery, buildings, &c., now appertaining to the cotton experiments in Broach, and by a loan of from 5,000 *l.* to 10,000 *l.* for a few years, free of interest.

Should the Government be pleased to think favourably of this suggestion, I respectfully solicit the favour of an early reply, as it is important that I should proceed to England without delay, to procure the gins, machinery, &c., in time for the next crop.

Bombay, 22 March 1848. I have, &c.
(signed) J. Landon.

MINUTE by the Honourable the Governor, subscribed to by the Honourable Board.

THE Honourable Court of Directors should be immediately informed of Mr. Simpson's resignation, and of the request made by Mr. Landon, under dates 8th February and 22d March last.

I think that we may, at the same time, inform the Honourable Court, that if Mr. Landon can satisfy them as to his qualifications for the superintendence of an establishment of the kind he proposes, we are of opinion that a favourable answer may be given to his request for the use of the gins, machinery, and buildings at Broach, but that we cannot support his application for a loan of money.

1 April 1848. (signed) G. R. Clerk.

(No. 37 of 1848)

From the Secretary to the Chamber of Commerce to Mr. Secretary *Goldsmid*.

Sir,

THE attention of the committee of the Chamber of Commerce having been requested by Mr. James Landon to the subject-matter of a communication sent in by him, as the committee understand, to the Honourable the Governor in Council on the 22d instant, I am directed respectfully to state to his Honour in Council, that the members of this Chamber would view with much satisfaction the introduction into this country of some such extended and improved means of cleaning cotton-wool, and bringing it to market, as Mr. Landon proposes.

2. The numerous obstacles in the way of Europeans settling in the interior of this country, and carrying on business, except with the cognizance of Government, and more or less active assistance, lead the committee of the Chamber to think that the Honourable the Governor in Council might with great propriety give a favourable consideration to the proposal of Mr. Landon in carrying out the objects specified.

3 I am only further instructed to express a hope that the known interest and concern had by the members of this Chamber in increasing the public resources, and facilitating trade, will be considered by the Honourable the Governor in Council as their sufficient apology for submitting this communication to his Honour's consideration.

Bombay, Chamber of Commerce, I have, &c.
(signed) J. Connon, Secretary.
25 March 1848.

(No. 2058 of 1848).

From Mr. Deputy Secretary *Erskine* to Mr. *James Landon*.

Sir,

I HAVE been directed by the Honourable the Governor in Council to acknowledge the receipt of your letter, dated the 22d ultimo, requesting that Government will lend its aid to your efforts to improve the method of cleaning and handling cotton in this country, by allowing you the free use of the gins, machinery, buildings, &c., now appertaining to the cotton

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cotton experiments in Broach, and by granting you a loan of from 5,000 *l.* to 10,000 *l.* for a few years, without interest.

2. In reply, I have been instructed to state, that your application will be immediately submitted for the consideration of the Honourable the Court of Directors, who will be informed with reference to your design of proceeding to England, that if you can satisfy them as to your qualifications for the superintendence of an establishment of the kind you propose to form, this Government is of opinion that a favourable reply may be given to your request for the use of the gins, machinery, and buildings at Broach, but that it cannot support your application for a loan of money.

Bombay Castle, 7 April 1848.

I have, &c.
(signed) *C. J. Erskine,*
Deputy Secretary to Government.

(No. 2059 of 1848.)

From Mr. Deputy Secretary *Erskine* to the Secretary to the Chamber of Commerce.

Sir,

IN acknowledging the receipt of your letter, No. 37, dated the 25th ultimo, recommending to the favourable consideration of Government an application made by Mr. James Landon to be assisted in extending and improving the method of cleaning cotton, I have been directed by the Honourable the Governor in Council to transmit, for the information of the Chamber of Commerce, the annexed copy of a letter, No. 2058, which I have this day addressed to Mr. Landon.

Bombay Castle, 7 April 1848.

I have, &c.
(signed) *C. J. Erskine,*
Deputy Secretary to Government.

Revenue Department, 4 July (No. 7) 1848.

Our Governor in Council at Bombay.

Para. 1. ON his arrival in this country, Mr. Landon submitted to us an application similar to that which he had addressed to you, and we informed him, in reply, that we were prepared to authorize your Government to grant him, for a limited time, the free use of the gins, machinery and buildings appertaining to the cotton experiments at Broach, and to direct you to instruct the local officers in the district to afford him all proper assistance and encouragement in carrying out the object which he has in view, but that we could not entertain his application for a loan of money.

Letter dated 12th April (No. 28) 1848, reporting the resignation of Mr. Simpson, Superintendent of Cotton Experiments in Khandeish, and the receipt of two applications from Mr James Landon, for the assistance of Government in introducing extended and improved means of cleaning cotton in Broach.

2. Mr. Landon has again addressed us, stating that he finds it to be now too late to procure and send out the requisite number of gins and steam machinery, and put them up ready for use in time for the next crop, and he solicits that, with the view of obtaining a more accurate knowledge of the local peculiarities connected with the cultivation and management of cotton by the natives, he may be appointed superintendent of cotton experiments in Broach till next spring, on the same terms and conditions as were agreed on with Mr. Mercer.

3. We think that Mr. Landon's intimate acquaintance with the cultivation of cotton in the United States of America, and the knowledge which he has acquired of the wants of the manufacturers in this country, may render his services highly useful in that capacity, and we accordingly authorize you to appoint him, on his arrival in Bombay, to the situation formerly held by Mr. Mercer, on the salary and allowances stated in our despatch of the 8th September (No. 17) 1847.

4. A copy of Mr. Landon's correspondence with us * is herewith transmitted, for your information.

London, 4 July 1848.

We are, &c.
(signed) *J. L. Lushington,*
,, *A. Galloway,*
&c. &c.

* Mr. Landon to Mr. Melvill, dated 5th June 1848 Mr. Melvill to Mr. Landon, dated 16th June 1848. Mr. Landon to Mr. Melvill, dated 20th June 1848. Mr. Melvill to Mr. Landon, dated 28th June 1848.

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To James C. Melvill, Esq., Secretary to the Honourable the Court of Directors,
East India Company.

Sir,

ON the 22d of March last I had the honour of submitting to the Honourable the Governor in Council, at Bombay, a proposition for putting up an establishment at Broach for ginning and packing cotton for market; and, with reference to the said proposition I have now the honour to advise the Honourable Court of Directors of my arrival in England, with a view to carrying it out.

As time did not permit my making any explanation to the Government of Bombay beyond the mere statement of my proposition, I respectfully beg leave now to offer a few remarks upon the subject.

The putting in operation of an establishment such as I propose, would be the means of at once furnishing for market a greater quantity of an improved quality of cotton than has been supplied by all the Government experiments from their first introduction to the present time, and the success of which would not fail to lead to the speedy introduction of a similar system in all the cotton districts of India. It is not only the most feasible, but the only practicable means of effecting a permanent improvement in the character of Indian cotton, as the natives can never be induced to adopt any method themselves for the accomplishment of this desirable end; for the reason that the ryots' knowledge of the value of the article extends not beyond his dealings with the banyan, to whom he sells it at a fixed price per bhar, without regard to quality or purity: hence it is his sole object to increase its weight, as the more pounds the more pice. The banyan's knowledge is also confined to his dealings with the native agent, to whom he sells it at a price per candy, which is often agreed to before the cotton is picked; the banyan, therefore, like the ryot, has but one idea on the subject, viz., to increase the weight by every means in his power; the most obvious of these means are seed, dirt, and water. In this system of adulteration the ryot is clearly the greatest, if not the only sufferer (and next to him the Government) because he has to sell the crop at a price as much below its real value as will be equal to the amount of damage it will sustain by adulteration from the field to the manufacturers. Whereas, should such an improved system of picking, handling, and cleaning be introduced as would prevent deterioration and adulteration, he would then get, as now, the full value of the article, which, in my humble opinion, would be so much above its price under the present system, as to render it the most profitable crop that could be cultivated in the country, and consequently tend more than all the experiments in the world to its increase. I venture to assert that this object, so much desired by the Government and the commercial and manufacturing interests, can never be effectually attained except by the general introduction of saw-gins moved by steam power* at all the principal cotton depôts in the country, under the superintendence of experienced persons who will go to the trouble of procuring cotton from the fields in a clean and pure state, and have it properly handled through all its subsequent stages; for unless the cotton be clean picked as soon as the bolls open, carefully handled, preserved from improper exposure to the sun and dews, and from contact with dirt, leaf, and so forth, it must suffer a deterioration which no mode of ginning, however excellent, can remedy.

As regards the facilities for the introduction of my plan, I would beg to state to the Honourable Court, that by far the greater portion of the cotton of the district is always carried to Broach in the seed, to be cleaned by the native churkas, and the parties at present engaged in cleaning it, together with the ryots, have unanimously offered to furnish me with any quantity that might be required, and to pick, handle, and deliver it in any way desired for such advance upon the ordinary price as would compensate them for the extra trouble. This advance, which I should have to pay upon the usual price under the present system, as ascertained from the ryots themselves, would be about five rupees per bhar of kupas of 960 lbs. The cotton crop of Goozerat for 1845 (the last year for which I have been able to see any returns) amounted to 9,22,473 maunds (of 40 lbs. each) of clean cotton, or 38,436 bhars. As the kupas, or cotton in the seed weighs a little more than three times as much as the clean cotton, this would give for the above year, say 1,15,305 bhars, upon which five rupees per bhar would amount to 5,76,525 rupees. At this rate, I might proceed to show the additional amount to be paid to the ryots throughout the country; but this I deem unnecessary. I speak of Goozerat alone. The above I think sufficient to prove the advantage that would be derived from the general introduction of the system in behalf of which I seek the aid of the Honourable Court.

Notwithstanding all that has been said upon the subject, I may observe, that a residence of upwards of 17 years in the cotton-growing States of America, and a thorough knowledge of the article, both in an agricultural and commercial point of view, lead me to the conviction that by the adoption of the plan I have suggested, India grown cotton possesses as intrinsic good qualities as that of the uplands of Georgia and South Carolina, and needs only

* The impracticability of using saw-gins to any great extent by any other power than that of steam, will be apparent from the fact that 24 bullocks are required to work the three gins now in operation on account of the Government, at Broach. These three gins clean six bhars of kupas per diem, which yields about 1,728 lbs. of clean cotton; so that, at the utmost, they cannot clean more than 500 bales during the season. This information I obtained from the person in charge. At this rate, it would require 480 bullocks to clean 10,000 bales.

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only a proper system of handling, cleaning, and packing, to render it nearly, if not quite of equal market value.

With reference to rent, labour, expenses of cultivation, and transmission to market, I consider the position of the ryots of Goozerat to be fully as favourable as that of the planters of the United States generally.

On the subject of the Indian mode of cultivation, I am unable to express an opinion, having seen the crop only as it stood in the fields at maturity, but I saw nothing objectionable except that the rows appeared to be rather close together, and the plants a little too thick in the rows, which, in America at least, would prevent the growth of lateral branches, so essential to an abundant yield.

Should the Honourable Court be pleased to grant me the assistance asked for, I shall be happy to give such security as may be required, and would undertake to repay the amount in five annual instalments, or in such other manner as might be wished by the Honourable Court.

As it is necessary to procure the gins, machinery, &c., without delay, in order to get them out in time for the next crop, I respectfully ask to be favoured with the decision of the Honourable Court at as early a date as convenient.

London, 5 June 1848.

I have, &c.
(signed) *James Landon.*

Sir,

East India House, 16 June 1848.

I HAVE laid before the Court of Directors of the East India Company your letter of the 5th instant, referring to the proposition which on the 22d of March last you submitted to the Government of Bombay, for putting up an establishment at Broach for ginning and packing cotton for the market, and advising the Court of your arrival in England with a view to carry out your plan, in effecting which, you solicit the Court's assistance under the explanations afforded.

The Court have also had before them a letter from the Government of Bombay, with the correspondence which passed there respecting the assistance which you solicited, and which consists in the free use of the gins, machinery, buildings, &c., now appertaining to the cotton experiments in Broach, and a loan of from 5,000 l. to 10,000 l. for a few years, free of interest, for which loan, in the letter under acknowledgment, you propose to give security, repaying its amount by instalments.

In reply, I am commanded to inform you, that the Court are prepared to authorize the Government of Bombay to grant you, for a limited time, the free use of the gins, machinery, and buildings at Broach, and to direct them to instruct the local officers in the districts, to afford you all proper assistance and encouragement in carrying out the object which you have in view, but that the Court cannot entertain your application for a loan of money.

James Landon, Esq.,
17, Arundel-street, Panton-square.

I am, &c.
(signed) *James C. Melvill,*
Secretary.

To *James C. Melvill*, Esq., Secretary to the Honourable the Court of Directors,
East India Company.

Sir,

London, 20 June 1848.

I HAVE the honour to acknowledge the receipt of your letter of the 16th instant, informing me, in reply to mine of the 5th instant, that the Honourable Court are prepared to authorize the Government of Bombay to grant me the free use, for a limited time, of the gins, machinery, and buildings at Broach, and to direct them to instruct the local officers in the district to afford me all proper assistance and encouragement in carrying out the object I have in view, but that the Court cannot entertain my application for a loan of money.

I beg leave most respectfully to thank the Honourable Court for their offer to grant me the free use of the gins, machinery, &c. at Broach, and to state that, as the object I have in view will require a large sum of money to carry it out, the whole of which must now be provided from a private source, and as before the details of an arrangement can be properly adjusted, it would be too late to procure and send out the requisite number of gins and steam machinery, and put them up ready for use in time for the next crop of cotton, I shall be under the unavoidable necessity of deferring the execution of my plan till next year.

It is very important, also, before embarking in such an enterprise wholly with private capital, to ascertain beyond a doubt the market value of such an article as I propose to supply, as compared with the ordinary cotton of the district.

On applying to several of the largest consumers of Indian cotton in Manchester, I was told that as they had never used any Broach cotton prepared exactly in the proposed manner, they could not say till they saw it what would be its comparative value.

A more intimate acquaintance with the people, and local matters generally appertaining to cotton in that district, would likewise materially aid me in the successful introduction of my proposed plan; and understanding that there is no Government superintendent at present

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at Broach I respectfully solicit the appointment for that district till next spring, on the same terms and conditions as were agreed upon between the Honourable Company and Mr. Mercer.

Should the Honourable Court be pleased to favour me with this appointment, I request to be allowed to purchase a quantity of cotton, either on account of the Government or otherwise, to be picked, ginned, and managed throughout as I wish, in order to ascertain its real value in Manchester, both as compared with the common cotton of the district and with uplands American.

I should wish also, if it meets with the approbation of the Honourable Court, to try and reach Broach before the end of the present planting season, for the purpose of sowing some American seed, and seeing whether any, and what improvements are practicable in the Indian mode of cultivation. I will hold myself ready to proceed to Bombay with the mail of the 3d proximo if it be the pleasure of the Honourable Court that I should do so.

I have, &c.
(signed) *James Landon.*

Sir,

East India House, 28 June 1848.

I AM commanded by the Court of Directors of the East India Company to acknowledge the receipt of your letter of the 20th instant, in which you state that you find it to be too late to procure and send out to India the requisite number of gins and steam machinery, and put them up ready for use in time for the next crop, and that you will therefore be compelled to defer the execution of your plan until next year. With the view of obtaining a more accurate knowledge of the people and local matters generally appertaining to cotton in the Broach district, you solicit the appointment of superintendent of cotton experiments in Broach, now vacant by the retirement of Mr. Mercer, on the terms on which it was held by that gentleman.

In reply, I am directed to acquaint you, that the Court comply with your request, that they will authorise the Government of Bombay to appoint you to the situation of superintendent of cotton experiments in Broach on your arrival at Bombay, to which place you state it to be your intention to proceed without delay.

James Landon, Esq.
17, Arundel-street, Pantion-square.

I am, &c.
(signed) *James C. Melvill,*
Secretary.

EXTRACT of a LETTER from the Court of Directors to the Government of Bombay, dated 4th July (No. 6) 1848.

6. WE take this opportunity of acquainting you, that Mr. Mercer, the American planter, declined to return to India, and tendered his resignation to us in this country.

No. 51 of 1848.—Territorial Department Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

Revenue Cons.
1848. 26th April;
V. 5105 to 9.—10th
May; V. 5571 to
74 c.

In para. 7 of our letter, No. 28, dated 12th April last, reporting that we had accepted the resignation of Mr. Simpson, superintendent of the cotton experiments in Khandeish and Broach, your Honourable Court were informed that Mr. Inverarity, the First Assistant Collector of Khandeish, had been called upon to state the grounds on which he based his opinion that Mr. Simpson had proved himself an able and valuable officer, and that upon receipt of the reply, we would consider whether that gentleman's request for a gratuity could be favourably entertained.

2. We now have the honour to forward to your Honourable Court copy of a letter from the Collector of Khandeish, dated 20th April last, with its accompaniments, detailing the progress of the experiments in that province while under the superintendence of Mr. Simpson, and canvassing the question as to whether he deserves a gratuity.

3. We also received a letter, of which the annexed is a copy, from Mr. Simpson himself. We have informed him, in reply, that the question as to whether he is to receive a gratuity, would be placed before your Honourable Court; that we regretted to lose his services; that the same amount of passage money would be granted him as was given the other cotton planters, provided the terms of his

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his original covenant were the same as the terms of the covenants entered into by those gentlemen, and that he would be permitted to draw his pay up to the date of the departure of the steamer, which left this place on the 12th May.

Bombay Castle,
27 March 1848.

(signed)

Falkland.
Willoughby Cotton.
J. P. Willoughby.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department,
dated 26 April 1848.—V. 5105 to 5109.

(No. 509 of 1848.)

From the Collector of Khandeish to Mr. Deputy Secretary *Erskine*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1703, of date the 23d ultimo, agreeably to the tenor of which, I communicated to Mr. Simpson that he would be allowed to draw pay up to the date of his resignation, and that he would receive passage money to Europe the same as the other cotton planters, provided it was according to the terms of his covenant.

V. 5105.

2. Mr. Simpson drew his pay here up to the end of March last, resigned his situation on the 5th instant, on which date Mr. Price, his assistant, took charge of the factories at Dhurrumgaum and Julgaum. Mr. Simpson finally adjusted his accounts with this department at Dhoolia on the 10th instant, and has now gone to Bombay to embark for Europe.

3. As directed in the 4th paragraph of your letter under acknowledgment, I do myself the honour herewith to transmit a letter, dated 30th ultimo, from Mr. G. Inverarity, explaining his reasons for having recommended Mr. Simpson to Government for the gratuity allowed to the other cotton planters.

4. I regret I am unable to concur with Mr. Inverarity in the sentiments expressed in the concluding paragraph of his letter above alluded to, which seem to be somewhat in contradiction of his favourable recommendation for a reward, and to imply (if I gather his meaning correctly) that Mr. Simpson has been overpaid for the services he has rendered. To enable me to submit an opinion on this point, I proceeded to the cotton factory at Dhurrumgaum, and found that, in addition to the successful and indefatigable performance of his duties in all its branches as a cotton planter, his works there finished and in progress, attested the application of first-rate mechanical skill. The cotton screw press (the plan of which he brought with him from America, and told me was the sort last invented, and most approved there) is an instance of his engineering skill, as he states that it works double those in Guzeerat, and I was a witness of the facility of its operation. His services are alluded to in his closing report of the 5th instant, No. 71, herewith transmitted. The departure of so well-qualified a public servant from the province, at the dawn of its improvement in the process of ginning and screwing cotton, is a loss that cannot, I fear, be easily repaired, as it will be difficult to find a successor who possesses in an equal degree the same combination of mechanical skill, united with a knowledge of the business of a cotton planter. It is owing to his skill and exertions that the faulty construction of the ginning machinery forwarded to the factory, which might perhaps have remained useless or defective, has been corrected and made to work, not to mention his having set up the American ginning machinery, which works so much more quickly and economically than the native "churka," that the natives are induced to forsake the churka, and now come eagerly forward to have their cotton ginned and pressed at the factory at a charge that repays Government.

5. Mr. Simpson also reports, that the cultivation of the New Orleans cotton has proved successful on the small scale, that it has of late been tried in this province; and recommends its extension in small lots among different native cultivators, who, from his description, do not seem averse to the trial; I would, therefore, beg leave to propose that a cart-load of this seed should be immediately sent here from Dharwar, to enable me to distribute it among the ryots before the setting in of the ensuing rainy season.

6. That more has not been accomplished by Mr. Simpson does not appear to be his fault, as every thing required at the factory had to be created, and the means supplied to him from the difficulty of their acquisition were slowly and scantily furnished; but I trust sufficient has been pointed out to render Mr. Simpson, in the opinion of Government, well entitled to the liberality of his employers for his efforts in advancing the important objects committed to his charge.

Khandeish, Collector's Office, Dhoolia,
20 April 1848.

I have, &c.
(signed) *A. Elphinston,*
Collector.

JIL
Bombay.

To Alexander Elphinston, Esq., Collector of Khandeish.

Sir,

V. 5106.

I HAVE the honour to acknowledge the receipt of your endorsement, No. 384, bearing date the 23d instant, on the Government letter, in the Territorial Department, No. 1703, of the 23d idem, with respect to the 4th para. of which I am instructed to state the grounds on which I hold the opinion expressed in my letter to Government, No. 290, of the 6th of the present month, that success has attended the exertions of Mr. Simpson, the superintendent of cotton experiments, since the commencement of his operations in this province.

2. In reply, I would beg to observe, that the grounds for my opinion will be found contained in the English records of the experiments now with your office; not having these at hand for reference, it will be difficult for me to supply the information required in such detail as would prove most acceptable to Government. I must therefore content myself with such a general exposition of the subject as comes more immediately within my recollection, it being in all cases remembered that the time I was Acting Collector comprises but a very small portion of the period over which the experiments were extended, and that my opinions are deduced more from the recorded observations of my predecessors than from any actual experience of my own.

3. The planters, Messrs. Simpson and Blount, were sent to Khandeish in order to endeavour to effect the introduction of a superior cotton staple, and to improve the cleaning and picking of the indigenous commodity of the country, with the prosecution of such other measures as would tend in a general manner to advance the interest of the declining cotton trade of the Presidency.

4. The experiments connected with the introduction of the New Orleans cotton failed, a result attributable, according to Mr. Blount, to the non-adaptation of the climate to its growth; while his colleague, in taking a milder view of the peculiar circumstances of the case, considered that the want of success might be found to arise from the adverse nature of the two seasons then experienced, and did not doubt that, with due attention, the article could be cultivated to any extent required; the indigenous cotton was, however, by this time found so superior, that the efforts of the planters were directed principally to its improvement; and their opinion in this respect appears to have been concurred in by the collectors and by Government; a large extent of land was therefore cultivated under their own superintendence, and the crop, after being picked, cleaned, and ginned, was transmitted to the Presidency, where it fetched prices considerably higher than a great portion of the other Broach and Southern Mahratta country cotton at the same time put to auction; for the details of this I must refer you to the statement of the result of the sales, received either direct from Government, or from Mr. Frere, deputy collector of Customs, I forget which, in March 1847: about this time Mr. Simpson was entrusted with the whole superintendence of the experiments both here and at Broach, the services of Mr. Blount having been dispensed with.

5. The superintendent, becoming of opinion that it was unnecessary to cultivate land under his immediate management, suggested that he might be permitted to purchase the cotton from the ryots, paying them a small premium over the bazar price of the day for such as showed better picking to have been used towards it than had hitherto been the case; this measure appearing admirably adapted to the ends in view, was sanctioned by Government, and the results will be known on the receipt of advices from the Honourable Court as to the opinion held of the staple by the home manufacturers, while there is every reason to hope that they will prove highly satisfactory.

6. It must be remembered, that the Julgaum and Dhurrungaum gins have always, during a greater portion of the working season, been employed in cleaning the cotton grown or purchased on account of Government; the local traders have not, therefore, had those opportunities of being made acquainted with their value so much as could have been desired; but what time could be spared from ginning the Government cotton, was devoted to these merchants, and many of them became fully alive to the benefits which the machines could confer upon them; so much so, that, although I write from memory, I am confident that I do not overstep bounds when I say that, had Government not purchased cotton on their own account, ample work would have been found for all the available gins from cotton the property of the resident traders; little inquiry will suffice to satisfy you on this point, while you will also learn that several of the merchants were most solicitous to have the gins on their own hands. Mr. Simpson will be able to name these individuals; at present, Shamrao Ramchunder, of Dhoolia and Julgaum, and Girdhurlal Chutterbooj of the latter place, occur to me as parties who have always been most anxious for private gins; that these were not supplied, is not Mr. Simpson's fault; he has been constant in his applications for saws, and it is only within the last month that a supply of these has been received from England; notwithstanding this delay, he has, from the scanty materials at his command, manufactured either one or two hand-gins for the number of saws, for which I must refer you to the cotton file.

7. Had I records by me, I could detail the extent of land cultivated, the amount of produce received, the quantity cleaned on account of Government, and for private individuals; but, for the reasons before stated, I have been obliged to confine myself within a general exhibition of

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of facts; at the same time I have stated enough to show that all that could have been done has been performed; that the cotton cleaned on account of Government has turned out an excellent article; that the local traders have become impressed with the value of the saw-gin over the native churka, and that it only requires a sufficient number to be manufactured for them to become of general use throughout the province.

8. I have only now to refer you to the press and press-house at Dhurrungaum, both constructed by Mr. Simpson, without the aid of any engineer officer whatever, and which prove his mechanical talents to be of a high order; the building is only now being completed; but I believe that a number of bales have been screwed there, and sent to the Presidency, which of themselves will testify as to the manner in which the presses have been put up, while the great impetus which the cotton trade of the province will therefrom receive must be at once brought to view.

9. In conclusion, I have to add, that, while I consider Mr. Simpson entitled to a gratuity, I do not at all suppose that he has been underpaid for his exertions; his salary from the first has been liberal beyond measure for all that he has done; he has already been amply remunerated, and would have been so had he done twice as much; but as the Honourable Court were pleased to exercise such great liberality towards Mr. Blount, and award him a gratuity for what he had effected, it would be a questionable distinction to exclude the present superintendent from the enjoyment of a similar boon, whose exertions—and it is no disparagement to the others to say so—have been so much more extended, and who had exhibited such superior ability and ingenuity as a mechanic; there is, however, I must at the same time admit, room to take exception to the grant in the present case, when it is remembered that Mr. Simpson, during the latter portion of his services, has drawn emoluments double what fell to the lot of his coadjutor: of the importance to be attached to this, Government are the best judges.

First Assistant Collector's Office, Camp Kulwun,
30 March 1848.

I have, &c.
(signed) G. Inverarity,
First Assistant Collector.

(No. 71 of 1848.)

REPORT of the (undersigned) Superintendent of Cotton Experiments in Khandeish.

ON the eve of retiring from my position as superintendent, I have the honour to submit, for the information of the Collector of Khandeish, with reference to his letter, No. 383 of the 25th March 1848, the following observations on the progress of the cotton experiments in the province of Khandeish; and as it will doubtless prove a dull and wearisome undertaking on my part to write them, and equally so to the Collector to read them, I therefore dispense with any detailed remarks on these experiments prior to the 12th March 1847, further than to offer the following synoptical quotations of those of my letters and reports, handed up to your predecessors in office, which I deem of importance antecedent to the date above given, as follows:—

My letter, No. 6,* of the 10th January 1846, suggests a farm for the culture of the New Orleans and other kinds of cotton, and names the places whence a supply of seed might be had, and also the necessity of entering into contracts with the ryots for the culture of the indigenous cotton, as a means of procuring a supply of clean cotton. The building of a screw-press was likewise recommended.

The order for establishing a cotton farm was received on the 13th June following, which was too late to enable me to carry the measure into effect that season, and therefore the plan of giving the culture of the New Orleans cotton into the hands of the ryots on contract, as suggested in my letter, No. 58,† of the 1st July 1846, partly on account of the cheapness of the latter, but more especially because the sowing season was at hand, and did not admit, for want of sufficient time, the establishment of a farm, notwithstanding my application for the same was sent in as far back as the 10th January 1846.

My letter, No. 9,‡ of the 31st January 1846, shows that a selection from the specification sent up of (4) four gins for Dhurrungaum was made whilst Mr. Blount selected from the same documents (4) four more for Julgaum, none of which were supplied.

My letter, No. 54,§ of the 22d June, pointed out the inadequacy of the gins on hand, and suggested that a further supply should be purchased and sent up, or otherwise procured by local manufacture.

My letter, No. 65,|| of the 1st August 1846, reports the inundation by water of about 12 beghas of the New Orleans cotton-plants, in the direction of the Taptee River, and mentions

* 1. Forwarded to Government with the Collector's letter, No. 50, of the 13th January 1846.

† 2. Copy now forwarded to Government.

‡ 3. Forwarded to Government with the Collector's letter, No. 196, of the 20th February 1846.

§ 4. Copy of this is now forwarded to Government.

|| 5. Copy now forwarded to Government, with copy of the Acting Collector's reply, No. 884, of the 15th August 1846.

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tions the non-arrival of the materials from Bombay for making saw-gins, and further pointed out the deficiency in numbers of the gins on hand to clean the cotton purchased for Government, and that offered by the native merchants; and proposed making an effort to supply the deficiency by manufacturing them on the spot, and asked for assistance for this purpose.

My letter, No. 79,* of the 1st October, reports the appearance of the New Orleans cotton plants as having sustained an injury from blight, and that late sowing appeared objectionable. The receipt of a 25-saw-gin from Bombay is therein acknowledged. The completion of the 10-saw-gin, manufactured at Dhurrumgaum, was announced. The repairs made on the 18-saw-gins were detailed. The want of workmen was alluded to.

To which report the Acting Collector of Khandeish, in his letter, No. 1099, of the 6th November 1846, makes the following reply:

"The zeal and industry which have prompted you, in the absence of qualified artificers, to undertake personally the completion of a new hand-gin of 10 saws, and the completion of considerable repairs in the machinery already on hand, deserves my cordial acknowledgments."

My letter, No. 84,† of the 1st November 1846, anticipates a second crop from the plants of New Orleans cotton in the month of February, and further refers to the repairs and fitting up of the saw-gins, &c.

My letter, No. 90,‡ of the 17th November 1846, replies to queries regarding the press, and states the difficulties met with to have been a want of timber of sufficient size; the want of workmen competent to execute the work; and lastly, the want of a house to put the press in, when furnished.

My letter, No. 92,§ of the 21st November 1846, reports the number, size, and description of saw-gins at Dhurrumgaum, &c.

My letter, No. 96,|| of the 1st December reports the starting of the gins to cleaning cotton, and states the results arising from the extensive repairs made on them to have realised the highest expectations, and points out the detected defects in the 25-saw-gin received from Bombay, and named the repairs required to be made on this gin before it could be set to work, &c.

My letter, No. 5,** of the 5th January 1847, contains 10 paragraphs, and gives a general review of Khandeish operations, and was considered by Mr. Young, the Acting Collector of Khandeish, to be a highly satisfactory and valuable report, as detailing the results of the New Orleans cotton culture. The success that attended the working of gin machinery, and the consequent interest manifested in them, as well as patronage bestowed by the native merchants. To which report the present Collector of Khandeish is respectfully referred for information on the past history of the cotton experiments in this province.

I will merely add, that the amount of rooe (or cleaned cotton) purchased, or otherwise contracted for, and cleaned on the saw-gins, and despatched to the Presidency on Government account, is as follows:—

Years or Seasons.	Candies.	Lbs.	
1845-46 - - -	36 - - -	736	} Weighing 784 lbs. each.
1846-47 - - -	17 - - -	289	
1847-48 - - -	90 - - -	33	
Total Candies, 244		,, 274 lbs.	

My letter, No. 29,†† of the 27th March 1847, discusses the claim to a "bonus," to which letter A. Elphinston, Esq., is respectfully referred, as showing the true basis of such a claim.

This brings me up to a point of time when my position was changed, having been appointed by Government superintendent of cotton experiments in Khandeish, Broach, and northern parts of Surat; and monthly reports have been, until very lately, regularly handed up, in which all that is necessary to be known of the operations in Khandeish has been stated; however, in order to bring these transactions under brief review, I shall proceed to state, that a plan and estimate of operations for the year 1847-48 was submitted in my letter, No. 60,‡‡ of 1st May last, in which letter, and in subsequent ones, I proposed the building of sheds to the gin-house. The building of a cotton godown, as also a reservoir for water at Dhurrumgaum, and the enlarging of the gin-house at Julgaum, and substituting of

* 6. Copy now forwarded to Government, with transcript of the Acting Collector's reply, No. 1099, of the 6th November 1846.

† 7. Copy now forwarded to Government.

‡ 8. Forwarded to the Revenue Commissioner, Northern Division, No. 1180, of the 9th December 1846.

§ 9. Not forwarded to Government, not being required.

|| 10. Copy now forwarded to Government.

** 11. Forwarded to Government with the Acting Collector's letter, No. 164, of the 13th February 1847.

†† 12. Copy of this is now forwarded to Government.

‡‡ 13. Forwarded to the Revenue Commissioner with the Collector's letter, No. 608, of the 11th May 1847, and forwarded to Government by the Revenue Commissioner, with his letter, No. 791, dated 18th May 1847.

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of a tile for a thatched roof for the same. In addition to the building of the screw-press at Dhurrumgaum, Government transferred the building of the press-house from the civil engineer's department to that of mine, a work of itself, as intimated in Lieutenant Hart's letter, No. 667, dated 20th July 1846, to the Acting Collector of Khandeish, requiring a period of 12 months to complete it in; and with regard to the execution of these works, I desire to remark, 1st, that the order to erect the tiled sheds, as contained in Government letter, No. 1331, of the 13th May 1847, reached me on the 27th of the same month: this work was immediately taken in hand and completed at an outlay of Rs. 101. 13. 3., and contains an area of 1,200 square feet of tiled roofing.

The sanction to erect a cotton godown, conveyed in Mr. Secretary Escombe's letter, No. 2485, of the 6th June 1847, reached me about the 6th July following, which, it will be perceived, was at or near the commencement of the moonsoon, a time at which few individuals similarly situated as myself would have attempted the execution of this work; but knowing that, without a go-down, it would be next to impossible to preserve the cotton of the then ensuing crop from adulteration by the admixture of extraneous matter, I therefore determined on making a bold effort, and, (19) nineteen days after the first steps towards its execution were taken, I had the satisfaction of seeing completed a godown containing an area of 2,880 square feet, and capacious enough to hold from 75 to 100 candies of kuppas, and all doubts of its success dispelled, with the agreeable knowledge before me that its utility was secured.

The order transferring to me the building of the press-house was received about the 1st June 1847, too late in the season, it will be observed, to admit of scarcely anything being done to this work, as material and workmen are only procurable in Khandeish with great difficulty, and after the lapse of much time no one in fact could undertake the making of bricks at that stage of the season; however, I had the foundation of the house dug out, and procured stones sufficient for, and with which I had the foundation laid, which was all that could be done before the setting in of the rains.

The sanction to enlarge and put a tiled roof on the Julgaum Factory, conveyed in Mr. Secretary Escombe's letter, No. 2487, of the 26th June 1847, reached me some time in July, and which, like the above, was at a period of the season when nothing could be done towards its execution.

In July 1847, contracts were entered into with and advances made to the patels and others in the Errundole and Nusseerabad Talookas for a supply of kuppas, and at the close of the rains in the latter part of August and beginning of September contracts were made with parties for supplying bricks, tiles, chunam, &c., and measures were taken for obtaining a supply of timber at the earliest possible date.

Mr. Price, assistant to the Superintendent of Cotton Experiments, joined this department on the 7th August 1847, which enabled me to leave Dhurrumgaum in the early part of October for Broach.

The materials indented for, for making saw-gins, as sanctioned in Mr. Chief Secretary Pringle's letter, No. 2010 of the 20th May 1847, did not reach this factory till the 3d November following, or during my absence in Broach; and Mr. Price not having had any experience in saw-gin building, he was obliged to postpone its undertaking (moreover the gin-saws did not arrive till 4th of March 1848), besides which, he had his time and attention wholly occupied in looking after the working of the gins, and getting in the kuppas from the contractors, and carrying forward the work of both press and press-house. On my return from Broach and Surat, on the 25th December, I found that, unless the whole of the energies of the establishment were directed to the execution of these latter-named works, they could not be finished in time to be of any service in the present season's operations; as, from unforeseen circumstances, over which neither Mr. Price or myself would have had any control, tended to retard the progress of the work; the walls of the press-house were, on my return from Goozerat, not generally above four feet above the foundation, whilst much of the carpentry was finished, which permitted the employment of the carpenters almost entirely on the press, and every effort was made to urge both works forward, and which efforts, though often thwarted for the want of building material, were, upon the whole, very successful, and the press was set to work on the 22d of February, and the house subsequently has been also furnished; in fact, the building of both press and press-house may be considered to have been principally executed in three-and-a-half or four months' time, and was got ready for screwing the present crop, a portion of which has not been screwed, principally for the want of rope to cord the bales with, not being able to get any regular ropemakers to furnish a supply; the process of purchasing the hemp, and having it spun into yarn, and twisted into rope at the factory, was the only way in which it could be procured this season; another year different and better arrangements for this purpose may be made.

I shall now proceed to offer some remarks on the press. In consequence of some of the timbers being rather short, and the impossibility of getting others in time, I was obliged to make use of such as I had, and therefore had to shorten the press-box, which contains the loose cotton (just before the process of screwing commences), in consequence of which, I found some trouble and loss of time in getting 392 lbs., or a half candy bale of cotton into this box; but there is no difficulty in making a bale of 300 lbs. net weight, exclusive of rope and bagging. This press, it must be borne in mind, was designed to be worked by a single horse, or an active pair of bullocks, in moving it up or down; but not having the former animal, nor could I at this season of the year hire or in any way procure from the village suitable cattle; I therefore had to employ 10 coolies to work the press; but from the fact of there being only two levers, and these very low down (a foot and a half above the

ground), out of the 10 coolies, the strength of not more than perhaps six were actually exerted, &c.

In order to make bales containing an aliquot part of a candy, as near as could be without adding fractional parts, I divided the candy of 784 lbs. into three equal parts of 262 lbs, which is a fraction more than the third of a candy. These 10 coolies, without practice (promiscuously picked up from the village), have taken out 18 bales per day of the above weight; and when a regular set of hands (six in number) shall have become well acquainted with the work, aided by a pair of active bullocks (or, what is better, a horse), there is no doubt that a larger number of bales of greater weight may be made on this press; already it has about doubled on the Goozerat presses, the working of which latter entails great labour and fatigue on the people employed; whereas there is nothing akin to laboriousness required of the people in working the Dhurrungaum press; the principle requisite is dexterity, or quick movements, on the part of the people to keep pace with the movements of the press, which is in many respects self-acting, i. e. every moveable part (except the side doors) play up or down, just as the screw is either turned up or down. The side and end doors turn upon their own hinges, and may be opened or closed by a child, so far as the exerting of force is required.

The dimensions of the bale are as follows:

4' - - long }
1' = 9 wide } Cubical contents 14 feet nearly.
1' = 10 deep }

The cost of working the press as above described, may be stated thus:

	Rs.	a.	p.
10 coolies to turn below, at two annas each per day - - -	1	4	-
2 coolies to attend above, at two annas per day - - -	-	4	-
2 coolies to assist in weighing the cotton, and screwing the bales - - -	-	4	-
1 weigher's pay, at 3 annas per day - - -	-	3	-
TOTAL - - -	Rs.	1	15 -

I propose charging six annas per bale for screwing, at which rate, for
18 bales per day, gives - - - - - 6 12 -
Leaving a profit for every day the press is worked, of - - - - - 4 13 -

Showing that the press only requires to be worked 430½ days to repay the cost of both press and press-house, which amounts, in the whole, to Rs. 2,069. 9. 3, and which shows a saving from the sanctioned estimates, for this work of Rs. 2,393. 6. 9. For further details, see P. S.

Now that the press and press-house have been completed, the work of saw-gin making has commenced; and I have no doubt that Mr. Price will be able to make a considerable augmentation in the number of these machines by or before the next ginning season comes round. In consequence of the 150 gin-saws supplied to this department in February last, having been prepared in England to fit on to a shaft two inches in diameter, I found I could make no use of these saws, from the fact of not having any bar-iron of that size, the largest being 1½ inches, which I had indented for, not supposing any rational man would ever think of making the axle of an 18 or 25 saw-gin of the same strength and size of the largest size gins of 60 and 70 saws each, as it will be perceived, from the usual rules observed by engineers, that if a gin of 70 saws requires a shaft two inches in diameter, one of 18 saws would require a shaft of about one inch, or one and a quarter inch, which would be found sufficiently strong, less expensive, and not nearly so heavy. In addition to the defects above alluded to, these saws are only eight inches in diameter, their teeth are badly formed, and altogether they have proved to be a very indifferent article indeed. In consequence of what has been said regarding the shaft or axle, I was induced to give the subject an attentive consideration, with the hope of in some way overcoming this difficulty, and the result is likely to prove very successful; in fact, it has been the means of my inventing a new plan of making a saw cylinder, and which I think I am not too sanguine in believing is likely to prove of great value, both in India and America. A cylinder made on the plan herein alluded to has been partly constructed, and gives me every reason to believe in its perfect applicability, and possesses these (two) great desideratums, a third lighter, and much cheaper than are saw cylinders as hitherto made.

The consummation of this work will be left in Mr. Price's hands, and who alone may be looked to for a perfect development of its principles.

I have advised Mr. Price to send in an indent for a foot-lathe and turning-tools required for manufacturing saw-gins, and also drawings of some cast-iron wheels, and segments of a new kind of fly-wheel, which I have every reason to believe will cheapen, as well as tend to expedite, the building of saw-gins. The above will require to be cast in Bombay* at the foundry.

The work of repairing and tiling the gin-house at Julgaum is now in hand, so far as the collection

* Advantage should be taken of Mr. Simpson's presence in Bombay to obtain his instructions at the foundry for the making of these articles.

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collection of materials and preparation of tiles go, nearly en-
cured; and when the ginning season is over, which will take place
of May next, this work may be completed before the rains set in.
The reservoir, as sanctioned on the 16th November 1847,
other work therein referred to is progressing.

The cotton already despatched as advised in my letters Nos. 4
stitutes the whole of the present season's supply from Khandeish. In
receipt of the instructions conveyed in Mr. Secretary Goldsmid's letter
20th January 1848, I ceased to purchase cotton on account of Government
applied to by native merchants for the use of the gins, and acting under the
contained in the letter above quoted, I have hired the whole of the Khandeish
parties above alluded to. Those at Julgaum have been thus employed for the last
and these here, at Dhurrungaum, for 12 days, and will continue to be similar, eng.
perhaps a couple of months more. The following are the terms on which I let
machines: for each gin, (except the 10-saw-gin) eight annas per day is charged,
merchant paying all expenses of working them; and supposing the gins to be worth 1
rupees each (which they are not), they would pay back their just cost in 300 days, if con-
stantly worked. These are facts that admit of no doubt whatever: they are not, how-
ever, the most important feature of these successes.

The Collector was informed, in my letter No. 85,† of the 25th ultimo, the same subject
was alluded to in my report, No. 96, of the 1st July 1847, that one individual had applied
for ten gins. I had previously been verbally applied to by another party for a similar
number, and Girdareelall Sett, of Julgaum, in addition to his offer to purchase the gins at
that factory last year, and whose application was handed up to the Acting Collector, to
which, however, no reply has been received, has very recently expressed a wish to become
the owner of as many as ten gins, if that number could be supplied to him. Besides the
above, other persons had spoken for gins, and in every case the applicants have voluntarily
come forward, and the strong inference is, if I had gins ready to have offered to these and
others, with some solicitations on my part, it would be difficult to name the extent to which
the machines might have been employed in Khandeish; certain it is that at least 25 more
than are at present in use have been bespoke many months ago.

The sites of the Government cotton factories at Julgaum and Dhurrungaum in 1846 were
"mydans" of waste lands, and that the Dhurrungaum Factory has been brought, in the space
of two years' time, to that degree of perfection which, speaking from a knowledge of facts,
(I may say) without presumption, surpasses any other establishment of its size and kind in
India, notwithstanding they all number more years, whilst some of them extend over a
period of eight years since the date of their organization; and in all other cases some
accommodations were obtained by the occupation of either rented premises, or those
already belonging to Government; but here every brick has been made, every stick pur-
chased and fashioned into a gin-house (working four gins), with office rooms,
and carpenters' sheds attached, a blacksmith's shop, a large cotton godown, a press-house
two stories high, with an efficient working machine in it, besides an establishment of
servants sufficiently instructed, it is believed, to continue the manufacture of saw-gins or
to build presses, if further required; the whole of which has been done under my super-
intendence by the natives or others born in the country, without the assistance or incurring
the expense of an engineer from first to last.

On the subject of the cultivation of New Orleans cotton in Khandeish, whatever may
be the results of future operations, this much I am fully prepared to say, that the incipient
efforts, as made in the season of 1846-47 form insufficient data to judge one way or the
other as to whether this variety of cotton can or cannot be successfully produced in this
province; however, taking the actual merits of the results into consideration, I am and
always have been of opinion that they gave grounds to hope for ultimate success, had its
culture not been put a stop to by Government (*vide* the 2d para. of Mr. Chief Secretary
Pringle's letter, No 2010, of the 28th January 1846, to the Revenue Commissioner, Northern
Division), as I considered the results quite as good as those obtained at Dharwar and Coim-
batore the first season, but which was found to have improved greatly after the second
planting in both of the above-named localities; moreover Errundole and Nusseerabad, the
only two talookas in which its culture was attempted in 1846-47, do not constitute what is
generally known to be the province of Khandeish. In Dharwar and in Coimbatore (in
Madras) it was found not to answer well in certain talookas, whilst in others it grew splen-
didly; and I have little doubt that in the talookas lying near to or on the banks of the Taptee
River, as well as those in Western Khandeish, where there is supposed to exist a more humid
atmosphere, arising from the river and heavy timbered forest, that are known to exist in
that direction, than that of Dhurrungaum and Julgaum. In fact, I am now in possession of
some information which seems to confirm my opinion, and which I shall presently state:
after the receipt of the Government's letter above quoted, which put a stop to any direct
efforts being made, or, in other words, I understood the import of the decision of Govern-
ment on this point to mean, that the culture of the New Orleans cotton was to receive no
further

† 14 & 15. Forwarded to Government with the Collector's letters, No. 356, of the 18th March 1848,
and No. 381, of the 25th idem.

† 16. Forwarded to the Revenue Commissioner with the Collector's letter, No. 391, of the 28th
March 1848.

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further notice; notwithstanding this, I did not feel inclined to witness the abandonment of its culture altogether, and consequently I sent a circular letter to several of the mamludars, asking them whether any of their villagers would plant some of the New Orleans cotton seed; that if they would do so, I would supply them with seed gratis, and purchase the produce at four rupees the old Dhurrumgaum maund, to which I only received replies in the affirmative from the mamludars of Sowda and Pachora. The seed was supplied (in small quantities of course); it was planted in both cases, from which a considerable produce was obtained; the cultivators have brought their cotton in, and have received the price agreed on, and are so well satisfied with the results, as to be willing and anxious to go on with its culture (on the same terms) another year to a much larger extent. In consequence of the above, five or six patels in the Nusseerabad talooka have applied for New Orleans seed for planting the coming season: one individual at the town of Nusseerabad wished to plant as much as 25 beghas; but I have persuaded him to try it on a smaller scale for the first year; besides which, the supply of seed on hand is very small, and by giving so much to one person, would be the means of disfurnishing others who may wish to try this kind of cotton.

Having detailed these facts, I leave it to the Collector to decide whether or not greater encouragement towards the culture of the New Orleans cotton than has been hitherto accorded should in future be given in the province of Khandeish. With regard to the indigenous cotton, all it requires to make it a valuable cotton, is clean picking and ginning; but as the spinners in England seem to prefer the New Orleans cotton (*vide* the Honourable Court's despatch of the 8th September 1847 to the Bombay Government), its culture, therefore, becomes a matter of great interest, and is one which seems deserving attention and encouragement.

I believe it would be out of place to mention in this report the measures which I adopted in Guzerat towards the introduction of hand gins, &c., and the consequent improvement in the process of cleaning cotton.

(signed) S. Simpson,

Supt. Cotton Expts., N.D.

Superintendent's Office, Dhurrumgaum,
5 April 1848.

	PRESS.	PRESS-HOUSE.	TOTAL.
P. S.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sums as sanctioned by Government - -	2,000 - -	2,463 - -	
Amount expended, as per statement - -	660 12 7	1,408 12 8	
Work performed by establishment, drawing pay on abstract - - - -	278 9 7	278 9 7	
Total cost of press and press-house - - -	939 6 2	1,687 6 3	
Net saving - - - Rs.	1,060 9 10	775 9 9	1,836 3 7

(signed) S. Simpson,

Supt. Cotton Experiments.

(No. 58 of 1846.)

To H. Young, Esq., Acting Collector of Khandeish.

Sir,

I HAVE the honour to transmit a contingent bill for the past month, amounting to Rs. 65. 15. 4.

2. In consequence of the verandahs of the gin-house being 12 feet high, the rain came in to such a degree, that I found it necessary to build sheds to protect the floors, which are cutcha, and rendered, by a heavy fall of rain, literally a batch of mud. These two sheds (which are nearly completed) each measure 42 feet long by 13 wide; besides the protection which they offered to the gin-house, they will be useful for many other purposes.

3. I beg further to report, that advances are being made to the cultivators on contract, and at some villages seed has been sown.

4. I have obtained 42 begahs of very good land at the village Dowdah, on the bank of the Taptee River, for planting New Orleans cotton seed on; and as the season for sowing is at hand, I have not sufficient time to undertake its culture myself, as, before I could purchase cattle, and get the necessary agricultural implements made up, the best of the sowing season

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 781

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season would be passed. Therefore I have contracted for the cultivation of the New Orleans cotton at five rupees per begah; the work is to be done in first-rate style, and with my general supervision. I have no doubt a good result will be obtained in a pecuniary point; the contract is by far the most economical plan, as shown below, as I should have had to pay a premium of at least four rupees per begah before the ryots would have agreed to give it up.

FARM CHARGES.		CONTRACT CHARGES.	
Premium on land	<i>Rs. a. p.</i> 4 - -	Cost of cultivation	<i>Rs. a. p.</i> 4 - -
Cost of cultivation	4 - -	Loss of Revenue	2 8 -
Loss of Revenue	2 8 -		
Proportion of fence round the farm.	1 - -		
Proportion for agricultural tools	- 8 -		
TOTAL	<i>Rs.</i> 12 - -	TOTAL	<i>Rs.</i> 6 8 -

Difference per begah - - - - - *Rs.* 5. 8.

Besides this, the purchase of cattle, feeding, &c. to be taken into consideration; and, altogether, I think you will agree with me in the course I have pursued.

5. As I before reported, I have been unable to get land for a farm at Dhurrungaum; however, I have ploughed up about an acre and a half within the gin-house compound, which I am planting with New Orleans cotton seed to-day; and, judging from the healthy appearance of about 50 young plants on this land, the seed of which were sown by me on their arrival here, in order to test their vegetating qualities, I have hopes that it will yield a satisfactory return, if the season continues favourable.

6. Under the impression that the contract cultivation was to be carried on at Julgaum, I requested the Seishtedar of Nusseerabad to ascertain if the ryots were willing to agree for four rupees per begah, the same as at this place; and I have since been informed that 800 begahs have been secured, and also 50 begahs for the New Orleans; but, for the want of sufficient funds in that talooka, I have been unable to make any advances. It will be my endeavour, however, to get the New Orleans seed sown as soon as possible.

I have, &c.
(signed) S. Simpson,
Government Cotton Planter.

Cotton Planter's Office, Camp, Dhurrungaum,
1 July 1846.

(No. 54 of 1846.)

To H. Young, Esq., Acting Collector of Khandeish.

Sir,
ADVERTING to my letter, No. 29 of 1846, dated 6th April, regarding two artificers, (one carpenter and one smith,) who were to have been employed under me in the manufacture of saw-gins and the building of a cotton press, I then stated that suitable men of the above-named professions were not procurable in Dhurrungaum, nor do I know of any such in Khandeish. However, this latter remark is intended rather to show my want of information than to affirm the inability of Khandeish to supply suitable workmen. I also stated that 20 rupees per month would, I thought, be a fair salary. In making that statement, I had in view the wages paid in the Southern Mahratta country; however, should this sum be considered inadequate, or not sufficiently liberal to induce competent persons to desire the situation, I would in that case suggest that more be given.

2. As the saw-gins now in Khandeish require a thorough repairing before they can be set to work in cleaning the coming crop of cotton, and as these four gins will be inadequate to clean the produce which will arise from contract cultivation (if the season is favourable), it will be necessary to either import three or four more gins, or to have as many manufactured at Dhurrungaum; in either case, workmen will be required immediately. Therefore, I beg you will afford me all the assistance you can in this matter. In the event of their not being found in Khandeish, there are three other places whence these workmen may most likely be procured; viz., Bombay, Poonab, or Ahmednugger. At this latter place I am told there are good workmen, but I know no person there to whom I could write privately or officially; perhaps you do, and will kindly make inquiry of them.

Cotton Planter's Office,
Dhurrungaum, 22 June 1846.

I have, &c.
(signed) S. Simpson,
Government Cotton Planter.

(No. 65 of 1846.)

To H. Young, Esq., Acting Collector of Khandeish.

Sir,

I HAVE the honour to report, for the month of July, the progress of the cotton experiment under my superintendence in the talooka of Errundole.

2. The contract cultivation, up to the latest accounts, appears to be progressing as favourably as could be expected under existing circumstances; the plants range in height from four to six inches; however, the very heavy rains that have fallen during the last ten or twelve days have tended to injure rather than promote its growth. The quantity of seed reserved for sowing, amounting to 10 candies, 18 maunds, and 2 tuckas, was found insufficient; 4 candies, 10 maunds, and 32½ tuckas, have been purchased for this purpose, and charged in this month's contingent bill. For further particulars regarding disbursements, &c., I beg to refer you to "A Tabular Statement, No. 1," attached to this report.

3. Since my last month's report, I have contracted for the cultivation of 8½ begahs more in New Orleans cotton, at 4 rupees per begah. The plants on these fields are from four to eight inches high, but I regret to add that about 12 begahs are, I fear, quite lost; this amount of land being inundated with water, and there being no possible way of draining it without incurring a greater expense than the cotton is worth; however, should the water subside within two weeks from this time, I am resolved to plant the land again in New Orleans cotton; and if I fail in this latter, I shall have it sown in gram or some other late crop, and thereby prevent any loss to Government. For the pecuniary items, I beg to refer you to the Appendix, at the foot of the Statement, No. 1. The plants in the gin-house compound are healthy and growing, some of which are 18 inches high, but generally about 10 inches. By mistake, this field was stated in my last month's report to be about one acre and a half; it should have been about half an acre.

4. The progress I have been able to make towards the building of the cotton press is but trifling; the amount of money expended on account thereof is shown in "A Tabular Statement, No. 2," hereunto attached. There also accompanies this report a bill of press timbers, showing what have been delivered, and the quantity yet to come. I regret to remark, that the contractor does not seem to have exerted himself as I had reason to expect he would have done towards the fulfilment of his engagement, as much of the timber has yet to be cut and brought from the jungle, whilst the pieces he has ready cannot be brought, in consequence of the muddy state of the road.

5. I have been making the necessary preparation for the manufacture of saw-gins, as well as to repair those on hand; and there is nothing now wanting to enable me to commence immediately the former, except the material which is coming up from Bombay; and as the number of gins (two) at Dhurrumgaum will not be capable of cleaning the coming crop of cotton in a much less time than six months, and as there appears little or no chance of getting any more gins up from Bombay, I propose making an effort to supply this desideratum by making new ones, and for this purpose I propose employing another smith; and should you approve of this plan, and know of any skilful smith, I think it would be advisable to employ him.

6. I have, for the sake of perspicuity, adopted the form of the accompanying tabular statements; and should you approve of this form, I shall continue to send in similar ones with my monthly reports.

Cotton Planter's Office,
Dhurrumgaum, 1 August 1846.

I have, &c.
(signed) S. Simpson,
Government Cotton Planter.

(No. 884.)

To S. Simpson, Esq., Government Cotton Planter, Dhurrumgaum.

Sir,

I beg to acknowledge the receipt of your report for last month, No. 65, of the 4th instant. The progress in the contract cultivation of cotton, as detailed in paras. 2 and 3, seems on the whole highly satisfactory.

2. Referring to your 4th para., I have the honour to request that you will furnish me with a copy of the deed of contract for the supply of the press timber, in order that I may call upon the contractor to act up to its conditions.

3. The measures which in your 5th para. you propose to adopt for supplying the deficiency of saw-gins, by making new ones with the aid of native artificers, is in my opinion judicious, and I would have no objection to your employing another smith for this purpose. I am at present looking out for a good artificer of this description, and hope to be able to send you one ere long.

4. I would in this place beg to draw your attention to the Government communication, No. 3019, of the 6th instant, copy of which was endorsed to you under date the 11th, from which you will perceive that a saw-gin has been ordered to be transmitted to Khandeish without delay.

5. The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 783

5. The form proposed by you in para. 6, of submitting detailed information matters connected with the cotton experiments under your supervision, in the form similar to those which have accompanied your report under acknowledgment, is to be very useful and comprehensive, and I shall request Mr. Blount to adopt similar ones.

Khandeish, Collector's Office, Dhoolia,
15 August 1848.

I have, &c.
(signed) *H. Young*,
Acting Collector.

III.
Bombay.

(No. 79 of 1846.)

To *H. Young*, Esq., Acting Collector of Khandeish.

Sir,

IN reporting progress for the month ending 30 September 1846, I have the honour to state, that from the 2d to the 20th of the month there were several heavy and many light showers of rain during this period, which doubtless have been of much benefit to the growing crop of country cotton, which everywhere promises well.

2. My New Orleans plants at Dhurrungaum had before the late rains begun to put forth flowers and fruit profusely; but, as I anticipated, these rains destroyed all, or nearly all, of these the first fruits by causing them to shed or drop off prematurely. The plants, in consequence of this second growing season, have attained a greater size, and may perhaps from this circumstance produce a larger crop than it otherwise would have done. I am now getting a little ripe cotton from my plants at this place, a sample of which I shall take an early opportunity of sending you; the sample will be cleaned on my newly-constructed hand-gin, of which I shall have something more to say in a subsequent paragraph of this letter.

3. The plants at Ratud and Dourah are respectable in appearance, though they begin to show indefinite signs of blight, though I believe to no serious extent; the plants from the second sowing being much more affected than those of the first, which fact would seem to argue that late sowing is opposed to the well-being and healthy production of this species of cotton; however, a little more time is required in order to see whether it will revive or not.

4. I beg to enclose a tabular statement exhibiting the amount of advances made on account of contract cultivation, and also an account current showing the total disbursements.

5. With regard to the timber of the press, I have to report the receipt of 25 small pieces which are to supply the place of the defective ones previously reported on. None of the large timbers have yet arrived; in consequence, no further progress has been made or expense incurred under this head during the month.

6. The new saw-gins of 25 saws have just arrived from Bombay in good order, excepting a good deal of rust on the saws, which, however, I am about cleaning off.

7. I have the satisfaction to report the completion of a hand-gin of 25 saws, 6 inches diameter. I this day put it in motion, and I find it cleans at the rate of 150 lbs. of seed cotton per day, and is worked or turned by a man. However, I intend trying it again with two men, although one person turns it with ease; but I find from the nature of the motion it is calculated to over-fatigue a single cooly, whereas two will be able to work it with greater regularity, and doubtless it will clean much more in a day. This first trial, however, gave results quite equal to my first expectations, which possesses an advantage in cheapness over the country churka in a proportion of three to one. I have experienced much difficulty in making up this gin; I have been able to obtain only the rudest plough makers from the village as carpenters, and my smith is little better than the others, therefore I have been obliged to execute nearly the whole of the work myself; but as a great amount of other duty now devolves on me, I can no longer give my attention to the making up of more new machines, but content myself by putting into efficient repair the old ones on hand (four in all), one of which has been completely repaired, which I have found to be a laborious and difficult piece of work; in fact, I have been compelled to make it almost anew, viz, 18 seer iron ribs or grates in front, and 18 back; of the cylinder, a new brush or fanner with six points, 22 inches diameter; new whisls or pulleys for cylinder, and brush with an extra one; gin frame altered and repaired throughout; saw cylinder reversed to suit new gin-house; aprons, flue, &c., fitted. In addition to the above, I have had partly constructed a fly-wheel for the new gin just arrived from Bombay.

8. I have made indefinite arrangements for getting up from Poonah a good carpenter and smith, but do not know whether I shall succeed; their services will be indispensable, if the building of the press is proceeded with, which, however, I fear has been delayed too long to suit the arrangements I have made for returning to my country early in 1847.

Cotton Planter's Office,
Dhurrungaum, 1 October 1846.

I have, &c.
(signed) *S. Simpson*,
Government Cotton Planter.

(No. 1099 of 1846.)

To *S. Simpson*, Esq., Government Cotton Planter, Dhurrumgaum.

Sir,

I HAVE the honour to acknowledge the receipt of your report No. 79 of the 1st ultimo, on the progress of the cotton experiments under your superintendence for the month ending with that date. I should have done so ere now, but that nothing contained in it seemed to me to call for special notice.

2. The state of the indigenous and foreign cotton crops as detailed in the first 3 paragraphs is satisfactory, and, passing over the 4th, I advert to the 5th, which has reference to the circumstances that have impeded the progress in the construction of the cotton press. Under the recent orders of Government, dated the 26th September last, communicated to you under my endorsement, No. 1054 of the 16th ultimo, I apprehend that it would be advisable to postpone the preparation of the press in question; nor do I think it can, even if completed, be put in motion without proper premises for its reception, the construction of which has not yet received the sanction of Government; I shall, however, submit the question for the Government decision, pending the receipt of which I would suggest that all proceedings but those calculated to enable us to derive the greatest advantage from the outlay already incurred should be stayed.

3. The zeal and industry which have prompted you, in the absence of qualified artificers, to undertake personally the completion of a new hand-gin of 10 saws, and completion of considerable repairs in machinery already on hand, deserve my cordial acknowledgments.

4. I take this opportunity of acknowledging the receipt of the samples of cotton promised in the 2d para., accompanied by your letter No. 80, dated 22d ultimo. Though I do not feel competent to pronounce upon these as specimens, yet, as far as I can judge, I think that the sample of cotton subjected to the new hand-gin is not quite so clean and free from particles of leaves and broken seeds as could be wished for; a defect which is, perhaps, accidental, and not owing to the imperfection of the machine.

Khandeish, Collector's Office,
Camp Kunhur, 6 November 1846.

I have, &c.
(signed) *H. Young*,
Acting Collector.

(No. 84 of 1846.)

To *H. Young*, Esq., Acting Collector of Khandeish.

Sir,

I HAVE the honour to report, for the month ending 31st October 1846, the progress of affairs under my superintendence.

2. The cotton crop is fast ripening, and much of it has opened, and requires gathering, and this I am doing as fast as I can, but, for the want of a few more peons, my progress is as yet slow, which, however, I hope in a few days to be in a position to rectify.

3. The New Orleans cotton at Dhurrumgaum has, and is still yielding a moderately fair crop; that in the direction of the Taptee River, however, does not appear to be quite so good; a small return will be obtainable from it in a few days. I anticipate a second crop from these fields in the month of February next, equal, if not better than the one now at hand; such, at least, I have observed, has been the case with the New Orleans plant in other parts of India in past years.

4. The two saw-gins (of 18 saws each) have been thoroughly repaired and set up with driving or fly wheels, and are now ready, and will be put to work in cleaning the crop of cotton in a few days. The new gin (of 25 saws), lately arrived from Bombay, is in course of being fitted up in like manner, and will, it is hoped, be ready by the beginning of next month.

5. Nothing further has been done to the press, not having received any more of the timbers; however, from a conversation I have lately had with the contractor, I am led to expect some of the pieces will shortly arrive; I also, learned that the larger pieces of timber have hitherto defeated all efforts to load them on carts; the cubical contents of these pieces I find from calculation equal to about 2,700lbs. weight, and from this circumstance I am induced to believe there can be no very great difficulty in loading them and bringing them in on carts. If the state of my health and business will allow, it is my intention to go out the 15th, and superintend the loading and despatch of these timbers to this place.

Cotton Planter's Office,
Dhurrumgaum, 1 November 1846.

I have, &c.
(signed) *S. Simpson*,
Government Cotton Planter.

(No. 96 of 1846.)

To *H. Young, Esq.*, Acting Collector of Khandeish.

Sir,

IN reporting progress for the month of November, I have the honour to state that on the 17th I started two of my gins to cleaning cotton; these two machines were repaired at this factory, and I am happy to say they fully realise my highest expectations arising from these repairs. I am now cleaning cotton on them at a cost of *Rs. 4. 28.* per candy.

In my letter No. 92, dated the 21st ultimo, I stated that all the gins were in good working order; I made that statement on the supposition that the 25-saw-gin being a new one, never before worked, was of course in good working order; this, however, I have since found to be incorrect; on the 28th I set it to work, and found, in the first place, that the cast-iron wheel on the cylinder shaft was so untrue, that it was impossible to keep a hand on it, and, in consequence, I had to case it over with wood. In the second place, I found some of the spaces between the front grate so wide, that the cotton seed passed through, and the back grates being made of soft wood, and the interstice so wide, that they were of no possible use; hence, many seeds and other impurities passed into the lint room. The brush, after a few revolutions, parted with a portion of the bristle, which takes the cotton from the saws. This has been replaced, and a set of new iron grates are in course of construction, in place of the wooden ones above mentioned. Lastly, the teeth of the saws are what the manufacturer termed broad points, which may, perhaps, suit the American cotton, but certainly they do not answer for Indian cotton. As this gin of 25 saws cleans 40 per cent. less than the gins of 18 saws, these defects I shall endeavour to rectify, although the process of filing up a saw cylinder, containing not less than 7,500 teeth, is a most tedious, as well as delicate operation. The gin of 10 saws will be put to work in a few days, or so soon as a temporary lint room can be completed, and which is now in process of construction.

3. Two only of the peons ordered to join me, as mentioned in your letter No. 1091, dated 4th ultimo, have arrived; the one from Sowdah came to me on the 12th, and the other, from Nusseerabad, on the 17th of the month; consequently (my establishment being inadequate) I have had to make other arrangements in connexion with the mamlutdar, for gathering the cotton crop, though I fear it will be more or less mixed with extraneous matter; however, so far there is not much to complain of in this respect.

4. During the month, the total amount of cotton gathered is 19 candies and 24 tuckas. This work, as set forth in my letter No. 87, dated the 13th ultimo, is very expensive, and the cost of gathering a candy of cupass, is about 15 rupees; but at present I see no way to remedy this matter, as the cotton must be gathered, or a still greater loss will be sustained.

5. With regard to the amount of produce likely to be obtained per beegah, it will be much less than what I was led to expect from the statements of the mamlutdar and ryots, at the time of entering into an agreement with them, and which were opposed to my own convictions, and which were then dwelt upon by me; however, in my next month's report, or at the close of the season, I shall be able to give the results more correctly.

Cotton Planter's Office, Dhurrungaum,
1 December 1846.

I have, &c.
(signed) *S. Simpson*,
Government Cotton Planter.

(No. 29 of 1847.)

To the Acting Collector of Khandeish.

Sir,

IT has been demi-officially stated to me that Government had informed you that the degree of success attained in Khandeish, in the cotton experiments under the superintendence of myself and Mr. Blount, did not entitle us to a bonus, as promised in our agreement, and has been allowed to Messrs. Mercer and Hawley for their labours in the southern Mahratta country.

2. If this information be correct, I respectfully beg to state, that though Government may not see fit to grant a bonus to me and my late coadjutor (Mr. Blount) for our successful labours in Khandeish, still I feel I should be wanting in my duty to Government, to ourselves to the cotton experiments, and to the community at large, were I not to oppose in the most positive terms the idea that success, complete success had not been obtained from the means placed at my disposal. Its wide-spread application in this province is a matter, I presume, that rests wholly with Government, and not ourselves.

3. We reconstructed the whole of the machines sent up, and made them what they were not before, suitable to the work; we have repaired and kept them at work for two seasons (without the aid of an engineer), and have up to this date cleaned (this season) not much less than (400,000) four hundred thousand pounds of Kupas (*i. e.* cotton in the seed), which is, perhaps, a larger amount of work than any other establishment of the same size in the same time

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Bombay.

time has been able to turn out during the 'age of the cotton experiments in India, and the gins are still at work, and will, if cotton can be had, before the close of the season clean (100,000) one hundred thousand pounds more; we have cleaned cotton at a cost of Rs. 4. 3. per candy; and the season's average does not go over 5 rupees, which is 2 rupees cheaper than it can be done for by any other means at present known among the natives. The cotton so cleaned has, at an auction sale in Bombay, fetched from 24 to 32 rupees per candy more than the best churkaed cotton then to be had in that market.

4. The natives have been throughout the season anxious to employ the gins, and now that the Government cotton is all cleaned up I am working them on the native dealers' cotton, both at Julgaum and Dhurrungaum, and an application has been made by Girdoorlall Sett, at the former place, to purchase the gins from Government; this is, in my opinion, a consummation of the views of Government, as expressed in the 4th para. of Mr. Revenue Commissioner Pringle's letter, No. 1161 of 1845, to the address of E. H. Townsend, Esq. Secretary to Government, dated Poona, 23d August 1845. In addition to what has been stated above, I beg to refer you to my monthly reports, and I feel confident you will agree with me in claiming complete success, and will bring these facts to the notice of Government.

I have, &c.

Superintendent' Office, Dhurrungau m,
23 March 1847.

(signed) S. Simpson,
Superintendent of Cotton Experiments.

MINUTE by the Honourable Mr. Reid, subscribed to by the Honourable Mr. Willoughby.

V. 5107.

Extract of para. 5 may be forwarded immediately to the Collector of Dharwar, with instructions to take immediate measures for complying with Mr. Elphinston's request.

The seed should be consigned to the collector of customs at Bombay, who should make arrangements beforehand to secure its speedy transmission to Khandeish.

When this has been done, the papers may be sent to the Honourable the Governor.

25 April 1848.

(signed) L. R. Reid.

(No. 2397 of 1848.)

From Mr. Deputy-secretary Erskine to the Collector of Dharwar.

Sir,

V. 5108.

I HAVE been directed by the Honourable the Governor in Council to transmit to you the annexed extract para. 5 of a letter from the Collector of Khandeish, No. 509, dated the 20th instant, soliciting to be supplied with a cartload of New Orleans cotton seed, and to request that you will take immediate measures for complying with Mr. Elphinston's application.

The seed, I have to add, should be consigned to the collector of customs at Bombay.

I have, &c.

Bombay Castle,
26 April 1848.

(signed) C. J. Erskine,
Deputy Secretary to Government.

(No. 2399 of 1848.)

From Mr. Deputy-secretary Erskine to the Collector of Customs.

Sir,

V. 5109.

I HAVE been directed by the Honourable the Governor in Council to transmit for your information the annexed extract para. 5 of a letter from the Collector of Khandeish, No. 509, dated the 20th instant, and copy of one which I have this day addressed to the Collector of Dharwar, and to request that you will make arrangements beforehand to secure the speedy transmission of the cotton seed therein alluded to to Khandeish.

I have, &c.

Bombay Castle,
26 April 1848.

(signed) C. J. Erskine,
Deputy Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 787

EXTRACT from the Proceedings of Government in the Territorial Department Revenue,
dated 10 May 1848—V. 5571 to 74 C.

From the late Superintendent Cotton Experiments Northern Division to
Mr. Chief-secretary Malet.

Sir,

I HAVE the honour to enclose certificates from the collectors of Khandeish and Broach showing that I have accounted for the advances of money made to me on account of the cotton experiments in those zillahs; I beg therefore that my passage-money may be directed to be paid to me at the earliest convenient period, to enable me to secure my passage on board one of the steamers which are to leave Bombay for Suez during the ensuing month.

2. I also beg to enclose a last pay certificate, and to state that as Government, on the retirement of Messrs. Mercer, Blount, and Hawley, about twelve months ago, permitted those gentlemen to draw their respective salaries up to the date of their quitting the country, I would again respectfully beg to bring the subject to the favourable notice of his Honour in Council, being fully persuaded that Government have no wish to make an exception of my case.

3. With regard to the question of a "donation or gratuity" as paid to the above-named parties by the Honourable the Court of Directors, the Collector of Khandeish will have brought to the notice of Government the nature and results of my humble efforts in the Province of Khandeish, which I trust may prove satisfactory to his Honour in Council; therefore I apprehend I need not say more on that subject.

4. Being desirous in my journey home of making a detour from the distinct line of travel, I shall therefore require some sort of passport or certificate from this Government to enable me to obtain a formal one from the American Consul at Alexandria in Egypt; being a *bonâ fide* American citizen, I would not therefore obtain one from a British consul, and I shall then be out of the employment of the Honourable the East India Company; I therefore could not reasonably expect their protection, or the redress of any molestation or injury I might by possibility sustain.

British Hotel, Bombay,
25 April 1848.

I have, &c.
(signed) S. Simpson,
Ex-superintendent Cotton Experiments, N. D.

(No. 835 of 1847-48.)

THIS is to certify that S. Simpson, Esq., Superintendent of Government Cotton Experiments, has received his salary up to the 31st of March 1848, from this office, and to no later period.

Khandeish, Collector's Office, Dhoolia,
10 April 1848.

(signed) A. Elphinston, Collector.

(No. 836 of 1847-48)

THIS is to certify, that Samuel Simpson, Superintendent of Cotton Experiments in Khandeish, has accounted for all the advances of money made to him from the Khandeish collector's treasury from the date of his first employment as cotton planter in this zillah up to the date of his giving over charge of the cotton experiments to his assistant Mr. Thomas Price, on the 5th April 1848.

Khandeish, Collector's Office, Dhoolia,
10 April 1848.

(signed) A. Elphinston,
Collector.

(No. 131 of 1848.)

To S. Simpson, Esq., Superintendent of Cotton Experiments.

Sir,

WITH reference to your letter, No. 61, of the 21st ultimo, I have the honour to inform you, that your accounts, up to the 31st December 1847, have been passed on audit as intimated to me by the Civil Auditor in his letter dated 10th February last. Similar accounts are now before that officer for examination and audit for the months of January and February 1848; but as these contain items of current charge which are usual in the establishment, and have already received the specific or general sanction of Government, I apprehend that no difficulty will be experienced in passing them also; consequently it does not occur to me that any accounts with which you are personally connected, require adjustment with this department.

Broach, Collector's Office,
5 April 1848.

I have, &c.
(signed) J. M. Davies,
Collector.

III.
Bombay.

REFERENCE to the Civil Auditor, No. 2407.

V. 5573.

REFERRED to the Civil Auditor for immediate report with reference to any Government claims against Mr. Simpson, late Superintendent Cotton Experiments in Broach and Khandeish, on account of advances, &c.

By order, &c.

Bombay Castle,
27 April 1848.

(signed) *C. J. Erskine*,
Deputy Secretary to Government.

REPORT by the Civil Auditor.

(No. 1923 of 1847-48.)

V. 5574.

THE Civil Auditor has the honour to report, for the information of his Excellency in Council, that it does not appear by the Broach and Khandeish accounts, that Government has any claim against Mr. Simpson, late Superintendent of Cotton Experiments, on account of advances made to him from the treasuries of these collectorates.

2. The advances made to Mr. Simpson for the purchase of cotton in Khandeish, under the Government letter, No. 2010, of the 28th of May 1847, have at once been debited to charges, without any detailed bills having been sent to this office; but as the vouchers for the sums advanced bear the collector's declarations that they have actually been disbursed for the public service, and Mr. Simpson states that he has rendered an account of the same to the collector, the transaction may be held to be satisfactory under the certificate furnished by Mr. Elphinston, in No. 836, dated the 10th instant.

Bombay Castle, Civil Auditor's Office,
29 April 1848.

(signed) *E. E. Elliot*,
Civil Auditor.

MINUTE by the Honourable Board.

V. 5574 A.

MR. SIMPSON may receive the same amount of passage-money as was given to the other planters, provided the terms of his covenant are the same. He may draw pay up to the date of the departure of the next steamer.

He may be informed that we regret to lose his services, and that it is for the Honourable Court to decide the question of gratuity. Para. 4 of Mr. Simpson's letter of 25th April, to be transferred to Political Department for immediate consideration and disposal.

10 May 1848.

(signed) *Falkland*.

(No. 2637 of 1848.)

From Mr. Secretary *Goldsmid* to the late Superintendent of Cotton Experiment,
Northern Division.

Sir,

V. 5574 B.

IN reply to your letter, dated the 25th ultimo, I have been directed by the Right Honourable the Governor in Council to inform you that instructions have been issued to the Civil Auditor to pass your abstracts for the same amount of passage-money as was given to the other cotton planters, Messrs. Mercer, Blount, and Hawley, provided the terms of your original covenant are the same as the terms of the covenants entered into originally by those gentlemen.

2. The Governor in Council has also been pleased to permit you to draw your pay up to the date of the departure of the next steamer.

3. His Lordship in Council has desired me to express his regret at the loss of your services, and to inform you that the question as to whether you are to receive a gratuity, will be placed before the Honourable the Court of Directors.

4. Your last pay certificate is herewith returned, and your application for a passport will be answered from the Political Department.

Bombay Castle,
10 May 1848.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 789

(No. 2640 of 1848.)

RESOLUTION.

ORDERED, that extract para. 4 of a letter from Mr. Simpson, late Superintendent of Cotton Experiments, N. D., dated the 25th ultimo, and para. 4 of the reply thereto, No. 2637 of this date, regarding his application for a passport, be transferred to the Political Department for immediate consideration and disposal.

10 May 1848.

(signed) H. E. Goldsmid,
Secretary to Government.

III
Bombay.

V. 5574 C.

(No. 158 of 1848.)—Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WE do ourselves the honour to submit to your Honourable Court the accompanying copies of a letter from the Collector of Khandeish, No. 1638, dated the 31st ultimo, and of the memorandum accompanying it, containing the information called for in your despatch of the 6th September last, No. 13, para. 2, as to the date on which Mr. S. Simpson commenced operations in that collectorate as Government Cotton Planter, and that on which he was appointed Superintendent of Cotton Experiments in the Northern Division, and the amount of allowances drawn by him at the different periods.

Revenue Cons.,
1848, 8th Nov.,
V. 13741; 8th Nov.,
V. 14451; 29th
Nov., V. 15061
to 64.

2. To enable us to give a reply to the 3d para. of the despatch quoted above, on the subject of Mr. Simpson's re-employment, we have called for further information as to the advantages which were derived from his employment before, and the result of our inquiries will be duly reported to your Honourable Court.

We have, &c.

Bombay Castle,
6 December 1848.

(signed) Falkland.
Willoughby Cotton.
L. R. Reid.
J. P. Willoughby.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 8th November 1848.—V. 13741.

(No. 6558 of 1848.)

From Mr. Acting Secretary Courtney to the Collector of Khandeish.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to transmit to you extract, para. 2, from a letter from the Honourable the Court of Directors, No. 13, dated the 6th ultimo, and to request you will immediately furnish the information required by the Honourable Court at the close of the above para.

V. 13741.

Bombay Castle,
26 October 1848.

I have, &c.
(signed) W. Courtney,
Acting Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 8th November 1848.—V. 14451.

(No. 2142 of 1848.)

From the Revenue Commissioner, Northern Division, to Mr. Acting Secretary Courtney.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 6559, of 26th instant, calling for my opinion regarding the re-employment of Mr. Simpson, late superintendent of cotton experiments in the Broach and Khandeish zillahs, on certain terms proposed by him in a letter to the Honourable the Court of Directors.

V. 14451.

2. The terms conceded in Government letter, No. 600, of 12th March 1847, must, I think, be regarded as liberal; and I have not the advantage of personal acquaintance with
296—Sess. 2. 5 K Mr.

III.
Bombay.

1,000 rupees.
700 rupees.

Mr. Simpson to enable me to testify individually to any peculiar qualifications possessed by him; but, from the correspondence on record, I am disposed to place much value on the combination of energy, practical experience, and mechanical talent, acknowledged by the officers under whom he more immediately served, particularly the late acting collector in Khandeish, Mr. Young, in para. 12 of a letter to the address of the Chief Secretary to Government, No. 164, of 18th February 1847; and since the proposed terms of 1,000 rupees per mensem, to include everything, are not very materially in excess of 700 rupees, with travelling allowance for two journeys in the year between Khandeish and Broach, payment of passage home, and a general claim to gratuity, I would beg to express my opinion in favour of acceding to Mr. Simpson's proposal.

I have, &c.

Revenue Commissioner's Office,
Poona, 31 October 1848.

(signed) *D. A. Blane*,
Revenue Commissioner, N. D.

MINUTE by the Right Honourable the Governor, subscribed to by the Board.

To await the reply of the Collector of Khandeish to our letter of the 26th October.

6 November.

(signed) *Falkland*,
W. Cotton,
L. R. Reid,
J. P. Willoughby.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 29th November 1848.—V. 15061 to 64.

(No. 1638 of 1848.)

From the Collector of Khandeish to Mr. Acting Secretary Courtney.

Sir,

V. 15061.

IN obedience to the instructions contained in your letter, No. 6558, of the 26th instant, with accompaniments, I do myself the honour to submit annexed a memorandum of the date on which Mr. S. Simpson commenced operations in Khandeish as Government cotton planter, and that on which he was appointed superintendent of cotton experiments in the Northern Division, with the amount of allowances drawn by him at the different periods.

I have, &c.

Khandeish, Collector's Office,
31 October 1848.

(signed) *Alexander Elphinston*,
Collector.

MEMORANDUM.

V. 15062.

Mr. S. Simpson commenced to draw salary, at 360 rupees per mensem, from 1st May 1845.

He received deputation allowance from the 16th September 1845, the date of his proceeding into the districts, at five rupees per diem, until he was appointed superintendent.

He was promoted to be Superintendent of Cotton Experiments in the Northern Division on the 1st March 1847, and commenced as such to draw salary at 700 rupees per mensem. He continued in receipt of this salary up to the 12th May 1848, the date of his embarkation at Bombay.

(signed) *Alex. Elphinston*, Collector.

MINUTE by the Right Honourable the Governor, subscribed to by the Board.

V. 15063.

To be communicated to the Honourable Court, in reply to para. 2 of their despatch of 6th September last, No. 13.

To enable us to give a reply to the Honourable Court on the subject of Mr. Simpson's re-employment, some further information seems necessary as to the advantages which were derived from his employment before; and this can, I think, be most satisfactorily obtained from the local officers in Khandeish and Broach, who should be requested to state the length of time during which Mr. Simpson was employed, the nature of his duties, the quantity of cotton grown under his superintendence, the quantity ginned and exported, the quality of such cotton; the increase, if any, in the cultivation of the superior varieties; the extent to which the saw-gin was introduced, to the supercession of the churka; and, generally,

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 791

generally, every information calculated to afford data from which to form an opinion as to the success of his superintendence, and the good results to be expected from his re-employment. They should also state their opinion as to the advisability of the measure with reference to present circumstances, particularly the subsequent engagement of other officers to superintend these experiments.

20 November.

(signed) *Falkland.*
W. Cotton.
L. R. Reid.
J. P. Willoughby.

III.
Bombay.

(No. 7332 of 1848.)

From Mr. Acting Secretary *Courtney* to the Revenue Commissioner, Northern Division.

Sir,

I HAVE been directed to acknowledge the receipt of your letter, No. 2142, dated the 31st ultimo, and to observe that, to enable the Right Honourable the Governor in Council to give a reply to the Honourable Court on the subject of Mr. Simpson's re-employment, some further information seems necessary as to the advantages which were derived from his employment before. This his Lordship in Council is of opinion can be most satisfactorily obtained from the local officers in Khandeish and Broach.

V. 15064.

2. I have, therefore, been desired to request that you will call upon the above officers to state the length of time during which Mr. Simpson was employed; the nature of his duties; the quantity of cotton grown under his superintendence; the quantity ginned and exported; the quality of such cotton; the increase, if any, in the cultivation of the superior varieties; the extent to which the saw-gin was introduced, to the supercession, of the churka; and, generally, every information calculated to afford data from which to form an opinion as to the success of his superintendence, and the good results to be expected from his re-employment. They should also be requested to state their opinion as to the advisability of the measure with reference to present circumstances, particularly the engagement of other officers to superintend the cotton experiments in their districts.

I have, &c.

Bombay Castle,
24 November 1848.

(signed) *W. Courtney,*
Acting Secretary to Government.

LETTER from the Court of Directors to the Government of Bombay, dated 6 September (No. 13) 1848.

Para. 1. IN your letter dated 27 May (No. 51.) 1848, you have submitted for our decision the claims of Mr. Simpson, late Superintendent of Cotton Experiments in Khandeish, to a gratuity for his services in that capacity.

2. Under the very favourable testimony borne to Mr. Simpson's merits by the Collector of Khandeish, Mr. Elphinstone, we are of opinion that he has established his claim to our favourable consideration. According to the principle laid down in awarding gratuities to Messrs. Mercer, Blount and Hawley, as communicated to you in our despatch of the 8th September (No. 17) 1847, we should consider Mr. Simpson entitled to a gratuity at the rate of 150 rupees per mensem, from the date of his commencing operations in Khandeish to the date on which his salary was raised to 700 rupees per mensem. We have, however, been unable to trace these precise dates on your records, and we must therefore desire that you will supply us with them with the least practicable delay.

3. Mr. Simpson has now left this country for America; but previously to his departure, he addressed a letter to our secretary, placing his services at our disposal, and stating the terms on which he would be willing to proceed again to India in his former capacity. We transmit a copy of his letter for any observations which you may have to offer. 11 July 1848.

We are, &c.

(signed) *H. Lushington.*
A. Galloway.

III
Bombay.

To J. C. Melvill, Esq., Secretary, East India House.

Sir,

I HAVE the honour to acknowledge the receipt of your letter of the 5th instant, informing me, in reply to mine of the 28th ult., that the necessary report to enable the Honourable the Court of Directors to decide on my application for a gratuity had not been furnished by the Bombay Government.

I did not in my former communication attempt to supply any details regarding the nature and results of my operations in Khandeish, as I considered the same would have reached you ere this from India. I therefore now beg to hand you copies of such official letters as I have in my possession, bearing testimony to my industry and application. No. 1 is from Mr. H. Young, the Acting Collector of Khandeish; subsequently, in "Extract No. 2," the same official expressed himself in very flattering terms in my behalf. The 3d is a copy of a letter from Mr. George Inverarity, the then acting Collector of Khandeish, and I would beg most respectfully to solicit the attention of the Honourable Court, particularly to the 3d and 4th paras. thereof.

The 4th is a copy of my letter to Mr. Chief Secretary Malet; a copy of the reply of Mr. Secretary Goldsmid thereto was furnished you with my letter of the 28th ultimo; these are, I believe, all the papers I need at present submit to the Honourable Court.

For the information of the Honourable Court, I beg leave to state, that I had the honour of originating in 1842 the idea of altering and adapting the "hand-gins" to the successful cleaning of cotton in India, and the manner of working these gins by fly-wheel was carried into effect under my superintendence at the gun-carriage manufactory in Madras; the result of these machines being thus arranged, was as 2 to 10; that is, the gins before cleaned 200 lbs. of kuppas per diem, and after the alterations in the mode of working them took place, they cleaned 1,000 lbs. per day; these results I privately communicated to my coadjutors then in the different Presidencies, with sketches showing the improvements which had been made; these were imitated by several superintendents with considerable success, especially by Mr. W. R. Mercer, in the Dharwar Collectorate, and the same was the source of great gratification to me.

I consider it but just towards myself to point out to the Honourable Court that the sketches of cotton screws as given at page 120 of the printed Report on Indian cotton, dated 21st May 1847, are fac similes of some supplied by me to Mr. T. J. Finnie, upon his written requisition, though it does not appear that Mr. Finnie did me the justice to allude to the source from whence he obtained them; but, on the contrary, it would seem that that gentleman advanced them as plans of his own. The sketches here alluded to are not very dissimilar to the press lately erected by me in Khandeish, only the latter possesses a wooden screw, and the former is intended to represent an iron one, and the consequent difference of structure arising therefrom.

I was compelled to resign my appointment as Superintendent of Cotton Experiments in Candeish, as a necessary means to enable me to return to my native country for a time; but it was not my wish to retire altogether from the service of the Honourable Company, and I have therefore respectfully to request, that you will ascertain whether my services will be again required; should such be the case, I feel it incumbent upon me to state, that I cannot think of returning to India, unless I am allowed the sum of 1,000 rupees per month, as consolidated salary and travelling allowance.

The Honourable Court may possibly consider the sum mentioned by me to be rather exorbitant, and also object to it on the ground, that if sanctioned, it might be taken as a precedent for others similarly employed, to found a claim upon.

In answer to this, however, I would wish to state, that the knowledge of mechanics which I possess, has hitherto, and it will hereafter, enable me to have gins manufactured or repaired, and presses or any other description of machinery made for the use of the cotton experiments, without incurring the additional expense entailed by employing engineers, all the establishments in India, with the exception of my own in Khandeish, having an engineer attached to them.

The Honourable Court will also, I trust, take into consideration, that there is neither pension nor promotion attached to this branch of their honourable service, nor is there any pay or allowance given when placed in my present position; I also imagine I shall be expected to pay my passage out and home, should I at any future time wish to return. I have, and shall be, spending the best of my days in India, and from the nature of the business it necessarily requires me to reside, for the most part, in posts removed far from European society; this materially limits the means of mental improvement, a matter of considerable importance to a somewhat inquiring mind.

Circumstances will prevent my being able to proceed to India before the lapse of 12, or perhaps 18 months from this time. Having been eight years in India, a residence in America or some European climate becomes necessary on account of my health, besides which my presence is required in Virginia, to establish my title to an estate which has been in abeyance for upwards of 12 years.

As I am desirous of visiting Paris for a few days before embarking for America, I shall be absent from London until the 19th instant, and propose sailing from Southampton on the 20th, on board the steam ship "Herman," which is appointed to leave on that day for New York.

I hope

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 793

I hope this will be received as a sufficient excuse for my soliciting the favour of a reply to this communication before the last-mentioned date. The above is a brief statement of facts, and I trust the Honourable Court will be sufficiently satisfied of the merits of my case, to grant me a gratuity; and I can only add, that should I again have the honour of conducting any of the Honourable Company's cotton experiments in any part of India, I shall always devote my best energies to forward the objects in view.

IIII
Bombay.

London, 25 Craven-street,
11 July 1848.

I have, &c.
(signed) *Sam. Simpson.*

(No. 57 of 1849.) Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

Honourable Sirs,

IN continuation of our letter No. 158, dated the 6th December last, we do ourselves the honour to transmit to your Honourable Court the accompanying copies of a letter from the Revenue Commissioner, Northern Division, No. 590 of the 28th ultimo, and of its enclosures, furnishing further information as to the advantages derived from the previous employment of Mr. Simpson as Government cotton planter, and to inform you, that under the circumstances therein reported, we are not disposed to advocate the re-employment of that Gentleman on the terms he proposes.

Rev. Cons., 1849,
April, V. 5469
to 73.

Bombay Castle,
30 April 1849.

We have, &c.
(signed) *J. P. Willoughby,*
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 1849.—V. 5469 to 73.

(No. 590 of 1849.)

From the Revenue Commissioner, Northern Division, to Mr Acting Secretary *Courtney.*

Sir,

I HAVE the honour to acknowledge the receipt of your letter No. 7332, of 24th November last, transmitting enclosures from the Honourable the Court of Directors, on the subject of Mr. Simpson's re-engagement, and requiring further information as to the advantages derived from his previous employment; in reply to which, I beg to submit, for the information of the Right Honourable the Governor in Council, letters from Mr. Elphinston, the Collector of Khandeish, and Mr. Davies the Collector of Broach, as per margin.*

V. 5469.

2. Without criticising too minutely Mr. Simpson's application to the Honourable the Court of Directors, urging his re-employment, I must remark that the merit advanced by him of the original idea of altering the hand gin, and adapting it to use in India, was also claimed by Mr. Mercer; it consisted in removing the cog-wheels, and appying a fly-wheel to the gins; it was, however, no invention, for the gins many years ago, forwarded to India in the time of Dr. Lush, were fitted up with fly-wheels, and in the first alteration that took place in Dharwar, a fly-wheel from one of the old English gins was substituted, I believe, in the place of the cog-wheel in a new American gin.

3. Without detracting from the exertions of Mr. Simpson, I am of opinion that the only criterion of merit in an experimental undertaking of the description upon which he was employed, is success; and I cannot observe, from a perusal of the accompanying letters from Mr. Elphinston or Mr. Davies, that Mr. Simpson's operations were attended with the advantage to the country or his employers that might reasonably have been looked for.

4. Mr. Elphinston speaks strongly in favour of Mr. Simpson's re-employment, and commends it in the 16th para. of his letter upon the liberal salary of 1,000 rupees per mensem, and batta at 10 rupees per diem, when travelling from one Zillah to another.

5. My opinion does not coincide with Mr. Elphinston in the above opinion; because, however zealous Mr. Simpson may have been, he seems in all his undertakings to have been attended by some unforeseen counter-circumstances, that nullified all the good plans he had intended to bring to operation.

6. The

* From Collector of Khandeish, No. 325, of 17th March, 1849. From Collector of Broach, No. 23, of 18th January 1849.

III.
Bombay.

6. The introduction of the New Orleans cotton failed during Mr. Simpson's residence of three years in Khandeish, although Mr. Elphinston remarks in the concluding part of his 10th para. that, "It is scarcely necessary to state here, that since Mr. Simpson's departure, the culture of this species of cotton has been vigorously continued, is extending, and in favour, in this province;" the merit of which Mr. Elphinston liberally bestows on Mr. Simpson, because on his leaving the district, he had advised him to continue the experiment; but the country, it appears to me, is more indebted to Mr. Elphinston's practice, than to Mr. Simpson's theories.

7. Mr. Elphinston in the 11th para. of his letter states the reason of "So little or no progress having been made in the construction of the saw-gins prior to Mr. Simpson's retirement;" however good these reasons may be, still the fact remains that little or no progress was made in the construction of saw-gins during the residence of Mr. Simpson in Khandeish; while, since his departure, some considerable increase has taken place, as *vide* Mr. Elphinston's letter dated 10th March, No. 302, forwarding the half-yearly report, showing that 10 gins had been recently constructed by Mr. Price.

8. The only work satisfactorily completed by Mr. Simpson was the operation of screwing cotton, which is represented both by Mr. Price and Mr. Elphinston to be now found an useless undertaking, as reported by the collector in his letter dated 17th instant, No. 324, this correspondence is under reference to the collector, to inquire the mode he proposes of disposing of the screws, and the expenses of converting the cotton screw-houses into workshops.

9. The whole quantity of cotton ginned by Mr. Simpson during three years, amounted to only 174 candies, as mentioned in the 6th para. of the collector's letter, and the contract price paid to ryots for cultivating a beegah of land with indigenous cotton, appears to me to be considerably more than was paid in Dharwar for an acre of New Orleans cultivation under Mr. Mercer; and although the price of the Khandeish cotton in Bombay was as high as is represented in the 9th para. of the Collector's letter, yet I understand the ultimate result of the sale of this cotton at Manchester was only 5½ to 5¾ per lb., while the Dharwar realised 6½, as *vide* report forwarded with Government letter, No. 887 of 9th February last.

10. In Broach Mr. Davies reports that Mr. Simpson was employed for a short period; he remarks that he left "No proofs during his incumbency of any advantages which might be anticipated from his re-employment."

11. Under the above considerations, I am not disposed to advocate the re-engagement of Mr. Simpson; but if employed again, I would respectfully recommend no increase of salary should be allowed, but rather that a liberal reward should be granted on his retirement after a specific time, provided complete success attended the operations upon which he was employed.

12. Three marked improvements would, in my opinion, indicate merit:

1. The introduction of the general use of the saw-gin.
2. A considerable improvement in the cotton of the district produced in the market, in its being more cleanly and carefully gathered.
3. The introduction of exotic cotton.

Without the two first of these, I would suggest that no rewards should be given; their introduction is obviously profitable to the parties engaged in the trade, and by perseverance and exertion would be certainly adopted; regarding the introduction of exotic cotton, there may exist a doubt as to its being adapted to a particular climate, and although it might be a distinction of merit when it was brought generally into cultivation, I would not insist on it as an infallible criterion until it had been demonstrated that the climate of the district was favourable to its culture.

I have, &c.

Revenue Commissioner's Camp, Allibaugh,
28 March 1849.

(signed) A. N. Shaw,
Revenue Commissioner, N. D.

(No. 325 of 1849.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern District.

Sir,

V. 5470.

I HAVE the honour to supply the information respecting the advantages derived from the employment of Mr. S. Simpson, as superintendent of the cotton experiments in this province, as called for by Government, in their letter No. 7332 of the 24th November last, bearing your predecessor's endorsement, No. 2317 of the 27th idem.

2. The

2. The points on which information is required would appear to be—

- 1st. The length of Mr. Simpson's employment in this collectorate.
- 2d. The nature of his duties.
- 3d. The quantity of cotton grown under his superintendence, the quantity ginned and exported, and the quality of such cotton.
- 4th. The increase, if any, in the cultivation of the superior varieties of cotton.
- 5th. The extent to which the saw-gin was introduced to the supersession of the churka.
- 6th. And generally any information calculated to afford data, from which to form an opinion as to the success of his superintendence, and the good results to be expected from his re-employment.

First Point.

3. Mr. Simpson was appointed cotton planter in Khandeish on the 1st May 1845. He took charge of his appointment on the 28th July following, and held it from thence till the end of February 1847, when he was appointed superintendent of cotton experiments in the northern division, which included Surat and Broach, as well as Khandeish.

Second Point.

4. The duties performed by Mr. Simpson are correctly described in the 8th para. of his letter to Mr. Secretary Melvill, in the East India House, dated the 11th July last, viz.: He was at once a cotton planter, a mechanic, and an engineer. His turn for mechanics and his engineering skill are attested by the economical construction of the buildings attached to the department; the erection of a screw press; the adjustment and rectification of the defects in the saw-gins purchased and forwarded to the factory by Government in 1845-46, &c. as will hereinafter be noticed.

Third Point.

5. Mr. Simpson arrived in Khandeish in July 1845; in October he was directed by Government to proceed to Bombay, for the purpose of superintending the preparation of certain saw-gins intended for transmission to Khandeish, and did not return until the end of November. He could not, therefore, establish any farm in the first year of his arrival, 1845-46, for growing cotton, either exotic or indigenous, under his own superintendence. Four gins arrived from Bombay in 1845, and one in 1846, in a very bad state, owing to carelessness in packing, which, added to some original faulty principle of construction, required considerable amendments, which necessarily took up time. Mr. Simpson, however, made the most of what available portion of the season was left, and purchased, under sanction, a small quantity of cotton on account of Government, which he cleaned in the gins, and despatched to Bombay. The quantity of clean cotton thus exported was 26 candies $\frac{21}{88}$ lbs.

6. In January 1846 Mr. Simpson submitted a plan of operations for the year 1846-47, which consisted of 50 beegahs of the New Orleans cotton cultivation under his own management, in two farms, of 25 beegahs each, and contracts with the ryots for the cultivation of 1,000 beegahs with the indigenous variety. The plan was sanctioned by Government on the 23d March; but as Mr. Simpson's term of service was over in April that year, he tendered his resignation, offering at the same time to remain in office until January next, if Government chose to retain him; but as the services of Mr. Blount, his colleague in office, were urgently required in the older experiments at Dharwar, in consequence of the retirement of Mr. Hawley, it was considered that Mr. Simpson's retention for the short period proposed by him would be of little utility, and Government accordingly, on the 28th April, directed that the cotton experiments in Khandeish should be given up. Mr. H. Young, then Acting Collector, however, deferred to carry out the decision of Government, as he deemed that it would be inexpedient to bring the experiment to an abrupt termination in the prime of its favourable progress, and that all the labour, energy, and expenditure bestowed on it would thereby be thrown away, and that everything would have to be commenced afresh in case of the re-establishment of the experiment at a future period. Adopting the views of Mr. Young, Government, under date the 11th June 1846, was pleased to cancel its original determination, and to direct the continuance of the experiment. The loss of time occasioned by these circumstances precluded Mr. Simpson acting up to his original proposal to superintend a farm of the New Orleans cotton culture. He moreover found, on a second consideration, that the contract system was the most economical, and accordingly entered into contracts with the ryots (by which they were to be excused the land tax, and to be paid for their labour), for the cultivation of 46½ beegahs of land with the New Orleans cotton in two villages, at an outlay of Rs. 268. 8., though, owing to a failure of the crop, the out-turn was very scanty, being only about 220 lbs. of clean cotton, which was despatched to Bombay in 1847. Mr. Simpson also cultivated about 1½ beegah of land in the factory compound at Dhurrumgaum with the New Orleans cotton, and though the out-turn was reported to have been more favourable than in the two other villages, I have not the means of ascertaining the exact quantity of cotton obtained from it. Mr. Simpson likewise entered into contracts with the ryots, for the cultivation of Bs. 699. 9½. with the indigenous cotton, at the rate of from 5 to 2½ rupees the beegah, in addition to the remission of the

Rs. 268. 8.

III.
Bombay.

land tax, and obtained as the result about 173,000 lbs. of cotton with seed; he also made purchases from wholesale dealers to a trifling extent. The total quantity of clean cotton, both the New Orleans and indigenous ginned, and despatched by him to Bombay in 1846-47, was 45,521 lbs., C. 58. 49 lbs.

7. In the third and last year of Mr. Simpson's employment in this province, 1847-48, he was restricted from entering upon the cultivation of cotton, either in farm or upon contracts. He accordingly purchased 159 candies 266 lbs. of cotton with seed, which he cleaned with the saw-gin, and sent to Bombay in 1848; the amount of cotton without seed thus forwarded was C. 90. 33 lbs.

8. Thus the total quantity of cotton ginned and despatched to Bombay, under Mr. Simpson's superintendence, in the three years after the cotton factory was established, during which he was employed in Khandeish, was about 174 candies without seed.

His want of gins prevented his sending more.

9. In evidence of the quality of the indigenous cotton despatched by Mr. Simpson, I can only quote the sales effected at Bombay in the year 1847, when it fetched at the rate of from 107 rupees to 124 rupees per candy of 784 lbs., at a time when, at the same place, the Dharwar indigenous cotton sold at 113 rupees; cotton the produce of Broach indigenous seed sown in Belgaum fetched 125 rupees; the New Orleans cotton from Belgaum, 120 rupees, and Khandeish indigenous cotton, ginned under Mr. Blount's superintendence at Julgaum, realised 132 rupees per candy.

Fourth Point.

10. The foregoing paragraph will have furnished information regarding the culture of the superior varieties of cotton in this province. In consequence of the failure (noticed in para. 6) of the New Orleans cotton crops in Khandeish during the season of 1846-47 (under the contract cultivation system, by which the ryots had no interest in the amount of produce yielded), Government, under date the 28th May 1847, ordered that no direct efforts should be made for the introduction of this variety into Khandeish, and consequently no further steps were officially taken to encourage and extend its culture until after Mr. Simpson's departure from this province in April last; but it is due to Mr. Simpson to say that in his zeal for the introduction of a superior description of cotton plant, such as is the New Orleans, he, as a private arrangement, persuaded several independent cultivators to prosecute the experiment at their own risk with the seed he saved and gave them from the first crop that had failed in 1846-47, which was officially reported by him to thrive well; and before he left the province he assured me that he did not consider the failure greater than on the first introduction of the New Orleans seed at Dharwar and Coimbatore; that he was not disheartened at the prospect of ultimate non-success, and advised me to apply to Government for more New Orleans seed, whilst the already acclimated seed in Khandeish should be carefully propagated. It is scarcely necessary to state here that since Mr. Simpson's departure the culture of this species of cotton has been vigorously continued, is extending, and in favour in this province.

Fifth Point.

11. The reasons for little or no progress having been made in the construction of saw-gins prior to Mr. Simpson's retirement from the province have so frequently been reported to Government, that it seems unnecessary here to recapitulate them. I may, however, briefly add, that the necessity of completing the erection of a cotton screw press and press-house, and several other works to afford shelter, before Mr. Simpson's departure (*vide* following para.), combined with the late arrival of saws from England, and the fact that the artificers employed under that officer were not at first sufficiently expert in the art of gin manufacture, from being unused to the work, were the causes of the apparently slow progress that was made. Mr. Simpson first erected, on his own plan and under his own unaided superintendence, a model hand-gin of 10 saws, which served to correct the defects and disorders in the gins supplied by Government from Bombay in 1845-46. The native merchants evinced a desire to become purchasers of gins, and some of them had their cotton separated from its seed by the Government gins in large quantities, paying hire for the same, a fact illustrative of the impression made upon the minds of the natives of the superior advantages of the saw-gin machinery, then first introduced, over the country churka or roller.

Sixth Point.

12. Under the head of general information, I must recount the different works performed under Mr. Simpson's superintendence, which have already from time to time been reported to Government; I will therefore only briefly allude to them in this place.

The following works were completed under Mr. Simpson's superintendence:—

1. Sheds to the gin-house at Dhurrungaum.
2. Cotton godown at ditto.
3. Reservoir for water.
4. Enlarging the gin-house at Julgaum.
5. Tiles substituted for thatch to the above building.
6. A cotton screw press.
7. A substantial house to contain ditto.

13. I regret

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 797

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13. I regret that it has now been found that it was a useless expense to have a screw press in Khandeish, as the expense of the cartage of the cotton bales to Bombay is just the same, whether the bales are screwed or unscrewed, and the Presidency cotton screws being so much more powerful than those used in the interior of the country, renders the first screwing productive of no advantage, except when the bales have to be shipped, when space, and not the weight, is the chief consideration; in consequence of this discovery I have been obliged to order the discontinuance of the pressure of the bales by the screw at the station (attended as that operation is with some expense) until the receipt of the instructions of Government on this subject, on which I have this day submitted a separate report to you. This unforeseen circumstance does not, however, detract from the credit due to the projector of the machine for his ingenuity and promptitude in its erection, as the absence of necessity for its use does not result from its faulty construction, but from its being composed of weaker material (being all of wood) than the patent powerful expensive iron presses in Bombay.

That a larger quantity of cotton was not ginned and despatched by Mr. Simpson was owing to the small number of gins available to separate seed, while the causes that obstructed the speedy manufacture of gins in the depôt have been detailed in a previous part of this communication.

14. From the foregoing review of the proceedings of the cotton experiments under Mr. Simpson's management, it will be seen that as much was effected by that officer for the benefit thereof as the means at his command admitted of being done, and that his exertions and energy had brought the experiment to a state of progressive improvement which, if followed up perseveringly, cannot, I am sanguine, fail to ensure success.

15. In the concluding part of the Government letter under reference, I am called upon to state my opinion as to the advisability of re-employing Mr. Simpson as Superintendent of cotton experiments in this province, "with reference to present circumstances, particularly the engagement of other officers to superintend the cotton experiments." For my sentiments on this subject I beg to refer to my letter* to your predecessor's address, No. 163, of the 9th ultimo, in which I have expressed my satisfaction with the performances of Mr. Price, the assistant superintendent in charge, but urged the expediency of the presence of an American superintendent, who, from having spent the greater part of his life in business connected with the culture of cotton and its preparation for the market as a master of the business, would from time to time be enabled to introduce such improvements as might be required, which would ensure the most successful results with the least expenditure. If this is not done, in the race of competition between India and America in supplying cotton for the English market, the deficient skill and energy of India will fail to win the race against the practised skill and energy of America; therefore instructors in this country will from time to time be required from America, but especially now at the outset of the cotton experiment in this country, where improved processes are to be introduced.

16. I am therefore of opinion that, with reference to the importance of the object which the Honourable the Court of Directors have in view, the one thousand rupees (1,000), amount of salary demanded by Mr. Simpson, is not unreasonable, also considering his professional knowledge and engineering skill, the increasing number of ginning stations being established in Khandeish, the fair prospect through his means of turning the agricultural resources of the province to account; and that the contract with Mr. Simpson lasting only for a few years, at the end of which time the expense can be reduced if the requital is not deemed sufficient, I would suggest that Mr. Simpson be allowed the salary of seven hundred rupees (700) per mensem as superintendent of the cotton experiments, and the additional three hundred rupees (300) as engineer, exclusive of travelling allowance. He before had seven hundred rupees (700) per mensem, with travelling allowance at the rate of ten rupees (10) per diem when on journey from one zillah to another.

I have, &c.
(signed) Alex. Elphinston,
Collector.

Khandeish, Collector's Office, Camp Dhurumgaum,
17 March 1849.

(No. 23 of 1849.)

To D. A. Blane, Esq., Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement, No. 2318, of the 27th November last, on a letter from Government, No. 7332, of the 24th idem, calling for my opinion upon the subject of re-employing Mr. Simpson, late superintendent of cotton experiments in Broach.

2. Mr.

* Recommending that Mr. Landon, superintendent of the cotton experiments at Broach, be appointed superintendent over the experiment in Khandeish.

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2. Mr. Simpson's personal connection with the Broach establishment was limited to one visit of about two months' duration, during which he employed himself almost exclusively in completing a certain number of hand-gins, commenced, with the previous sanction of Government, by Mr. Laidlaw, the engineer of the factory. Two (2) of these machines Mr. Simpson had set up in Surat, and a like number in other parts of the Broach zillah; but that gentleman took his departure before these machines were experimented upon, and had consequently nothing to do either with the ginning or other operations of the season.

3. The cultivation of cotton in Broach on Government account had been relinquished prior to Mr. Simpson's visit.

4. Invidious though it be, therefore, to appear to detract from the merits of one to whom I am a comparative stranger, yet candour compels me to state that Mr. Simpson left no proofs during his incumbency of any advantages which might be anticipated from his re-employment in this zillah.

I have, &c.
(signed) *J. M. Davies,*
Collector.

Broach, Collector's Camp, Pahaj,
18 January 1849.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Mr. Willoughby.

V. 5471. COPIES of these communications should be forwarded to the Honourable Court, in continuation of our despatch No. 158, dated 6th December last, and we may inform that authority that, under the circumstances reported by the Revenue Commissioner, N. D., we are not disposed to advocate the re-employment of Mr. Simpson on the terms he proposes.

9 April 1849. (signed) *Falkland.*
J. P. Willoughby.

MINUTE by the Honourable Mr. Blane.

V. 5472. As regards Mr. Simpson personally, the opinion offered by me, as Revenue Commissioner, in my letter, No. 2,142, of 31st October last, in favour of his re-employment, was based upon the favourable character given to him by the then acting collector, Mr. Young, and others under whom he had served. My inquiries on my visit to the factory at Dhurrungaum in the December following led me to a somewhat less favourable conclusion as to the extent of the local information acquired by Mr. Simpson, particularly as regards the advantages held out by him from the exertion of a cotton press, and I therefore see no reason to differ from the views expressed in the Right Honourable President's minute. I am still, however, disposed to place much importance upon the employment of some one with experience and qualifications adequate to the suggestion and accomplishment of something in an onward direction, and can hardly think that any material results are to be anticipated from the mere routine maintenance of such an establishment.

12 April 1849. (signed) *D. A. Blane.*

V. 5473. FURTHER MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. Willoughby and Blane.

I THINK that we are at present only discussing Mr. Simpson's case; and as both my honourable colleagues concur with me that he ought not again to be employed on the terms he proposes, these proceedings had better be sent to the Honourable Court.

14 April 1849. (signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

EXTRACT of a Letter from the Court of Directors to the Government of Bombay; dated 12 September (No. 16) 1849.

2. IN continuation of our despatch, dated 6th September (No. 13) 1848, we have to acquaint you, that we have awarded to Mr. Simpson, late Superintendent of Cotton Experiments in Khandeish, the sum of 330 *l.*, being at the rate of 150 rupees per mensem, from the 1st May 1845 to the 1st March 1847; and we have also caused him to be informed, that, while we are desirous of again availing ourselves of his services in India, we cannot, in his case, authorise the grant of any higher allowances than those already assigned to the superintendents of cotton cultivation under your Presidency.

Revenue Department, 28 November (No. 19) 1849.

Our Governor in Council at Bombay.

Para. 1. MR. SIMPSON, formerly Superintendent of Cotton Cultivation in Broach and Khandeish, having applied to us to know whether we should again require his services in India, we have caused him to be informed that we were prepared to authorise your Government to re-engage him for two years certain, from the date of his arrival in India, or for such longer period as you might require his services. Mr. Simpson's salary is to be fixed at 700 rupees per mensem, with travelling allowance at the rate of 10 rupees per diem for any period during which, in the opinion of the Collector or other officer under whom he may be placed, it may be necessary, for the more efficient performance of the duties entrusted to him, that he should quit the station at which his head quarters may be fixed, for the purpose of moving about the district to which he may be attached.

Cotton cultivation.
Re-engagement of
Mr. Simpson.

2. We understand that Mr. Simpson is now on his way to Bombay; and we authorise you, on his arrival, to re-engage him on the terms above stated.

We are, &c.

London, 28 March 1849.

(signed) *A. Galloway.*
J. Shepherd.
&c., &c.

(No. 113 of 1849.)—Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

ADVERTING to para. 10 of your Honourable Court's despatch, No. 17, of the 8th September 1847,* we have now the honour to report that we have authorised the re-engagement of the services of Mr. Blount, the Superintendent of the Cotton Experiments at Dharwar, from 1st January next, on which date his present engagement will cease, on the same terms as were granted to him in that despatch.

Rev. Cons., 1849,
8 August.
V. 10060 to 63.

2. The Revenue Commissioner, S. D., recommended that the term of Mr. Blount's re-engagement should extend to five years; but we were of opinion that, in the present state of this experiment, it would be prudent to limit the term to the period of two years only, as was done when he was last engaged by your Honourable Court.

We have, &c.

Bombay Castle,
15 August 1849.

(signed) *J. P. Willoughby.*
D. A. Blane.

* See page 750.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue;
dated 8th August 1849.—V. 10,060 to 63.

(No. 2975 of 1849).

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

V. 10,060. SUBMITTED to Government with an explanatory letter from the Collector, No. 816,
dated 1st ultimo; and recommended that Mr. Blount's services be engaged for a further
period of (5) five years from January 1850.

Poona, Revenue Commissioner's Office,
21 July 1849.

(signed) *E. H. Townsend*,
Revenue Commissioner, S. D.

(No. 642 of 1849.)

To *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division.

V. 10,061. Sir,
I HAVE the honour to forward, for the consideration of Government,* a copy of a letter
from Mr. Blount, the Superintendent of Cotton Experiments in this collectorate, inquiring
whether Government will require his services after January next, when the period of his
engagement will expire.

Dharwar, Collector's Office,
30 April 1849.

I have, &c.
(signed) *W. W. Bell*,
Collector.

(No. 213 of 1849.)

To *W. W. Bell*, Esq., Collector, Dharwar.

Sir,
As the time of my engagement will expire in January next, I beg to inquire whether
Government will require my services after the time above mentioned, and, if required, to
express my willingness to continue my engagement for a further period.

2. My object in making an inquiry thus early is, that I may be prepared to leave India
in the event of my services not being further required.

Dharwar District, Hooblee,
28 April 1849.

I have, &c.,
(signed) *J. M. Blount*,
Superintendent of Cotton Expts., S. M. C.

(No. 816 of 1849.)

To *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division.

Sir,
IN reply to your letter, No. 2402, dated the 25th ultimo, directing me to submit my
opinion whether Government should continue to engage Mr. Blount's services on the
expiry of his present engagement, and, if so, for what probable period, I have the honour to
state, that I think there cannot be a question that Mr. Blount's presence, or that some person
equally well qualified, will be essentially necessary to the efficient continuance of the experi-
ment to improve cotton in this province for many years.

2. Without entering into the question of the past or prospective advantages of this
experiment generally, and under the assumption that Government is resolved to prosecute
it, I am of opinion that unless the exclusive attention of Mr. Blount or some other compe-
tent superintendent, be devoted to it, it will be impossible to conduct it. Late experience
has proved that the operations cannot be trusted in the hands of our native servants, and
the collector cannot possibly attend to them without employing those servants. Indeed,
beyond affording the superintendent my general support, and conducting the correspondence
relating to the department, I cannot possibly undertake any of its details.

3. The

* Government letter, No. 316, dated 18 January 1848, forwarded with Revenue Commissioners' endorsement, No. 323, dated 26th of the same month.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 801

3. The experiment I look upon as at present in its infancy, and that many years must elapse before any permanent advantage can arise from it. I think, therefore, the Government, in prosecution of the determination which I have assumed in the preceding paragraph, may safely engage Mr. Blount for five or ten years.

Dharwar, Collector's Office,
1 June 1848.

I have, &c.
(signed) *W. W. Bell*,
Collector.

III.
Bombay.

MINUTE by the Honourable Board.

THE Honourable Court intimated in their despatch, No. 17, dated 8 September 1847, para. 10, that they had re-engaged Mr. Blount for two years certain, from 1st January 1848, or from the date of his arrival, at the rate of 700 rupees per mensem, and five rupees per diem, when travelling beyond the limits of the district to which he may be attached; this engagement will expire in January next.

V. 10,062.

We may, I think, sanction the re-engagement of Mr. Blount on the same terms; but I doubt whether we should do so for so long a period as five years, as recommended by the Revenue Commissioner, and think, in the present state of the experiment, it would be prudent to limit the term to the period of two years, as was done when he was engaged by the Honourable Court.

30 July 1849.

(signed) *Falkland*,
J. P. Willoughby,
D. A. Blane.

(No. 4846 of 1849.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Southern Division.

Sir,

WITH reference to your memorandum, No. 2975, dated the 21st ultimo, on a correspondence which has passed with the Collector of Dharwar, I have been directed to inform you that the Right Honourable the Governor in Council has been pleased, for the reasons therein stated, to authorise the re-engagement of Mr. Blount, the Superintendent of the cotton experiments in that district, on the same terms as those on which he was last engaged by the Honourable the Court of Directors, on the termination of his present engagement in January next.

V. 10,063.

2. His Lordship in Council is, however, of opinion, that in the present state of this experiment it will be prudent to limit the term of Mr. Blount's engagement to the period of two, instead of five years, as recommended by you.

Bombay Castle, 6 August 1849.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

(No. 57 of 1851)—Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WITH reference to our letter, No. 113, dated 15th August 1849, reporting that we had re-engaged from the 1st January 1850, for a period of two years, the services of Mr. Blount, Superintendent of cotton experiments at Dharwar, we do ourselves the honour to annex copy of a letter from that gentleman (without number and date, and written by him when at Bombay last month) inquiring whether the Government will require his services after 1st January next, when the period of his engagement will expire.

2. Your Honourable Court will learn from the papers noted in the margin * that the present Acting Collector of Dharwar, Mr. Goldfinch, strongly protested against a change of superintendence, and that accordingly we declined to sanction Mr. Blount's removal from Dharwar to Khandeish, consequent on the

* Rev. Cons. 1851, 22 January. V. 5121 to 24.

III.
Bombay.

the resignation of Mr. Simpson, as proposed by the Revenue Commissioner, Northern Division, in his letter, No. 282, of 31st January last, of which latter paper a copy accompanied the proceedings forwarded to your Honourable Court with our letter, No. 20, dated 17th February last.

Despatch, dated
28 November
(No. 19) 1849.

3. Considering the satisfactory manner in which Mr. Blount appears, from the accompanying papers, to be carrying on his operations in the South Mahratta country, we beg to recommend that we be permitted to retain his services on the allowances awarded by your Honourable Court to Mr. Simpson.

4. Mr. Blount appears from his present letter to have misread Mr. Shaw's communication, No. 282, dated 31st January last, with regard to the salary received by Mr. Simpson. Mr. Simpson's pay was but 700 rupees per mensem and his deputation allowance 300 rupees. Mr. Blount's pay is also 700 rupees, and we request your Honourable Court * will be pleased to allow us to make up his travelling, or, as it has hitherto been termed in this Presidency, deputation allowance, to 300 rupees, instead of, as at present, 150 rupees per mensem.

Bombay Castle,
15 April 1851.

We have, &c.
(signed) *J. P. Willoughby.*
D. A. Blanc.

EXTRACT Bombay Revenue Consultations, 4 April 1851.—No. 5121 to 24.

From *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division.

No. 5121.

Sir,
IN reply to your endorsement of 13th ultimo (No. 1325), I have the honour to transmit a letter from Mr. Goldfinch, dated 25th ultimo (No. 297), which has my fullest concurrence.

2. I can hardly doubt that Government will, on perusal of it, give up all idea of moving Mr. Blount, and that Mr. Channing will, if necessary, be sent to Khandeish, and the cotton districts of Belgaum be included in Mr. Blount's charge.

Ahmednuggur Districts,
Revenue Commissioner's Camp,
Sungumnair, 12 March 1851.

I have, &c.
(signed) *E. H. Townsend,*
Revenue Commissioner, S. D.

(No. 297 of 1851.)

From *W. A. Goldfinch*, Esq., to *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division.

No. 5122.

Sir,
WITH reference to Government letter (No. 1323), dated 13th instant, to the address of the Revenue Commissioner, Northern Division, forwarded with endorsement, No. 1326 of the same date, calling for report and opinion on a proposal by Mr. Shaw to remove Mr. Blount to Khandeish, and to place the superintendence of the experiments in Dharwar and Belgaum under the control of Mr. Channing, with increased salary and assistant, I have the honour to forward my opinion on this arrangement.

2. When the superintendence of the experiments in this collectorate was vested in Mr. Blount about three years ago, the prospect of success was not very flattering; the condition of the experiments is now most satisfactory, and I have no hesitation in attributing to Mr. Blount's tact, good sense, and zealous exertions, the almost assured success of the experiments, and I beg to protest most strongly against any change in a superintendence which has produced such satisfactory results.

3. The experiment has now arrived at that degree of forwardness, that we may confidently anticipate that with two or three years more of Mr. Blount's care, it will require no more assistance from Government; I say Mr. Blount's care, because I feel strongly that the success that has hitherto attended the experiments in this collectorate is mainly due to that gentleman's qualifications.

4. Though I earnestly deprecate any change in the superintendence of this collectorate, I most cordially concur in Mr. Shaw's proposal to save expense, and I am of opinion that
a reduction

* See Honourable Court's despatch, No. 9, dated 6 March 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 803.

a reduction of the establishment in the two collectorates of Belgaum and Dharwar might be made so as to combine economy with increased efficiency.

5. I learn from a correspondence forwarded to this office by Government, that Government have withdrawn from the market as a purchaser of cotton in Belgaum; this withdrawal took place in order to meet the views of an European mercantile agent, who it is presumed will do all towards encouraging improvement in the cultivation and preparation of cotton that could be hoped for from the appearance of the Government agent as a purchaser; this withdrawal must have relieved the superintendent of that collectorate of a great part of his duties, and his attention must now be in a great measure confined to the manufacture and sale of gins. The service of a superintendent can hardly be necessary to conduct this duty, and I would propose that Mr. Channing be moved to Khandeish, with an increase of salary, as suggested by Mr. Shaw, and that the superintendence of the two experiments be placed under Mr. Blount.

6. I would observe, that the principal cotton districts of Belgaum, namely, Pursghur, Bagulkote, and Hoongoond are as near, if not nearer, to Dharwar than to Belgaum, and could be supplied with gins from the Dharwar factory without the least difficulty. I believe it to be generally considered that one large establishment works cheaper, and is more effective than two small ones. I propose that the Belgaum factory be done away with, and such an increase made to the Dharwar one as would enable it to supply the wants of both collectorates.

7. In event of the abolition of the Belgaum workshop, and the persistence of Government in keeping aloof from the purchase of cotton in Belgaum, I do not conceive that it would be necessary to appoint an assistant for Belgaum; I think that Mr. Blount would be able to exercise a very efficient superintendence without one, and all that he would require would be a small increase in his establishment of clerks; however, on this point I cannot undertake to speak with confidence. Mr. Blount (now on duty at Bombay), must be consulted.

8. As regards the qualifications of Messrs. Blount and Channing, it would be invidious to compare them; Mr. Blount may be considered at all events equally competent with Mr. Channing to take charge of the two experiments, and therefore it is difficult to understand the propriety of removing Mr. Blount with the same salary to Khandeish, to make room for Mr. Channing with increased salary here.

9. I make no mention of the personal inclinations of either individual. Wishes must give way to public duties; but I think we may imagine how disheartening it would be for a man in Mr. Blount's situation to be removed from the scene of his labours when about to reap the reward of his exertions in the satisfaction he would derive in witnessing the success of the experiments entrusted to his charge. In saying this, I beg it to be understood that I mean it in its fullest sense. I have had many opportunities of marking the hearty unselfish zeal with which Mr. Blount exerts himself, and I am convinced that he would feel the disappointment very deeply.

I have, &c.
(signed) *W. A. Goldfinch*,
First Assistant Collector in Charge.

Dharwar, Collector's Office,
Camp Hooblee, 25 February 1851.

MINUTE by the Honourable Board.

UNDER the opinion here given, I would not remove Mr. Blount from Dharwar. Mr. Channing is still purchasing cotton for Government at Belgaum. I would not remove him from that collectorate.

Mr. Shaw may be requested to suggest some other arrangement for Khandeish.

(signed) *Falkland*,
J. P. Willoughby,
D. A. Blanc.

20 March 1851.

REPLY to No. 3310, Copy being sent to the Revenue Commissioner, Southern Division, for Information, No. 3311.

Sir,
WITH reference to my letter, No. 1323, dated 13th ultimo, I have been directed to transmit herewith copy of one from the Revenue Commissioner, Southern Division, No. 1230, dated 12th instant, with its accompaniment; and to acquaint you that, under the opinion expressed by Mr. Goldfinch, the Right Honourable the Governor in Council would not remove Mr. Blount from Dharwar, nor does his Honor in Council think it advisable to remove Mr. Channing from Belgaum.

296—Sess. 2.

5 L 4

2. You

III.
Bombay.

No. 5123.

No 5124.

III.
Bombay.

2. You are requested, therefore, to favour Government by suggesting some other arrangement for Khandeish.

Bombay Castle, 24 March 1851.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

(No. 21 of 1852.)—Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WE have the honour to forward copies of the papers noted in the margin,* and to express a hope that, under the circumstances therein represented, your Honourable Court will see reason to favour us by return mail with a reply to our reference of the 15th April last, No. 57, relative to the re-employment of Mr. Blount as Superintendent of Cotton Experiments, Southern Mahratta country.

We have, &c.
(signed) *Falkland.*
T. Grey.
D. A. Blane.
A. Bell.

Bombay Castle, 17 January 1852.

Revenue Department, 18 February (No. 4) 1852.

Our Governor in Council at Bombay.

IN compliance with the recommendation contained in your letters of the 15th April (No. 57) 1851, and the 17th January last (No. 21), we now convey to you our authority † for re-engaging the services of Mr. Blount as Superintendent of Cotton Experiments in the Southern Mahratta country, on the same pay and allowances as were awarded to Mr. Simpson in our despatch of the 28th November (No. 19) 1849; viz. 700 rupees per mensem as salary, and 300 rupees per mensem as travelling or deputation allowance.

We are, &c.
(signed) *J. Shephard.*
J. W. Hogg.

London, 18 February 1852.

COPY of Revenue Letter, dated 28 January, No. 15, of 1853.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London; dated Bombay, 28 January 1853.

Honourable Sirs,

WITH reference to para. 3 of our letter (No. 89) dated the 30th June, and to our letter (No. 104) dated the 5th August 1852, we have the honour to forward a copy of our proceedings as per annex'd list, relative to the inferior quality of the cotton purchased by the Superintendent of Cotton Experiments Southern Mahratta country, Mr. Blount, in the season 1850-51 for shipment to England.

2. We

* Letter from Collector of Dharwar, No 58, dated 7 January 1852, with accompaniment. Minute by Right Honourable the President, concurred in by the Honourable Board, dated 15 January 1852, to the Collector of Dharwar, No. 390, dated 10 January 1852.
† Re-engagement of the services of Mr. Blount as Superintendent of Cotton Experiments in the Southern Mahratta country.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 805

2. We request your Honourable Court's attention to the resolution passed by us under date the 26th instant (No. 479).

III.
Bombay.

We have, &c.
(signed) *Falkland.*
Frederick Fitz Clarence.
D. A. Blane.
A. Bell.

Bombay Castle, 28 January 1853.

(No. 125 of 1852.)

From the Collector of Customs, Bombay, to Mr. Secretary *Goldsmid.*

Sir,

I WAS not aware until I received your letters, as per margin,* that the Government looked to me for any report as to the quality and condition of the cotton received from the Superintendents of cotton experiments in the districts of this Presidency, to be forwarded by me, under the instructions of Government, to England.

2. Having now received through the Collectors of Belgaum and Dharwar the first consignment of cotton of the season 1850-51, the growth of the Southern Mahratta country, and finding the quality generally much inferior to samples from the same districts which are now being packed for exportation by private merchants in Bombay, I think that I am acting in conformity to the wishes of Government in bringing the circumstances to the notice of his Lordship in Council, before proceeding to pack the consignment for transmission to the Honourable the Court of Directors.

3. The cotton to which I allude varies considerably in quality; but the very best samples, both of New Orleans and indigenous descriptions, are very inferior, in cleanness and absence of leaf, to the cotton from the same districts now being exported in large quantities by Messrs. Ritchie, Steuart & Co., Messrs. Lancaster & Co., Ravageer Coovergeer, Mooljee Dhunjee, and other mercantile firms.

4. As the consignments of cotton on account of Government always attract much attention, in England, and the character of Indian cotton in the market is much influenced by these consignments, it seems very desirable that none but the best and most carefully cleaned samples should be sent to the Honourable Court; and I would, therefore, respectfully suggest that the cotton now in my hands should be sold in Bombay, as its importation into England by private individuals would not so materially injure the character of the cotton as the importation of an inferior article by the Honourable Court.

5. Before, however, deciding finally on the course to be pursued with this cotton, it might be satisfactory to Government to obtain from the Chamber of Commerce a report of the comparative quality of the cotton of the Southern Mahratta country now consigned to Government, and that of the same district consigned to the mercantile firms to which I have above alluded.

Bombay, Custom House,
16 February 1852.

I have, &c.
(signed) *H. Young,*
Collector of Customs.

RESOLUTION on a Letter from the Collector of Customs, Bombay, No. 125; dated 16 February 1852.

1. MR. YOUNG has done perfectly right in bringing the state of the cotton to our notice.

2. Copy should be sent to the Collector of Dharwar, with directions immediately to report to us what he and Mr. Blount may have to urge on the subject.

3. It may be necessary that Mr. Blount should himself visit Bombay, and examine the cotton thus unfavourably reported on.

4. Pending receipt of a reply from Dharwar, cotton to be kept in a secure and dry place by the Collector of Customs.

(signed) *Falkland,*
J. Grey,
D. A. Blane,
A. Bell.

17 February 1852.

* Memo., No. 305, 13 January. Memo., No. 934, 11 February.

(No. 1105 of 1852.)

EXTRACT paras. 1 and 4 of the above resolution and indorsement are sent to the Collector of Customs for information and guidance.

Bombay Castle, 18 February 1852. (signed) *H. E. Goldsmid,*
Secretary to Government.

MEMORANDUM from the Collector of Customs, Bombay, No. 157.

THE Collector of Customs presents compliments, and requests that the Revenue Secretary to Government will be so good as to obtain the early instructions of Government as to the disposal of the cotton alluded to in the Collector's letter, No. 125, of the 16th instant.

2. Further consignments from the Southern Mahratta country to the number of 2,413 bales, are shortly expected, and unless the Custom House godowns are cleared of the cotton already in store, it will be indispensably necessary to rent private warehouses to afford accommodation to the above consignments at considerable expense.

Bombay, Custom House, (signed) *H. Young,*
21 February 1852. Collector of Customs.

(No. 1193 of 1852.)

MEMORANDUM.

IN reply to his memorandum of 21st instant (No. 151), the Secretary to Government has the honour to inform the Collector of Customs that the cotton he refers to must be carefully kept in a godown until the further instructions of Government are communicated to him, and care be taken the cotton is not tampered with.

Bombay Castle, (signed) *H. E. Goldsmid,*
23 February 1852. Secretary to Government.

MEMORANDUM from the Collector of Dharwar, No. 162, with accompaniment.

(No. 162 of 1852.)

FORWARDED to the Secretary to Government, in the territorial department revenue, for the information of the Right Honourable the Governor in Council.

Dharwar, Collector's Office, Camp Raneebednoor, (signed) *J. S. Law,*
3 February 1852. Collector.

(No. 29 of 1852.)

To *J. S. Law*, Esquire, Collector, Dharwar.

Sir,

I HAVE the honour to advise you of a further despatch of Government cotton of the year 1850 and 1851, as specified below.

The cotton has been consigned to Mr. G. N. Smith at Coompta, with instructions contained in Government letter, No. 2691 of 1845.

I beg to request that you will inform the Collector of Customs that invoices of cost will be forwarded as soon as I have ascertained the cost of freight, and commission from Coompta to Bombay.

Mark.	Descriptions.	Number of Bales.	Numbers.	Net Weight.	
				<i>Candies.</i>	<i>lbs.</i>
2	American - - -	148	344 to 491 -	25	591 $\frac{1}{2}$
4	- Ditto - - -	195	624 to 818 -	36	605 $\frac{1}{4}$
5	- Ditto - - -	91	1 to 91 -	15	—
P	- Ditto - - -	275	1 to 275 -	50	686
	TOTAL - -	709	- - -	128	314 $\frac{3}{4}$

I have, &c.
(signed) *J. M. Blount,*
Dharwar District, Camp, Raneebednoor, Supt. of Cotton Expts., S. M. C.
1 February 1852.

MEMORANDUM from the Collector of Dharwar, No. 278, with accompaniment.

(No. 278 of 1852.)

FORWARDED to the Secretary to Government in the territorial department, revenue, for the information of the Right Honourable the Governor in Council.

Dharwar, Collector's Office, Camp Bussapoor, (signed) *J. S. Law,*
27 February 1852. Collector.

(No. 47 of 1852.)

To *J. S. Law,* Esquire, Collector, Dharwar.

Sir,
I HAVE the honour to advise you of a further despatch of Government cotton of the year 1850 and 1851, as specified below.

The cotton has been consigned to Mr. G. N. Smith, at Coompta, with instructions to forward it to the Collector of Customs, Bombay, as per instructions contained in Government letter, No. 2691 of 1845.

I beg to request that you will inform the Collector of Customs that invoices of cost will be forwarded, as soon as I have ascertained the cost of freight and commission, from Coompta to Bombay.

Mark.	Description.	Number of Bales.	Numbers.	Net Weight.	
				<i>Candies.</i>	<i>lbs.</i>
D O	American - - -	350	1 to 350 -	55	124 $\frac{1}{4}$
B D	Ditto - - -	450	1 to 450 -	78	264 $\frac{1}{4}$
	TOTAL - -	800	- - -	133	388 $\frac{1}{2}$

I have, &c.
(signed) *John M. Blount,*
Dharwar District, Camp Hooblee, Supt. of Cotton Experiments, S. M. C.
23 February 1852.

(No. 355 of 1852.)

From the Collector of Dharwar to Mr. Secretary Goldsmid.

Sir,

WITH reference to the resolution of Government forwarded with your endorsement, No. 1102, dated 18th ultimo, I have the honour to forward the accompanying letter from the superintendent of cotton experiments, dated 2d instant, on the subject of the opinion expressed by the Collector of Customs of the inferiority of the first consignment of cotton of the season 1850-51, purchased by the former officer on account of Government.

2. I beg to explain, that I have hitherto deferred sending this report, as I had expected that Mr. Blount would, about this time, have proceeded to Bombay, and it appeared to me that it would be more satisfactory if a full explanation were afforded after he had had an opportunity of inspecting the cotton himself; but as I find that he could not leave Dharwar until the end of this month, at earliest, I have thought it better to forward his letter without further delay.

3. Probably, in the meantime, further consignments will have arrived, both from Mr. Blount and from the agents of merchants; and I would venture to suggest, that the opportunity should be taken to institute a more extended comparison, for it might have so happened that the cotton belonging to mercantile firms, alluded to by Mr. Young, was above the average quality of their entire purchases from the crop of 1850-51.

4. I beg, at the same time, to state, that I have ascertained that Mr. Blount's first consignment consisted principally of cotton cleaned under the superintendence of his own establishment, and which, therefore, ought to have been good; but, from advices received from the agent at Coompta, it appears to have fallen short in weight, which, joined to what is stated by the Collector of Customs, gives rise to a suspicion that it may have been changed or adulterated on the road.

5. The marks on the bales referred to are as follows, and I would beg to suggest that they should be left untouched until Mr. Blount can examine them in person.

△	203 bales.
○	296 "
+	119 "
⊖	57 "
⊕	421 "
KK	63 "
⊖	47 "

Dharwar, Collector's Office,
16 March 1852.

I have, &c.
(signed) J. S. Law, Collector.

(No. 54 of 1852.)

To J. S. Law, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to acknowledge, under cover of your letter, No. 264 of 1852, the communications noted in the margin* with reference to the cotton of the crop of 1850-51, purchased by me for Government, and which is now being forwarded to the Collector of Customs at Bombay, for shipment to England.

2. With reference to the 2d and 3d paragraphs of Mr. Young's letter, and with all deference to the opinion he has expressed of the inferiority of the cotton forwarded by me, as compared with that received from the Southern Mahratta country by mercantile firms at the Presidency, I beg to state, that when the whole cotton I have purchased is received (some 1,100 candies), it will generally be found, I think, equal in quality to the cotton of Messrs. Ritchie, Steuart & Co., and Messrs. Lancaster & Co. At the time of despatching the

* Letter, No. 125 of 1852, from H. Young, esq., Collector of Customs, to H. E. Goldsmid, esq., Secretary to Government, with resolution by Government on the above letter, &c. Letter, No 1102 of 1852; Territorial Department, Revenue from H. E. Goldsmid, esq., Secretary to Government, to the Collector of Dharwar.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 809

III.
Bombay.

the cotton, I sampled every bale; and all bad cotton, as far as it could be judged of from sampling, was rejected. In the large quantity (some 1,100 candies) which I have purchased, it may be expected that there would be some slight difference of quality, and there may be some bales containing bad cotton, for no sampling I can give the cotton here is a security against getting such bales; the only sure detection of such cotton is when the bales are cut open for repacking at the screws.

3. I have now on the road 300 candies of New Orleans cotton, purchased of the same parties from whom Messrs. Ritchie, Steuart, & Co. procured their cotton above alluded to, which I must conclude will be equal in quality to theirs. Messrs. Lancaster & Co. had some 25 candies of New Orleans cotton from the Belgaum district, and about 10 or 15 candies from Mysore; with this latter cotton, as regards cleanliness, the cotton of the Southern Mahratta country of the last crop will not, generally, bear comparison, but the cotton purchased for Government in the Belgaum district, and of which but a few bales have yet reached Bombay, will, I am sure, be found equal to any cotton received from that district.

4. Messrs. Lancaster & Co.'s native cotton from the Belgaum district, of which I saw a considerable quantity before it was cleaned, was not at all superior to the bulk of that purchased for Government; and some of the Government cotton, I do not hesitate to say, is equal to any native cotton imported into Bombay.

5. I have samples of the cotton purchased of the previous crop as well as that of 1850-51; which I will forward to Mr. Young for inspection as to the relative quantities of the two last crops, and for comparison of the samples of the cotton taken here with the cotton received by him in Bombay.

6. With reference to the 4th paragraph of Mr. Young's letter, I would beg to remark, that the character of the cotton should not be judged by comparison with a few candies of perhaps very select cotton; the question, I think, is not whether it is equal to such cotton as the few candies procured by Messrs. Lancaster & Co. from Mysore, but whether it is not decidedly superior to the generality of cotton received at Bombay. As to the proposition of selling it in Bombay under the expressed supposition of its inferiority, no surer method could be taken of securing its condemnation.

7. The cotton was purchased at a time when prices were much higher than at present, and if offered for sale now, would scarcely realise its cost, particularly if sold under an implication of its inferiority. I would beg to suggest, that when the cotton is received, some one should be employed to select and have the best cotton and that which is not so good packed in separate bales, and that the cotton should be sent home as in former years, for I feel confident that in England it will more than realise all expenditure of cost and transportation.

I have, &c.

Dharwar District, Hooblee,
2 March 1852.

(signed) J. M. Blount,
Supt. of Cotton Expts., S. M. C.

RESOLUTION on a Letter from the Collector of Dharwar, No. 355, dated
16 March 1852.

1. Mr. LAW to be informed that it is with astonishment and regret Government notice the careless manner in which he and Mr. Blount would dispose of our reference.

2. The Honourable Court brought to our notice that the cotton sent home in 1850 was of a description most discreditable to the Government agency, and the explanations furnished by Messrs. Law and Blount relative to that portion of the consignment which was sent from the Dharwar Collectorate were considered by Government to be very unsatisfactory.

3. In his letter of 16 February 1852, No. 125, Mr. Young, the Collector of Customs, very properly brings to the notice of Government that the cotton lately received by him from the Southern Mahratta country "varies considerably in quality; but the very best samples, both of New Orleans and indigenous descriptions, are very inferior, in cleanness and absence of leaf, to the cotton from the same districts now being exported in large quantities by Messrs. Ritchie, Steuart & Co., Messrs. Lancaster & Co., Ravageer Coovergeer, Mooljee Dhunjee, and other mercantile firms."

4. These allegations the Collector and Superintendent meet with cold indifference, notwithstanding that they cannot but be aware that, if correct, the large sums Government are expending on the cotton experiments in the Southern Mahratta country are being expended in a manner which will throw discredit on the produce of the province, rather than raise its value in the market.

5. It is the duty of Mr. Law to see that Mr. Blount makes arrangements to guard against cotton being tampered with on its road from the ginning-house to Coompta. Traders can do this, and assuredly Mr. Law, with his large establishment of peons, can do as much as can be done by them.

III.
Bombay.

6. The cotton sent by Mr. Blount to Bombay will be kept by the Collector of Customs till his arrival. He should proceed to the Presidency as soon as he can do so without detriment to his operations in the Southern Mahratta country; these operations being, however, apparently, from the papers now before Government, of but doubtful utility.

31 March 1852. (signed) *Falkland,*
A. Bell.

(No. 2485 of 1852.)

COPY of the foregoing Resolution for the Collector of Dharwar.

Bombay Castle, 10 April 1852. (signed) *H. E. Goldsmid,*
Secretary to Government.

(No. 445 of 1852.)

From the Collector of Dharwar to the Secretary to Government.

FORWARDED to the Secretary to Government in the Territorial Department, Revenue, for the information of the Right Honourable the Governor in Council.

Dharwar, Collector's Office, Camp Misrekote, (signed) *J. S. Law,*
3 April 1852. Collector.

(No. 73 of 1852.)

To *J. S. Law, Esq.,* Collector, Dharwar.

Sir,

I HAVE the honour to advise you of a further despatch of Government cotton of the year 1850-51 as specified below.

2. The cotton has been consigned to Mr. G. N. Smith at Coompta, with instructions to forward it to the Collector of Customs, Bombay, as per instructions contained in Government letter, No. 2691 of 1845.

3. I beg to request that you will inform the Collector of Customs that invoice of cost will be forwarded as soon as I have ascertained the cost of freight and commission from Coompta to Bombay.

Mark.	Description.	Number of Bales.	Numbers.	Net Weight.
A A	American - - -	65	1 to 65	<i>Candies. lbs.</i> 11 682 $\frac{1}{2}$

Dharwar, 1 April 1852.

I have, &c.
(signed) *J. M. Blount,*
Supt. of Cotton Expt., S. M. C.

MEMORANDUM by the Warehouse Keeper at the Custom House, dated 21 April 1852.

WITH reference to his memorandum, dated 14th February last,* the warehouse keeper begs to report, for the information of the Acting Collector, that up to the present date 4,236 † bales of Dharwar and Belgaum, New Orleans and native cotton have arrived at the Presidency; and, according to advices received up to this date from the above collectorates, there still remains a balance of 2,164 bales, ‡ which is daily expected from Coompta and Vingorla.

2. Of

* Quality, quantity, and condition of cotton received from Dharwar and Belgaum Collectorates.

† From Dharwar	- - - - -	3,635 bales.
" Belgaum	- - - - -	601 "
		<u>4,236 "</u>
‡ From Dharwar	- - - - -	1,534 bales.
" Belgaum	- - - - -	630 "
		<u>2,164 "</u>

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 811

III.
Bombay.

2. Of the 4,236 bales above referred to, and now in hand, about 2,776 bales have been stored in Government godowns, and the remaining 1,460 bales placed in a hired one; all of which are full. On the arrival of any portion of the cotton expected, other godowns will be required to be hired. The godown already taken has been hired at a monthly rent of 120 rupees, on condition of having the same vacated before the 30th May next, otherwise Government will have to keep it throughout the monsoon, and to pay the monthly rent till the 30th September next; no matter whether it is vacated previous to that date. The other godowns that will be required to be hired will not be procurable unless under the same conditions.

The cotton lately received varies considerably in quality; some bales appear to contain cotton a little cleaner than the other bales.

A report has been made to Government on the subject of this cotton, * and instructions received to keep the same until further orders. †

The monsoon is approaching fast, and the warehouse keeper would respectfully beg the Acting Collector to obtain early instructions from Government regarding the disposal of the cotton; for, if the cotton is to be shipped to England, it must be exported immediately, as the freight is now rising. ‡

The cotton is all old, and of the crop of 1850-51; it has remained in the Southern Mahratta country during the last monsoon, and if not shipped, or otherwise disposed of before the rains, it will be deteriorated both in respect to colour and quality, as well as value.

Custom House, 21 April 1852.

(signed) *F. A. Carvalho,*
Warehouse Keeper.

MEMORANDUM to the Acting Collector of Customs, Bombay.

THE Revenue Secretary presents compliments, and requests that the Acting Collector will have the goodness to state how many bales from Dharwar, and how many from Belgaum, formed the first consignment referred to in Mr. Young's letter of 16th February 1852, No. 125, and where these bales are stored, and at what charge to Government.

Bombay Castle, 24 April 1852.

(signed) *H. E. Godsmid,*
Secretary to Government.

MEMORANDUM by the Acting Collector of Customs, Bombay.

The Acting Collector presents compliments, and begs to annex a memorandum, which conveys the information required by the Secretary to Government.

24 April 1852.

(signed) *R. Spooner,*
Acting Collector.

MEMORANDUM.

THE first consignment from Dharwar consisted of 1,891 bales; that from the Belgaum Collectorate consisted of 159 bales. Both these consignments have been stowed in the custom-house godowns, and the Government is not subject to any expense on their account. But it is the subsequent consignments, as per margin § (a portion of which has been accommodated in the Government godowns), that are stowed in private warehouses (2 ||), and for which the Government pays 240 rupees as monthly rent. Perhaps another godown will be required for stowing a portion of the balance that is expected, but it cannot be stated for certain.

Custom House, 24 April 1852.

(signed) *F. A. Carvalho,*
Warehouse Keeper.

* Collector's letter to the Secretary to Government, No. 125, dated 16 February 1852.

† Government memorandum, No. 1193, dated 23 February 1852.

‡ In February last, 2 l. 5 s. per ton; in March last, 2 l. 10 s. per ton; present rate, 3 l. 15 s. per ton.

§ Dharwar, four consignments	- - - -	3,278	bales.
Belgaum, one consignment	- - - -	1,072	"
		<u>4,350</u>	"

|| One hired on 17 March 1852; one hired on 23 April 1852.

III.
Bombay.RESOLUTION on a Memorandum, dated 24 April 1852, from the Acting Collector
of Customs, Bombay.

THE whole of the first consignment, and three of the bales worst in appearance of each of the other consignments, to be kept till Mr. Blount arrives; and rest to be sent home to the Honourable Court.

27 April 1852.

(signed) *D. A. Blane.*
A. Bell.

(No. 2874 of 1852.)

To the Acting Collector of Customs.

Bombay Castle,
24 April, 1852.(signed) *H. E. Goldsmid,*
Secretary to Government.

(No. 461 of 1852.)

From the Acting Collector of Customs to the Secretary to Government.

Sir,

WITH reference to the correspondence, ending with the Government Resolution, No. 2874, dated the 24th April 1852, I respectfully beg to report that the cotton has been examined in the presence of Mr. Blount.*

2. The quantity of American cotton received up to this date from Dharwar is 4,501 bales; and of these, 703 have been ascertained to consist of bad cotton.†

3. The quantity of American cotton received up to this date from Belgaum is 150 bales.‡ These have not been subjected to examination, Mr. Blount having assured this department that the cotton is of good quality.

4. The native or indigenous cotton both from Dharwar and Belgaum Collectōrates, as per margin,§ has not been examined. Mr. Blount says that the cotton is all bad, and he does not therefore think it necessary to subject it to the examining process.

5. When the cotton is opened for screwing purposes, it will then, and not until then, be known how much is really bad. In many of the bales which have now been pronounced to be good, in all probability much spurious cotton will be found.

6. By the accompanying copies of letters, as per margin,* it is to be observed that when the first advice of the despatch of cotton from Dharwar was received here, Mr. Young made a reference to the Collector, to know whether the cotton was to be shipped to England separately, according to the different marks on the bales, or whether according to the qualities of cotton (*i. e.* American and native). Mr. Blount replied that the different marks on the bales indicated the villages or names of individuals from whom the cotton was purchased, and that he did not think it necessary that it should be packed and shipped according to mark, as the cotton differed but little in quality.

7. On examination, however, it has been discovered that the cotton does differ in quality; even under one particular mark there are different qualities. Some bales are superior, some middling, and some are very dirty and inferior; these latter bales have been set aside. It would appear Mr. Blount was aware what marks contained good, and what bad cotton, as he seems to be in possession of all particulars.

8. Up

* Cotton received from Belgaum and Dharwar for transmission to the Honourable Court.

† American cotton from Dharwar:—	Good cotton	-	-	-	-	-	3,798	bales.
	Bad cotton	-	-	-	-	-	703	"
							<u>4,501</u>	"

‡ American cotton, Belgaum:—Good cotton - - - - - 150 bales.

§ From Dharwar	-	-	-	-	-	-	617	bales.
From Belgaum	-	-	-	-	-	-	1,019	"
							<u>1,636</u>	"

|| Mr. Collector Young to Collector of Dharwar, No. 924, dated 9 December 1851. Collector of Dharwar to Mr. Young, endorsement No. 26, dated 5 January 1852, enclosing Mr. Blount's letter, No. 255, dated 26 December 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 813

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Bombay.

8. Up to the present time, I have not been able to procure freight; but as several ships have just arrived, I now trust that within a short time I shall be enabled to send the cotton to Liverpool. In the meantime, however, I shall have the cotton screwed, so as to enable Mr. Blount to have an opportunity of personally seeing and examining the whole of the cotton.

9. I respectfully solicit instructions as to the disposal of such portion of the cotton as may, when it is opened for the purpose of being screwed, be ascertained to be bad. My own opinion on the subject is, that the bad cotton should not be sent to England, but that it should be advertised as rejected cotton, and sold by public auction.

10. The consignments of cotton on account of Government always attract much attention in England, and the character of Indian cotton in the market is much influenced by these consignments; and hence therefore it is very desirable that none but the best and most carefully cleaned samples should be sent to the Honourable Court.

11. In conclusion, I would respectfully beg to suggest that Mr. Blount be requested to submit a report in detail, explaining the system which was followed in purchasing the cotton, and the measures which were, or perhaps I should say ought to have been, adopted by him to secure Government from being defrauded, by paying a very high price for very inferior articles.

Bombay Custom House,
20 May 1852.

I have, &c.
(signed) *R. Spooner*,
Acting Collector of Customs.

(No. 924 of 1851.)—Territorial Department, Revenue.

To the Collector of Dharwar.

Sir,

WITH reference to Mr. Blount's letter to your address, No. 224, dated 25th ultimo, forwarded to me under your endorsement, No. 2041, dated 29th idem, I have the honour to request the favour of your informing me whether the packages of cotton therein alluded to should be packed and shipped to England separately, and according to the different marks on the bales, or merely according to the qualities of the cotton. In the former case, four separate invoices of their cost and charges will be required from your department; whilst in the latter, you will have to furnish me with only two invoices.

2. I have also to request the favour of your informing me whether the above cotton is purchased, or the produce of Government farms.

Bombay Custom-House,
9 December 1851.

I have, &c.
(signed) *H. Young*,
Collector of Customs.

(No. 255 of 1852.)

To *J. S. Law*, Esq., Collector of Dharwar.

Sir,

IN answer to the letter of the Collector of Customs, No. 924 of 1851, received under cover of your endorsement, No. 2094 of 1851, I have the honour to state that, in forwarding this cotton, I have been guided by the instructions contained in extract, para. 3, of a Government letter, No. 6919, and letter of the Collector of Customs, No. 533 of 1851, and have therefore marked each purchase of cotton differently, so as to enable me to furnish, without delay the invoices of the cotton within a short time after its arrival at the Presidency. The price paid for the cotton here is the same in near every instance, but the expenses of forwarding, &c., will differ. I shall, therefore, have to render separate invoices of each mark; but as the cotton will differ but little in quality, I see no necessity for shipping each mark separately. The marks put on the bales here only indicate the village or name of individual from whom purchased; a register of the marks, however, should be made; for should any of the cotton turn out to be false packed, on examination at Bombay, from these marks I shall know of whom the cotton was purchased.

The cotton is all the produce of the Dharwar district, and purchased of ryots or dealers; none has been produced on Government farms.

Dharwar Districts, Camp Bunkapoor,
26 December 1851.

I have, &c.
(signed) *J. M. Blount*,
Supt. of Cotton Experiments.

(No. 26 of 1852.)

FORWARDED for the information of the Collector of Customs, with reference to his letter, No. 924, dated the 9th ultimo.

(signed) J. S. Law,
Collector.
Dharwar, Collector's Office, 5 January 1852.

(No. 102 of 1852.)

From Mr. Blount, Superintendent of Cotton Experiments, Southern Mahratta Country,
to Mr. Secretary Goldsmid.

Sir,

WITH reference to Government letter, No. 2485 of 1852, addressed to the Collector of Dharwar, and containing an extract from a letter of the Collector of Customs, dated 16th February 1852, No. 125, reporting to Government the general inferiority of the cotton forwarded from the Southern Mahratta country, as compared with cotton received from the same districts by mercantile houses at the Presidency ;

2. I have now the honour to report to you, that since my arrival at the Presidency, on the 26th ult., for the purpose of examining into the condition and quality of the cotton, that the whole of the American cotton from Dharwar district has undergone a thorough examination. I have had no opportunity of contrasting the cotton with any large lot that has been received by mercantile houses from that district, but I have inspected the samples in deposit at the custom-house of both Government cotton and that received by mercantile houses. The colour of the cotton does not appear so good as when it was despatched from the district, and generally I do not consider it inferior to the samples with which it has been compared.

3. The result of the examination here is, that of 4,501 dokras of American cotton from Dharwar, 3,798 are considered good, and 703 dokras inferior out of them. I think, on further inspection, many will be found good, and that the proportion of bad cotton will be but small.

4. The New Orleans cotton from Belgaum consists of 155 dokras; it was purchased of the ryots and cleaned on Government gins, the whole of which, I think, is in quality fine to good cotton.

5. The whole of the native cotton, 611 dokras, from Dharwar, and 1,075 from Belgaum, is ordinary cotton, and superior to the generality of native cotton only in being free of seeds, with the exception of 207 dokras, which I consider fine cotton.

6. I was certainly under the impression at the time of receiving the American cotton purchased in Dharwar district, that but few of the packs were bad (a few containing the latter pickings of the cotton purchased of the ryots), and I am much surprised, and regret to see that there is so much inferior cotton amongst that which I purchased of the dealers for good cotton. I was aware that the false packing and adulteration of the American cotton with the native had been done to a considerable extent by the native dealers, and I made every effort at the time of receiving the cotton from the various parties of whom I had purchased it, to detect the bad bales, and in all instances refused what I considered bad cotton. I have, no doubt, in many instances, been deceived in my opinion of the cotton, for, having to make the inspection of the cotton in either the open sunshine or in dark rooms, I could not at all times secure the proper light in which to inspect the samples, and, owing to this circumstance, I have committed errors of judgment in regard to the quality of the cotton.

7. I can but acknowledge that a large quantity of the cotton is inferior to what I thought it, but I have been led to err and been deceived, not so much in judgment, as from the deceptive way in which the cotton was packed by those from whom I purchased; by the samples taken from the bales I formed my opinion, and relied on all the cotton in that bale being of like quality; in so doing, I have been deceived, for many of the bales contain worse cotton than the samples taken by me.

8. In my letter to Mr. Law, which was forwarded to Government with his letter, No. 355 of 1852, dated 16th March, I endeavoured to explain that no one could protect himself from receiving at times false packed or inferior cotton, as that part of the bale from which the sample may be taken would show to be good cotton, whilst in other parts it may contain an inferior description, and cotton is thus received and forwarded in good faith, which afterwards, on being opened at the screws here, is found to be mixed or false packed. There is no security in this matter, unless by cutting open every bale previous to forwarding it from the district; heretofore, I could not take this precaution for want of a house in which to perform the work, but now that the press house in course of erection at Hooblee will be available for this purpose, all the cotton which I have purchased this year I will have cut open, and pledge myself that no complaint will be made in future of the cotton purchased for Government in the Southern Mahratta country.

9. After

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 815

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9. After completing the examination of the cotton here, I took samples from a number of bales indiscriminately of both American and native cotton, which I submitted to Mr. J. A. King, of the house of King & Co., and Mr. A. H. Campbell, of the house of Ritchie, Stewart & Co., for their opinion, and which I beg herewith to enclose.

10. Since my employment in the cotton experiments in 1840, I have studiously endeavoured to perform the duties expected of me with fidelity, and to the satisfaction of Government, and it is with the greatest regret that I now find all my exertions to secure for Government good cotton, and to raise the character of that article thwarted by the dishonest practices of the local native dealers. I hope my honesty of purpose will not be doubted by Government, and although I cannot expect to escape censure, yet I trust that Government will take a favourable view of my explanations, and forgive the commission of a fault which I endeavoured to guard against.

11. Since writing the above explanation on the quality of the cotton, and which I hoped would prove to be a correct one, some of the bales were sent yesterday to the screws: about 100 were opened for packing, and much to my disappointment they were not throughout good. I am very much distressed that such is the case, and however disagreeable to myself, as rendering me liable to further displeasure of Government, I must acknowledge that I have been much deceived as regards the quality of the cotton, and that the quantity of good cotton, to judge by the bales which have been opened, will not be so great as it appeared to be from the samples taken by me, and submitted to Messrs. Campbell & King for their opinion; and that the quantity of inferior cotton will be greater than I supposed, for in the bales opened yesterday, inferior cotton was mixed to some extent with the good, and in some instances handfuls of trash and seedy particles, taken out of the cotton in the cleaning process were found in the bales.

12. I beg again to repeat my extreme regret that I have failed in procuring good cotton, and that the cotton I have forwarded should have been even in part of an inferior description. I can conscientiously say that I have endeavoured faithfully to discharge the duties entrusted to me, and that the disagreeable position in which I am now placed, and which has brought on me the severest censure of Government, is not the result of carelessness or want of fidelity on my part, but of dishonesty on the part of those from whom I purchased the cotton. I hope these explanations will be considered satisfactory, as to my honesty of purpose in the discharge of the duties entrusted to me, and I beg to solicit the generosity of Government for the forgiveness of a fault not intentionally committed.

13. The cotton is now in process of being screwed, and it will take about one month to complete the work. Mr. Spooner in a memorandum of his, sent for my perusal on the 20th, recommends that I should remain here until the cotton is all screwed. I do not see any necessity of my remaining here for that purpose, as the work under Mr. Spooner's establishment will be as well done, and the cotton as correctly classified, as if I were present; I have no personal objection to remain until the work is done, but I beg to state that there are many accounts of the experiments unsettled, and outstanding balances to be recovered; I have also engaged a large quantity of cotton, on which I have advanced upwards of 35,000 rupees, and I am very anxious to examine and receive as much of it as possible previous to the commencement of the monsoon. I beg to request instructions as to whether or not I shall proceed to Dharwar.

Bombay, 22 May 1852.

I have, &c.
(signed) John M. Blount,
Superintendent Cotton Experiments.

My dear Blount,
I HAND you my report on the cotton; I wish it was more perfect, which it would have been if I could have given my opinion upon it in comparison with other lots of New Orleans cotton.

Yours truly,
(signed) J. A. King.

REPORT.

4,501 bales New Orleans seed cotton from Dharwar.

3,798 bales good staple; fair colour, little leaf, free from seed.

703 bales good staple; dull colour, leafy, free from seed. The proportion of this inferior cotton is 16 per cent., which is certainly not much.

155 bales New Orleans seed cotton from Belgaum. Perhaps a little superior to the 3,798 bales, as being rather better colour and with less leaf; I consider that the above three lots of cotton are all suited to the consumption of the English spinners, who use American cotton, and I have seen much worse American cotton than the 703 bales in the Liverpool market.

207 bales native cotton from Belgaum; very superior native cotton; good staple; good colour, very clear; free from seed.

III.
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868 bales native cotton from Belgaum; fair staple; leafy, free from seed; better than the native cotton in this market, as it is cleaner.

611 bales native cotton from Dharwar, of the same character as the 868 bales.

With reference to the New Orleans seed cotton, the colour is certainly not so good as I have seen it, but I understand all the crop of last season was rather inferior.

Bombay, 19 May 1852.

(signed) *J. A. King.*

I consider that Mr. King has very correctly described the character of the cotton to which he alludes, and of which I have carefully inspected samples submitted to me by Mr. Blount. There is a good deal of broken seed in some of the cotton which is attributable entirely to the faulty state on working of the gins; and it being the duty, as I have understood, of the Government engineer attached to the cotton experiments to keep the gins in good order, the superintendent could scarcely make this broken seed an excuse for not receiving the cotton if previously contracted for; as regards the colour, there can be no doubt that it is worse than that of any indigenous cotton now in the market; but any New Orleans cotton of the same age, *i. e.*, picked from the pod a year and a half ago, would now be as bad; the leaf also has become black from age, which is one of the worst features in the cotton as a marketable article.

Bombay, 20 May 1852.

(signed) *A. H. Campbell.*

(No. 4109 of 1852.)

From Mr. Secretary *Goldsmid* to the Superintendent Cotton Experiments, Southern Mahratta Country, Bombay.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 102, dated the 22d ultimo, with enclosure, relative to the inferior quality of cotton received from the Southern Mahratta country.

2. In your letter to the Collector of Dharwar, No. 255, dated the 26th December last, you state that the cotton "will differ but little in quality," and yet now it appears from the accompanying extract from a letter from Mr. Spooner, you, without any examination pronounced 1,636 bales to be all bad;* you are requested to explain how you reconcile this pre-knowledge, with the information given as above, in your letter to the Collector of Dharwar.

3. You will have the goodness to explain whether you took with you to the place, where the cotton is deposited, any memorandum which enabled you to state from the marks on the bales what cotton was good and what bad, without examining the contents.

4. You are also requested to remain in Bombay till the whole of the cotton is turned out and screwed.

Bombay Castle,
12 June 1852.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

(No. 4110 of 1852.)

From Mr. Secretary *Goldsmid* to the Acting Collector of Customs, Bombay.

Sir,

WITH reference to your letter, No. 461, dated the 20th ultimo, with enclosures, I have been directed by the Right Honourable the Governor in Council to authorise the bad cotton being sold as rejected, as proposed by you, leaving it to you to do the best you can for Government.

2. In forwarding herewith a copy of the Government resolution, dated 10th April last, No. 2485, and of the papers on which it was passed, as also copy of a letter † from Mr. Blount, and my communication to him of this date, I have been desired to request that you will have the goodness to furnish Government, when the whole of the cotton has been examined and pressed, with your report and opinion in detail, and any suggestions you may have to offer.

† No. 102 of 22 May 1852.

Bombay Castle,
12 June 1852.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

* See extract, para. 4, of a letter from the Acting Collector of Customs, Bombay, No. 461, dated 20 May 1852, hereto appended.

(No. 106 of 1852.)

From the Superintendent of Cotton Experiments, Southern Mahratta Country, to
Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 4109 of 1852, with accompanying extract, 4th paragraph of letter, No. 461, dated 20th May 1852, from the Acting Collector of Customs, and, in reply to the 2d paragraph of your letter, referring to a letter of mine, No. 255, dated 26th December last, to the Collector of Dharwar, in which I stated that the cotton differed but little in quality, I beg to state that there is no discrepancy in what I then stated to the information given afterwards to the Acting Collector of Customs. At the time I wrote my letter, No. 255, I had forwarded only about one-third of the cotton purchased, and my remark had reference simply to the quality of the two varieties of cotton separately; I did not intend to have conveyed the impression that there was no difference in quality between native and American, but that the different lots of American cotton differed but little in quality, and that the two lots of native cotton then forwarded were of the same description; I did not mean that the native cotton was equal in quality to the American.

2. I had a memorandum of the marks of all the cotton which I had forwarded, and from it knew the good from the inferior native cotton. The cotton referred to in the letter of the Acting Collector of Customs (No. 461 of 1852), is indigenous cotton, and, with the exception of 56 bales, was purchased of the ryots, and cleaned on Government gins in charge of carkoons belonging to the cotton experimental establishment. I have no reason to suppose this cotton to have been badly managed in the ginning and packing process, and as there is no cotton of a more inferior description grown with which it might have been adulterated, I therefore did not think it necessary to examine the whole of this cotton, as was done with the American. The whole number of bales of native cotton forwarded from Dharwar and Belgaum is 1,682, of which 207 bales (all that could be got in both districts clean picked) is good cotton, and the remainder 1,475 bales (not 1,636, as stated by the Acting Collector of Customs) is comparatively bad, that is, it is much inferior to the 207 bales of clean picked cotton referred to, but is superior to the generality of Dharwar and Belgaum indigenous cotton, in being freer of seeds, which is the opinion I expressed of this cotton, in my letter, No. 102 of 1852; it was the best cotton I could procure, but still I cannot call it good cotton, nor do I consider any indigenous cotton of the Southern Mahratta country good in anything, except staple, unless it is picked from the fields free from leaf.

3. With reference to the concluding paragraph of your letter directing me to remain in Bombay until the screwing of the cotton is completed, I beg respectfully to state, that the work will probably be completed in the next 20 days, and that there can be no actual necessity for my remaining here until that period, as there is no doubt the work will be as well performed as if I were to remain here, and that I think my presence in the district actually necessary to see how the work is progressing there. I have engaged a large quantity, 1,145 candies of cotton, and advanced on it 54,890 rupees, and I am most anxious to see that the packing and cleaning of it is properly done; besides, there are many of the accounts of last year's work yet to be settled, on account of monies advanced by the collectors of Dharwar and Belgaum for purchase of cotton and other matters connected with the experiments which I am anxious to have adjusted. Under these circumstances, I beg to request that I may be permitted at once to return to my duties in the districts.

I have, &c.

(signed) *J. M. Blount*,
Superintendent Cotton Experiments, S. M. C.

Bombay, 14 June 1852.

(No. 4229 of 1852)—Territorial Department, Revenue.

REFERENCE to the Acting Collector of Customs, Bombay, dated 17 June 1852.

MR. SPOONER is requested immediately to report when the screwing of the cotton will be completed.

By order, &c.

(signed) *A. Malet*,
Secretary to Government.

Bombay Castle, 17 June 1852.

III.
Bombay,

(No. 568 of 1852.)—Territorial Department, Revenue.

REPORT by the Acting Collector of Customs, dated 17 June 1852.

THE Acting Collector of Customs respectfully begs to state, that the screwing of the cotton will be completed, weather permitting, on or before the end of this month.*

Bombay, Custom House,
17 June 1852.

(signed) *R. Spooner,*
Acting Collector of Customs.

(No. 4307 of 1852.)—Territorial Department, Revenue.

From Mr. Chief Secretary *Malet* to the Superintendent of Cotton Experiments, S. M. C.,
Bombay.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 106, dated the 14th instant, explaining certain discrepancy in the statements made by you relative to the inferior quality of cotton received from the Southern Mahratta country.

2. As you state you have advanced 54,890 rupees on account of cotton engaged for, Government sanctions your immediate return to the Southern Mahratta Country.

3. His Lordship in Council has desired me to intimate to you, that on the whole of the cotton now in Bombay being screwed, Government will determine what measures are to be taken with regard to the very unsatisfactory manner in which you have conducted your purchase operations.

Bombay Castle, 24 June 1852.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

(No. 4308.)

COPY is sent to Mr. Spooner, with an intimation that further instructions will be forthwith communicated to him.

Bombay Castle, 24 June 1852.

(signed) *A. Malet,*
Chief Secretary to Government.

(No. 566 of 1852.)—Territorial Department, Revenue.

From the Acting Collector of Customs Bombay to Mr. Secretary *Goldsmid*.

Sir,

WITH reference to the Government resolution, No. 2874, dated 24 April 1852, I have the honour to forward a descriptive list of 500 bales of New Orleans cotton, shipped to Liverpool as per margin,† together with bills of lading in duplicate.

Insurance.

2. The cotton has been insured here for the sum of thirty-one thousand rupees (31,000), under Government letter, No. 1787, dated 6th March 1850, Revenue Department.

Classing of the cotton as 2d quality; reasons for.

3. The aforesaid cotton is out of the quantity selected as good cotton, as reported in my letter, No. 461, dated 20th ultimo, paragraph 2; but it was ascertained at the time of packing, that even this cotton was not of the best description, as it is not of an uniform quality, but contains good, bad, and indifferent cotton mixed together.

4. Under these circumstances, therefore, I have accordingly classed the cotton as being of second quality, making a note to that effect at foot of the Descriptive List.

Bombay, Custom House, 16 June 1852.

I have, &c.
(signed) *R. Spooner,*
Acting Collector of Customs.

* Dharwar and Belgaum cotton, consignment of, to England.

† Dharwar cotton, New Orleans; 500 screwed bales shipped, on account of the Honourable the Court of Directors, to Liverpool, per ship "Chancellor," James Turner, commander, to the care of Mr. William Rathbone.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 819

III
Bombay.

DESCRIPTIVE LIST of 500 Bales of Cotton, shipped on board the Ship "Chancellor," James Turner, Commander, marked as per margin, and consigned to the care of Mr. William Rathbone, Liverpool.

D C A	Gross Weight in lbs.	Net Weight in lbs.
Nos. 1 to 500. 500 Bales—Cotton—weighing	191,802	
Deduct Tare, at 14 lbs. per Bale	7,000	
		184,802
TOTAL Net lbs.	-	184,802

REMARKS.

D C
A Nos. 1 to 500. Bales of Dharwar New Orleans cotton, the produce of 1850-51, being cotton of second quality.

(signed) R. Spooner,
Bombay, Custom House, Acting Collector of Customs.
16 June 1852.

(No. 4363 of 1852.)—Territorial Department, Revenue.

From Mr. Chief Secretary Malet, to the Superintendent of Cotton Experiments, S. M. G., Bombay.

Sir,

WITH reference to Government letter, No. 4109, dated the 12th instant, I have been directed, by the Right Honourable the Governor in Council, to forward, for your information, the accompanying copy of a letter, No. 566, dated the 16th instant, from the Acting Collector of Customs at this Presidency, and to request your particular attention to paras. 3 and 4 thereof.

Bombay Castle, 28 June 1852.

I have, &c.
(signed) A. Malet,
Chief Secretary to Government.

(No. 4441 of 1852.)—Territorial Department, Revenue.

From Mr. Chief Secretary Malet to the Acting Collector of Customs, Bombay.

Sir,

ADVERTING to the Government endorsement, No. 4308, dated the 24th instant, I have been directed, by the Right Honourable the Governor in Council to forward to you the accompanying copy of the whole of the correspondence, as noted in the margin,* which has passed on the subject of the cotton of the season 1850-51 from the Southern Mahratta country, and to request that you will have the goodness to state, immediately that the screwing is completed, which of the consignments of cotton despatched, and which of those received up to the date of each letter, in the compilation of correspondence, contained good, inferior, and bad cotton, and to what extent, distinguishing the American from the indigenous.

2. You will have the goodness to state, also, whether it was the indigenous or the New Orleans cotton which Mr. Blount knew, from the marks on the bales, to be of good or inferior description, and on what dates the consignments he was thus able to distinguish were despatched from the Southern Mahratta country, and received at Bombay.

3. With your reply you will have the goodness to return the copy of the correspondence which accompanies this letter.

Bombay Castle, 30 June 1852.

I have, &c.
(signed) A. Malet,
Chief Secretary to Government.

* 1. From Collector of Customs, Bombay, to Government, No. 125, dated 16 February 1852. 2. Government Resolution thereon, No. 1105, dated 18 idem. 3. Collector's Memorandum, No. 157, dated 21 idem. 4. Government reply, No. 1193, dated 23 idem. 5. From Dharwar Collector to Government, No. 162, dated 3 idem, with accompaniment. 6. From ditto, No. 278, dated 27 idem, with accompaniment. 7. From ditto, No. 355, dated 16 March, with accompaniment. 8. Government resolution thereon, No. 2485, dated 10 April. 9. From Dharwar Collector, No. 445, dated 3 idem, with accompaniment. 10. From Acting Collector of Customs, dated 24 idem, with accompaniment. 11. Government Memorandum, dated 24 idem. 12. From Acting Collector of Customs, dated 24 idem, with accompaniment. 13. Government resolution thereon, No. 2874, dated 24 idem. 14. From Acting Collector of Customs, No. 461, dated 20 May, with accompaniments. 15. From Mr. Blount, No. 102, dated 22 idem, with accompaniments. 16. Reply to Mr. Blount, No. 4109, dated 12 June. 17. Reply to Acting Collector of Customs, dated 12 June. 18. From Mr. Blount, No. 106, dated 14 June.

III.
Bombay.

(No. 726 of 1852.)—Territorial Department, Revenue.

From *Richard Spooner*, Esq., Acting Collector of Customs, to *A. Malet*, Esq., Chief Secretary to Government, Bombay, Custom House, 6 August 1852.

Sir,

Cotton of the season of 1850–51, received from Belgaum and Dharwar, for transmission to the Honourable Court. Extraordinary conduct of Mr. Blount, the Government agent for the purchase of cotton.

I HAVE the honour to acknowledge the receipt of two Government letters, with their several accompaniments, No. 4110 and 4441,

dated the 12th and 30th June last respectively.

2. I shall endeavour to state, in as concise a manner as possible, the full particulars connected with the cotton, from the date of its arrival in Bombay to that of its final disposal, whether by shipment to England or by sale.

No. 4441 of 30 June 1852.

3. Before, however, proceeding with the subject-matter, I would beg respectfully to observe, that from the wording of your letter, it would seem that Government is under the impression that consignments of cotton are received here in the order of succession as advices from the local authorities arrive, but such is not the case; the cotton is transmitted from Coompta and Vingorla in quantities according to the freight procurable, and its despatch thence by the transmission agents depends entirely upon circumstances.

*American - 776
Native - 605

Total - - 1,381

Bales.
† American - 56
Native - 103

Total - - 159

4. At the time Mr. Young addressed his letter to Government, No. 125, dated the 16th February, a portion* only of the first consignment of cotton from the Dharwar district had arrived, while the first consignments † from Belgaum had arrived in full.

5. The other consignments from Dharwar did not arrive consecutively, but every shipment brought in portions of two or three different consignments (each consignment, consisting of divers marks); and on several occasions cotton from the aforesaid two districts arrived together; the remaining 510 bales of the first consignment from Dharwar, therefore, came along with these consignments, the last batch having been landed on the 18th March.

6. It will thus be observed that no satisfactory information can be given with regard to the dates of arrival of each particular consignment, nor is it possible to state, as required by Government, "which of the consignments of cotton despatched, and which of those received up to the date of each letter, in the compilation of correspondence, contained good, inferior, and bad cotton, and to what extent."

7. At the time, however, Mr. Blount penned his letter to the Collector of Dharwar, No. 255, dated the 26th December 1851, stating that "the cotton will differ but little in quality," and that he saw no necessity for "shipping each mark separately;" he had advised us of the despatch of 1891 bales of cotton as follows:—

MARKS.	Number of Bales of each Mark.	Description of Cotton.	How Disposed of.	
			Goods sent to England.	Rejected; sold by Auction,
1.	2.	3.	4.	5.
◇ D	228	American - -	150	78
◇ N	147	- ditto - -	133	14
◇ O	296	- ditto - -	243	53
⊙ X	119	- ditto - -	118	1
⊙ K	421	- ditto - -	402	19
KK	63	- ditto - -	58	5
◇ G	301	Native - - -	- - -	301
◇ I	56	ditto - - -	- - -	56
◇ A	203	ditto - - -	- - -	203
◇ T	57	ditto - - -	- - -	57
Total - -	1,891	- - - -	1,104	787

8. From columns 4 and 5 of the above statement, it will be observed that the cotton did differ considerably in quality, and that a large portion was eventually rejected.

617 bales.

9. Adverting to the second para. of your letter, No. 4441, I would beg to observe, that Mr. Blount on referring to his memorandum, pronounced the whole of the indigenous cotton

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to be bad, and with reference to the American cotton, the bales noted in the margin* were pronounced by him to contain the best, while the bales noted in the margin† he stated contained bad cotton, and this, on examination, turned out to be the case.

10. I will now proceed to submit a short summary of the proceedings in respect to the cotton, and will commence with the—

Dharwar Cotton.

11. Five advices were forwarded by the Collector of Dharwar of the despatch of 5,169 bales of cotton (*vide* below). The number of bales received here was, however, 5,170 (one of the bales must have been split into two by the people in transit to Coompta, to accommodate the bullocks or carts.

1. Advice.	2. Number and Date of Advice.		3. Date of Receipt.	4. QUANTITY.			5. MARKS.
				American.	Native.	TOTAL.	
DHARWAR COTTON:							
1st	2,090	1851: 15 Dec.	1851: 20 Dec.	1,274	617	1,891	D N O X K K K G I A and T
2d	121	1852: 24 Jan.	1852: 4 Feb.	1,704	-	1,704	AC E. X F. 2 3 & 4
3d	162	3 Feb.	11 - -	709	-	709	2 4 5 & P
4th	279	27 - -	5 Mar.	800	-	800	D.O & B D
5th	446	3 Apr.	10 Apr.	65	-	65	AA
				4,552	617	5,169	

12. The bales bore severally 22 different marks or brands, and arrived here by boats from Coompta and Vingorla between the 20th December 1851 and 25th May 1852.

No. of Marks.

13. On the receipt of the first advice, seeing that the consignment consisted of American and native cotton, and comprised different marks, a question naturally arose whether the cotton was to be packed and shipped according to the said marks, or whether according to the quality of the cotton, and the Collector of Dharwar was accordingly written to by Mr. Young, under date the 9th December 1851, No. 924.

American	-	18
Native	-	4
		22

14. In answer, that officer forwarded a letter from Mr. Blount, No: 255, dated 26th December 1851, in which it was stated that, as the cotton would "differ but little in quality," he saw "no necessity for shipping each mark separately," the marks merely indicating the village, or the names of the individuals from whom the article was purchased. This department was thus led to believe that all the American cotton was of one uniform quality.

15. The

1. Marks.	2. Of what Consignment.	3. Bales.	† 1. Marks.	2. Of what Consignment.	3. Bales.
(K)	1st	421	D	1st	228
KK	"	63	O	"	296
3	2d	288	N	"	147
5	3d	91	DO	4th	350
P	"	275	BD	"	450
AA	5th	65			

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15. The cotton was, however, found to differ greatly in quality on a cursory examination here; and as the Government had, on a previous occasion, made this department subject to a censure regarding the indifferent quality of the cotton shipped to England in 1851, Mr. Young, under date the 16th February 1852, No. 125, brought the general inferiority of the cotton officially to the notice of Government.

Government letter,
No. 1694, of 11 Mar.
1852.

16. In the mean time fresh consignments began to arrive, and, by permission of Government, private warehouses were rented for their accommodation.

17. Subsequently, viz., under date the 24th April 1852, No. 2874, Government directed that the whole of the cotton was to be shipped to England, with the exception of the first consignment, and three bales worst in appearance of each of the other consignments, which were to be kept until the arrival of Mr. Blount, who had been directed to repair to the Presidency.

18. The above order was received on the 26th April, and on that date Mr. Blount arrived; and it was then directed that a general examination should be made, for the purpose of separating the good from the bad cotton.

19. All the cotton, therefore, consisting of 4,553 bales of American cotton, had to be subjected to the examining process, which lasted for several days; and the result was, that 3,830 bales were, at Mr. Blount's desire, picked out as containing good, and 723 bales set aside as containing bad and dirty cotton.

20. The following Table shows in detail the number of bales selected as good and rejected as bad cotton, of each particular mark:—

American Cotton.

1. MARKS.	2. Number of Bales of each Mark.	3. From what Consignment.	4. SELECTION.		
			Good.	Rejected.	TOTAL.
◇	228	1st - -	150	78	228
◇	147	1st - -	132	14	147
◇	296	1st - -	243	53	296
⊗	119	1st - -	118	1	119
⊙	421	1st - -	402	19	421
KK	63	1st - -	58	5	63
AC	145	2d - -	135	10	145
E	103	2d - -	47	56	103
⊗	142	2d - -	116	26	142
F	60	2d - -	49	11	60
◇	491	2d and 3d -	447	44	491
◇	288	2d - -	283	5	288
◇	818	2d and 3d -	649	169	818
◇	91	3d - -	90	1	91
⊙	275	3d - -	261	14	275
DO	350	4th - -	287	63	350
BD	450	4th - -	312	138	450
AA	65	5th - -	49	16	65
No mark - -	1	- - -	1	- - -	1
TOTAL - - -	4,553	- - -	3,830	723	4,553

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21. The 617 bales of native cotton from the Dharwar Collectorate were not subjected to examination, Mr. Blount having said that they contained all bad cotton, and consequently not worth the trouble.

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22. None of the cotton, however, was what could be called really good, first-rate cotton, as, when the 3,830 * bales were cut open at the screws, not a single bale was found to contain cotton of one uniform quality throughout. All the bales had good, bad, and spurious cotton mixed up together; and although it was impossible effectually to separate the good from the bad, still a large quantity of spurious cotton was taken out at the time the bales were being screwed.

* American.

23. The following is the result of the examinations:—

American Cotton.

3,830 bales screwed into 1,461 whole and 9 half bales for shipment, besides giving 191 bales of spurious cotton.
723 bales rejected.

TOTAL - - 4,553

Native Cotton.

TOTAL - - 617 bales, all rejected.

24. The total quantity of cotton shipped to England was 1,461 whole bales and 9 half bales. Of this, 500 whole bales were shipped to England, per ship "Chancellor," on the 16th June 1852 (*vide* my letter to Government, No. 566), cotton classed as being of second quality; and 961 whole bales and 9 half bales were shipped to England, per ship "Loch-
lomond," on the 30th June 1852 (*vide* my letter, No. 615); the whole cotton classed as being of second quality, with the exception of 194 whole bales, which contained cotton of somewhat better quality than the rest.

25. Of the rejected American cotton, † inclusive of the 191 bales picked up at the screws, as stated in para. 23, a further examination was made, and the cotton was classified into five different qualities, with the view of effecting a profitable sale, and divided into as many lots, which, on being put up to auction on the 26th June and 10th July, realised the prices noted below.

1. LOTS.	2. Number of Bales.	3. PRICES SOLD FOR.
1st - - -	294	107 rupees per candy of 784 lbs.
2d - - -	400	91 - ditto - - ditto.
3d - - -	100	88 - ditto - - ditto.
4th - - -	100	80 - ditto - - ditto.
5th - - -	20	60 - ditto - - ditto.
TOTAL - -	914	

26. The native cotton, ‡ comprising 617 bales, was also exposed to public sale on the 26th June 1852, and it realised 85 rupees per candy.

27. I will

† American Cotton rejected:
723 bales rejected at the examination.
191 picked up at the screws.
914

‡ Native cotton rejected:—617 bales, sold at 85 rupees per candy of 784 lbs.

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27. I will now proceed to notice the *Belgaum Cotton*.

28. Three advices were received from Belgaum of the despatch of 1,230 bales of cotton; viz.:

1. Advice.	2. Number and Date of Advice.		3. Date of Receipt.	4. QUANTITY.			5. MARKS.
				American.	Native.	Total.	
1st -	1,476	1851: Dec. 3	1851: Dec. 8	56	103	159	$\frac{B}{A}$ and RN
2d -	212	1852: April 5	1852: April 10	94	951	1,045	$\frac{AH}{HS}$ $\frac{BI}{G}$ $\frac{N}{B}$ and $\frac{NI}{G}$
3d -	212	-	-	5	21	26	$\frac{AH}{B}$ $\frac{HS}{G}$ and
TOTAL				155	1,075	1,230	

Of which,

155 bales were American cotton.
207 „ native first class.
868 „ native second class.

1,230 Total.

29. Out of the above quantity, 1,221 bales have been received as under:—

155 bales American cotton.
196 „ native first class.
870 „ native second class.

1,221 Total.

Appendix (A.) 30. They arrived on various dates between the 16th January and 31st May 1852. The remaining 11 bales, out of 207 native first class, remained in the districts; and Mr. Blount, on being called on to explain the delay in their transmission, sends the letter No. 45, dated 15th July 1852.

31. The reason of there being two bales more in the native second class cotton is explained by the latter part of para. 11, under “Dharwar Cotton.”

32. The cotton was not subjected to examination here, as the opinion given of it by Mr. Blount was considered sufficient.

33. Of the 155 bales of *American Cotton*,

29 July 1852.

56 bales, which formed the first consignment, were screwed into 18 patent bales, and shipped to England per ship “Anglesey” (*vide my letter, No. 704*). Cotton classed as being of second quality.

99 bales, which formed the second and third consignments, were screwed into 31 whole and 1 half patent bales, and shipped to England also by the “Anglesey” (*vide aforesaid letter*). Cotton classed as first quality.

155 { Total shipped, 155 original bales of American cotton, screwed into 49 whole and 1 half bales.

34. Of the *Native Cotton*, minus 11 bales received short,

196 bales were screwed into 73 whole and 1 half patent bales, and shipped to England per the ship “Anglesey” (*vide letter above quoted*), besides giving seven bales of dirty cotton, which were sold at 53 rupees per candy.

35. The

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35. The other 870 (native second class) bales, which, according to Mr. Blount, contained inferior cotton, were sold here by auction, as follows:—

869 bales, on the 10th July, fetched 98 rupees per candy of 784 lbs.

1 bale, which was found to contain throughout damaged and discoloured cotton, fetched, on the 23d July, 3 rupees.

Belgaum cotton, native, 2d class, rejected; sale of.

870

Total sold, 877 bales, inclusive of seven bales dirty cotton, picked up at the screws.

36. It will thus be seen that the total quantity of cotton received was 6,391 bales, as per margin,* and that it has been disposed of as per margin.†

37. Having thus stated the facts relative to the consignments of cotton this year from the Southern Mahratta country, I will now proceed to make a few observations which have occurred to me, from a perusal of the correspondence transmitted with the letters under reference.

38. I do not consider that the explanations afforded by Mr. Blount in his several letters tend in any way to diminish the blame that must attach itself to him, in consequence of the very unsatisfactory manner in which his purchases seem to have been made. The opinions of Messrs. King and Campbell, which accompanied Mr. Blount's letter, No. 102, dated 22d May 1852, to Government, were founded on mere samples of the cotton; but from what is stated in para. 11 of the said letter, it is clear that the samples did not fairly represent the real quality of the cotton; and it is to be inferred, in consequence, that if Messrs. King and Campbell had been called upon to examine the cotton itself, instead of the samples produced by Mr. Blount, they would have pronounced the cotton to be inferior and bad.

39. It is very extraordinary that, after making such positive asseverations in his letter, No. 54, dated 2d March 1852, Mr. Blount should have a pre-knowledge of the several qualities of the cotton, as above stated in the 9th para. of this letter. He could not only foretel the exact qualities of the cotton under each particular mark, but, what is more, from the evasive manner in which he conducted himself throughout his stay in Bombay, he seemed to know more than he thought proper to communicate.

40. In his letter quoted above, para. 6, Mr. Blount remarks, that "the character of the cotton should not be judged by comparison with a few candies of, perhaps, very select cotton;" and further, in para. 2 of his letter, No. 102, dated 22d May 1852, he states that he does "not consider it inferior to the samples with which it has been compared." This I respectfully beg to deny in the most direct terms. The cotton had a fair trial given by this department, and it was found not only much below the common standard of the article imported by the mercantile community, but it was greatly interspersed with cotton of inferior quality, a fact which Mr. Blount could not but accord his assent to at the general examination, and again at the screws. *Vide* 11th para. of his letter, No. 102, of 22d of May, 1852. No. 54 of 2 March 1852.

41. The expectation of Mr. Blount, as expressed in the 3d para. of his letter, No. 102 of 22d May 1852, was too premature. So far from the proportion of bad cotton being "but small" in the American cotton, the number of rejected bales increased, as the cotton was being pressed at the screws; and even then no proper pickings could be made. Out of 4,533 bales, therefore, 914 turned out to be of the worse description, thus giving a ratio of 1 bale of bad, to nearly 5 of good cotton, or above 20 per cent.

42. From the dates of advices, as given in the 11th para. of this letter, it will be seen that four consignments of cotton from Dharwar were already on their way to the Presidency, before Mr. Young's letter, No. 125 of 16th February 1852, could have reached Mr. Blount; but still a greater portion thereof must have been in the district at the time; and Mr. Blount, instead of trying to make assurances to Government of the soundness of the generality of the cotton, he would, I beg to defer, have done better, had he thought of stopping its onward progress, and of examining some of the bales before writing his letter,

No. 54.

* American	-	-	-	-	-	-	-	-	-	4,708 bales.
Native	-	-	-	-	-	-	-	-	-	1,683 "
										6,391 bales.

† 4,181 bales, screwed into 1,583 whole, and 11 half bales, and sent to England.
2,210 bales sold.

6,391 Total.

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No. 54 of 2d March 1852, to the Collector of Dharwar, supposing he had not the pre-knowledge which he seems to have had. It will thus be seen that his endeavours at explanation have all fallen to the ground.

43. And further, knowing, as I conclude he must have done, that the Honourable Court had noticed that the cotton sent from the Southern Mahratta country in 1851 was of a description most discreditable to the Government agency, he should have been more careful in his selections, and packing of the cotton.

44. The general want of attention on the part of Mr. Blount is evinced from the fact that, out of the cotton of the 1st consignment, which has been stated (*vide* Mr. Law's letter to Government, No. 355, dated 16th March 1852, para. 4) to have been cleaned under the superintendence of Mr. Blount's own establishment, and which, therefore, ought to have been of better quality than the rest, a large portion was rejected here.

45. From the Government having called Mr. Blount to the Presidency, I conclude that it was their intention that that gentleman should have been present at the inquiry throughout; and he was, moreover, requested by me to attend at the screws, which he could have well managed, if he wished, considering the proximity of his residence thereto (not a hundred yards off); but I regret exceedingly to bring to the notice of Government, that, throughout his stay in Bombay, Mr. Blount manifested a peculiar in difference to everything concerning the cotton. In the first place, he seldom attended at the screws, where such ample opportunities were offered of judging of the cotton properly; and, I believe that out of the whole lot of 3,830* bales of cotton, he may have seen only about 200 bales cut open; hence, therefore, my conclusion, as stated in the latter part of para. 39.

* Dharwar American.

46. The extra charges incurred by this department in warehouse rent and examination of cotton may be estimated at about Rs. 1,193. 8. 2. as per margin.†

Appendix (B).

47. I beg to hand up a statement, showing, on a rough estimate, the probable amount of loss Government will have to sustain on the cotton that has been rejected and sold here, under Mr. Secretary Goldsmid's letter, No. 4110, dated 12th June 1852; but as soon as complete invoices shall have been received from the Dharwar and Belgaum Collectorates, a correct statement can be furnished, if required.

48. The above estimate, however, does not show the real amount of loss which Government will have to sustain, inasmuch as it does not include any charges on account of—

1. Rent of Government warehouses.
2. Mr. Blount's salary, and that of his establishment, while engaged in buying the cotton.
3. Interest of money from the time the cotton was bought, until it was sold by this department.
4. Time occupied by Government in perusing correspondence, and issuing instructions.
5. Time occupied by this department in conducting a lengthened correspondence, in examining and selling the cotton, and in carrying out the instructions of Government.

49. In conclusion, I would merely beg to add, that I see no advantage which can be gained by purchasing cotton of inferior quality for consignments to England, and more especially so when the cotton, as in the present case, was purchased at a very high figure. Without, therefore, Mr. Blount can satisfy Government that, for the future, he will furnish cotton of the best quality, at a fair cost, I think it would be to the advantage of Government, if they would dispense with his services as cotton agent, and then either abandon altogether the purchase of cotton, or employ a person who is both able and willing to conduct the duties required of him in a satisfactory manner.

Mr M. A. De Carvalho.

50. In consequence of it being necessary to examine each bale of cotton, and, so far as practicable, separate the good from the bad, a very heavy task was imposed on the warehouse department, and one which could not be performed by the existing establishment,‡ consistent with the proper discharge of its other duties, which are onerous and numerous. Mr. Carvalho, the warehousekeeper, who conducted the packing, examining, and selling, &c., of the cotton, was therefore obliged to employ his son (who thoroughly understands all matters connected with cotton) to assist him in his duties. For these services Mr. Carvalho's son has received no remuneration; and as he was so engaged for three months, and was actively

	<i>Rs.</i>	<i>a.</i>	<i>p.</i>
† Extra charges (estimated) - - - - -	625	-	4
Warehouses rented from private individuals - - - - -	568	7	10
Total - - -	Rs. 1,193	8	2

‡ 1. Warehouse-keeper, 200 rupees. 2. One clerk, 50 rupees. 3. One clerk, 30 rupees. 4. One clerk, 25 rupees. 5. One clerk, 20 rupees. 6. One warehouseman, 12 rupees.

actively employed, and performed really good service, I would respectfully beg to suggest that the sum of three hundred rupees (300) be paid to him, and charged with the other expenses which have been incurred in the disposal of the cotton.

51. The enclosures received with your letter (No. 4441), dated 30th June, are herewith returned, as directed.

I have, &c.
(signed) *R. Spooner*,
Acting Collector of Customs.

APPENDIX (A.)

(No. 45 of 1852.)

To *Richard Spooner*, Esq., Acting Collector of Customs, Bombay.

Sir,

IN answer to your letter (No. 548 of 1852) regarding a deficiency in the receipts of cotton from Belgaum district, I have now the honour to inform you that the cause of the delay of the cotton was owing to the contractor not having paid the cartmen for taking it to Vingorla, though he had received from me a full advance for the carriage of the cotton as early as the middle of March last. Five bales are in charge of Mr. Sequiera, shipping agent at Vingorla, and six bales at Belgaum, have been put in charge of the mamlutdar of Padsha-poor, and will be forwarded as early as the season will permit.

I have, &c.
(signed) *John M. Blount*,
Supt. of Cotton Experiment, S. M. C

Dharwar, 15 July 1852.

APPENDIX (B.)

STATEMENT showing, on a rough Estimate, the Loss expected to be sustained by Government from that Portion of the Consignments of Cotton received this Year from the Southern Mahratta Country which was Rejected and Sold under Government Letter, No. 4110, dated 12 June 1852. (*Vide* also Paragraph 47 of Acting Collector's Letter, No. 726, dated 6th August 1852.

1. From what Collectorate.	2. Quantity and Description of Cotton.			3. Assumed Average Price, including all Charges.				
	No. of Bales.	Net Weight.	Description of Cotton.	Assumed Price of the Cotton, including all Charges up to Bombay.		Add, Ordinary Charges of Landing, Stowing, Weighing, and Delivery to Purchasers.	Proportion of Extraordinary Charges incurred on account of Godown Rent, and Examination of Cotton.	TOTAL.
				Rate per Candy.	Amount.			
		<i>Cands. lbs.</i>		<i>Rupees.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
Dharwar -	294	55 54	American	99 ½	5,479 5 6	20 10 5	84 14 6	5,584 14 5
Ditto -	400	73 347	- ditto -	99 ½	7,307 8 7	27 8 7	113 3 9	7,448 4 11
Ditto -	100	13 222	- ditto -	99 ½	1,321 10 8	4 15 8	20 7 8	1,347 2 -
Ditto -	100	13 492	- ditto -	99 ½	1,355 15 -	5 1 9	21 - 2	1,382 - 11
Ditto -	20	2 496	- ditto -	99 ½	261 15 1	- 15 9	4 - 11	266 15 9
Ditto -	617	115 83	Native	81 ½	9,381 1 11	43 2 7	76 - 4	9,500 4 10
Belgaum -	869	132 709	ditto	108	14,353 10 7	49 13 5	144 10 8	14,548 2 8
Ditto -	7	0 632	ditto	108	87 - 11	- 4 10	3 8 -	90 13 9
Ditto -	1	0 112	ditto	108	15 6 10	- - 10	- 1 -	15 8 8
			TOTAL - - Rs.		39,563 11 1	152 9 10	467 15 -	40,184 3 11

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1. From what Collectorate.	4. Price realised in Bombay.	5. Difference.		6. TOTAL Loss sustained.	7. REMARKS.
		Loss.	Gain.		
	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	
Dharwar -	5,892 5 11	- - -	307 7 6	- - -	Had the classification, as stated in Acting Collector's letter, No. 726, dated 6th August 1852, para. 25, not been made, the loss would have been much greater than is here shown to be. The gain of Rs. 307. 7. 6. may also be attributed to the same reason.
Ditto -	6,683 4 5	765 - 6	- - -	- - -	
Ditto -	1,168 14 7	178 3 5	- - -	- - -	
Ditto -	1,090 3 2	291 13 9	- - -	- - -	
Ditto -	157 15 4	109 - 5	- - -	- - -	
Ditto -	9,783 15 11	- - -	283 11 1	- - -	There was a sudden and great rise in the price of cotton just at the time the sale took place, otherwise the loss to Government would have been much heavier.
Belgaum -	13,024 10 -	1,523 8 8	- - -	- - -	
Ditto -	42 11 7	48 2 2	- - -	- - -	
Ditto -	3 - -	12 8 8	- - -	- - -	
TOTAL - <i>Rs.</i>	37,847 - 11	2,928 5 7	591 2 7	2,337 3 -	

Bombay, Custom House, }
6 August 1852.(signed) *Richard Spooner,*
Acting Collector of Customs.

(No. 5553 of 1852.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Southern Division.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to transmit for your early report and opinion the accompanying copy of the whole of the correspondence, as noted in the margin*, which has passed on the subject of the cotton of the season 1850-51, from the Southern Mahratta Country.

2. You will have the goodness to return the accompaniments to this letter, with your reply.

Bombay Castle, 23 August 1852.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

(No. 844 of 1852.)

From *Richard Spooner*, Acting Collector of Customs, to *A. Malet*, Esq., Chief Secretary to Government.

Sir,

Extra and other charges incurred on account of the examination of cotton received from the Southern Mahratta Country.

WITH reference to para. 46 of my letter to you, No. 726, dated 6th ultimo, I beg to forward herewith, for the sanction of Government, a bill, No. 1, amounting to rupees six hundred and eighty-six, annas four, and pies seven (*Rs.* 686. 4. 7.), being the actual extra charges incurred on account of the examination of cotton received from the Southern Mahratta Country.

2. I beg-

* 1. From Collector of Customs, Bombay, to Government, No. 125, dated 16 February 1852. 2. Government Resolution thereon, No. 1105, dated 18 idem. 3. Collector's Memorandum, No. 157, dated 21 idem. 4. Government reply, No. 1193, dated 23 idem. 5. From Dharwar Collector to Government, No. 162, dated 3 idem, with accompaniment. 6. From ditto, No. 278, dated 27 idem, with accompaniment. 7. From ditto, No. 355, dated 16 March, with accompaniment. 8. Government Resolution thereon, No. 2485, dated 10 April. 9. From Dharwar Collector, No. 445, dated 3 idem, with accompaniment. 10. From Acting Collector of Customs, warehouse-keeper's report, dated 21 idem. 11. Government Memorandum, dated 24 idem. 12. From Acting Collector of Customs, dated 24 idem, with enclosure. 13. Government Resolution thereon, No. 2874, dated 24 idem. 14. From Acting Collector of Customs, No. 461, dated 20 May, with accompaniments. 15. From Mr. Blount, No. 102, dated 22 idem, with accompaniments. 16. Reply to Mr. Blount, No. 4109, dated 12 June. 17. Reply to Acting Collector of Customs, No. 4110, dated 12 June. 18. From Mr. Blount, No. 106, dated 14 June. 19. Government Memorandum, No. 4229, dated 17 June. 20. Acting Collector's reply, No. 568, dated 17 June. 21. To Mr. Blount, No. 4307, dated 24 June. 22. From Acting Collector of Customs, No. 566, dated 16 June, with accompaniment. 23. To Mr. Blount, No. 4363, dated 28 June. 24. To Acting Collector of Customs, No. 4441, dated 30 June. 25. From Acting Collector of Customs, No. 726, dated 6 August, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 829

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2. I beg to enclose also, for the sanction of Government, four bills, Nos. 2 to 5,* amounting in the aggregate to rupees one hundred and sixty-two, annas nine, and pies ten, being the ordinary charges incurred on that portion of the cotton which was disposed of by public auction here, and reported to Government in paras. 25, 26, and 35, of my letter above alluded to.

Bombay Custom House,
15 September 1852.

I have, &c.
(signed) *Richard Spooner,*
Acting Collector of Customs.

RESOLUTION on a Letter from the Acting Collector of Customs, Bombay, No. 844; dated 15 September 1852.

Sanctioned.

21 September 1852.

(signed) *D. A. Blane,*
A. Bell.

(No. 6256 of 1852).

To the Acting Collector of Customs, with the bills.

To the Civil Auditor.

Bombay Castle,
24 September 1852.

(signed) *A. Malet,*
Chief Secretary to Government.

(No. 2919 of 1852.)—Territorial Department, Revenue.

From *W. Courtney*, Esq., Revenue Commissioner, Southern Division, to *A. Malet*, Esq., Chief Secretary to Government.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 5553, of 23d August last, forwarding, for my early report and opinion, the whole of the correspondence which passed on the subject of the cotton of the season 1850-51, from the Southern Mahratta Country.

2. The points on which I presume my opinion is required are, first, the degree of blame attributable to Mr. Blount, the superintendent, for having despatched inferior cotton to Bombay, for shipment to England, as consignments to the Honourable the Court of Directors; and, second, if neglect or carelessness be fairly chargeable to him, the expediency of continuing his agency for the future.

3. To enable me more satisfactorily to dispose of these questions, I obtained some further information from the Collector of Dharwar, which I beg to submit, in the correspondence, as per margin,† accompanying this letter, from a consideration of which, as well as of the letters of the Collector of Customs in Bombay, transmitted to me with yours, under acknowledgment, it will, I fear, be found impossible to acquit Mr. Blount from the charge of carelessness and neglect of the interests of Government confided to his care.

4. In respect to the consignments of indigenious cotton, the Collector of Dharwar states, in his letter of 11th ultimo, para. 12, that no blame can attach to Mr. Blount on account of its being of inferior quality, as he reported that no cotton of the first sort was procurable; but from the 21st para. of Mr. Spooner's Report of 6th August last, it would appear that not one of the 617 bales of native cotton received from Dharwar was examined in Bombay, because Mr. Blount himself admitted that they contained all bad cotton, and were not worth the trouble; and that of the 1,066 bales of native cotton received from Belgaum, only 196 were shipped to England, those even being by no means of a superior quality, and the remaining 870 bales were rejected. Now, either this cotton must have been bought by Mr. Blount, under the knowledge that it was so bad as not to be worth the trouble even of looking at, or he must have left the selection and examination of it before purchase to his subordinates,

									<i>Rs.</i>	<i>ā.</i>	<i>p.</i>
* 1	Bill, No. 2, for	-	-	-	-	-	-	-	80	12	7
1	Bill, No. 3, for	-	-	-	-	-	-	-	71	13	3
1	Bill, No. 4, for	-	-	-	-	-	-	-	5	-	-
1	Bill, No. 5, for	-	-	-	-	-	-	-	5	-	-
4	Bills.							Total	<i>Rs.</i>	162	9 10

† Revenue Commissioner's letter to Collector, No. 2151, of 2 September 1852. Collector's reply, No. 1534, of 11 October, with enclosures. Revenue Commissioner to Collector, No. 2603, of 20th idem. Collector's letter, No. 1721, of 18 November, with accompaniments.

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subordinates, and knew nothing whatever of its quality himself. If he did the former, the fact of his having reported to the Collector that no cotton of the first sort was procurable, cannot surely be urged as sufficient justification of his having purchased that which was, by his own admission, so utterly bad as not to be even worth the trouble of examining; and if he did the latter, he entirely neglected the duty for which he was paid; and in either case I am unable to find any excuse for his conduct, which cannot but, I think, be viewed as very unsatisfactory.

5. In respect to the New Orleans variety, 4,553 bales were, it appears, received in Bombay from Dharwar; from these Mr. Blount himself picked out 723, as those he knew to contain bad and dirty cotton, leaving 3,830 bales for consignment to the Honourable Court; and of these it appears that "not a single bale contained cotton of an uniform quality throughout; all the bales had good, bad, and spurious cotton mixed up together." Passing over the unsatisfactory character of the cotton contained in the bales shipped for England, 723 bales were admitted to contain bad and dirty cotton; now, either this must have been purchased in that state by Mr. Blount, or have been tampered with after purchase, or on the road after leaving Dharwar. From Mr. Blount's letters of 24th September last, and 31st ultimo, it will be seen that he tested the cotton after it had been cleaned and packed, when of course, it is reasonable to suppose (as it is to be assumed that he understood his duties), that he could not have failed to discover if it had been adulterated or mixed subsequently to the conclusion of his purchases; and from para. 17 of Mr. Law's letter of 11th ultimo, Mr. Blount appears to have admitted that he had no reason to suspect that the cotton was tampered with in its transit to Coompta. Moreover, independently of the unreasonableness of any supposition that bad cotton could have been systematically substituted for good in so many hundred bales, on the road, had this been done, it would have effectually prevented Mr. Blount's being able to pick out in Bombay the bales which he knew contained the bad and dirty cotton, as he appears to have done.

6. The supposition of any subsequent tampering with his consignments must, therefore, it is evident, be rejected; and the other alternative, that the cotton was purchased in the bad and dirty condition in which it reached the Presidency, fallen back upon. Here again he is placed in a dilemma, for either he tested the cotton and knowingly accepted bad for good; or he did not examine it at all, and accepted any that was brought him; if the former, he is guilty of something more than carelessness and neglect; if the latter, nothing less can be imputed to him.

7. Mr. Blount, in the 12th para. of his letter to Government of 22d May, says, the disagreeable position in which he is placed, "is not the result of carelessness or want of fidelity on his part, but of dishonesty on the part of those from whom he purchased the cotton." Admit, for the sake of argument, that this is the case, and no stronger proof is required of the total inutility of his agency; for if a high paid and experienced officer like Mr. Blount can be cheated, though employed at great expense to the State on the spot, in the purchase of almost every bale of cotton, where is the return which Government has a right to expect for the cost of his services, and what the advantage of continuing them? Better to save the money and entrust the agency to the local district officers, who, with common care and attention, could scarcely fail to accomplish its objects in a more satisfactory and creditable manner than I fear Mr. Blount can be considered to have done, from the papers now submitted.

8. The accompaniments to your letter under reply are returned, as requested.

I have, &c.
(signed) *W. Courtney*,
Revenue Commissioner, S. D.

Sholapoor District, Camp "Mohole,"
29 November 1852.

(No. 2151 of 1852.)

From *W. Courtney*, Esq., Revenue Commissioner, Southern Division, to *J. S. Law*, Esq.,
Collector of Dharwar.

Sir,

WITH reference to your memorandum to the address of the Collector of Customs, dated the 5th January last, No. 26, and correspondence preceding it, relative to the consignments of cotton made to the Presidency by the superintendent, Mr. Blount, from the crops of the season 1850-51, I have the honour to forward for your own perusal, but not for communication to that officer, the accompanying copy of a correspondence* on the same subject, and
to

* Mr. Blount's letter to Government, No. 102, of 22 May 1852, and enclosures. Government letter to Mr. Blount, No. 4109, of 12 June 1852. Government letter to Collector Customs, No. 4110, of 12 June 1852. Superintendent to Government, No. 106, of 14 June 1852, and subsequent memoranda. Government memorandum to Collector Customs, No. 4308, of 24 June 1852, and accompaniment. Letter from Collector Customs to Government, No. 566, of 16 June 1852, and accompaniment. Government letter to Mr. Blount, No. 4363, of 28 June 1852. Government letter to Collector Customs, No. 4441, of 30 June 1852. Letter from Collector Customs to Government, No. 726, of 6 August 1852, and enclosures.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 831

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to request the favour of your obtaining from Mr. Blount, with as little delay as possible, full and explicit replies to the following queries:

1. Of how many bales did the consignment of cotton referred to in the letter of the Collector of Customs, dated 16th February 1852, No. 125,* consist; what number of them was of New Orleans, and what number of country cotton, and from whom were all the bales purchased?
 2. Were the purchases made, in each instance, by the Superintendent himself, or by his subordinates? If by the latter, what precautions were taken to secure cotton of the best quality?
 3. What was the price paid, per khundee, for each description of cotton; was it above or below the market price; and are the dealers' receipts forthcoming?
 4. At the time of purchase was the cotton loose or in bales; and by whom was it inspected when brought in to be ginned?
 5. Who superintended its packing after being ginned; and what arrangements were made for its safe transit to Coompta, the bunder from which it appears to have reached Bombay?
 6. Was it consigned to any and whose agent at Coompta, and was any report made by that officer on its arrival there; and if so, what was the purport of it?
 7. How long was the cotton in transit to Coompta; how long was it detained there; and was it shipped alone, or with other cotton belonging to merchants.
 8. When the superintendent inspected the bales in Bombay, was there anything in their appearance which led him to suspect that they had been tampered with in transit; and, if so, was the circumstance noticed at the time, and to whom?
 9. In the 2d para. of his letter to Government, dated 14 June last, No. 106, Mr. Blount states, "I had a memo. of the marks of all the cotton which I had forwarded; and from it, knew the good from the inferior native cotton." In compliance with what instructions was this "inferior" cotton consigned to Bombay, for transmission to the Honourable the Court of Directors?
2. I request that you will, at the same time, obtain and furnish a statement of the accompanying form, exhibiting the number, mark, weight, and cost of the several bales alluded to in the present correspondence, and favour me with such remarks or explanations as may occur to you in connexion with the subject of the present reference, returning the original accompaniments with your reply.

Poona,
Revenue Commissioner's Office,
2 September 1852,

I have, &c.
(signed) *W. Courtney,*
Revenue Commissioner, S. D.

(No. 1534 of 1852.)

From *J. S. Law*, Esq., Collector of Dharwar, to *W. Courtney*, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour, herewith, to forward a copy of the answer of the Superintendent of cotton experiments, Mr. Blount, to the queries propounded in your letter, dated 2d ultimo, No. 2151, and of a subsequent communication from that officer, containing further explanation on certain points called for by me.

2. A copy of the correspondence noted in the margin,† which took place direct with Government in 1850, on the subject of purchases of native cotton, is also annexed, as I presume it is not on your records, and as it seems necessary that you should peruse it, in order that you may fully understand the obstacles to obtaining clean picked native cotton, such as could be classed as "superior" in the Southern Mahratta country. It includes the Government letter referred to in Mr. Blount's answer to the 9th query.

3. In the previous year, 1849, a correspondence had also taken place on this subject through your department, which is noted in the margin,‡ from which you will observe that both

* See Government memorandum to your address of 18 February 1852, No. 1102.

† Not forwarded, they being already on the records of Government.—1. Collector's letter to Government, No. 197, dated 8 February 1850, with accompaniment from Superintendent of Cotton Experiments, Southern Mahratta Country. 2. Government reply, No. 1221, dated 19 February 1850. 3. Collector to Government, No. 283, dated 23 February 1850. 4. Collector to Government, No. 431, dated 25 March 1850, with accompaniment from Superintendent of Cotton Experiments. 5. Government reply, No. 2611, dated 6 April 1850. 6. Collector to Government, No. 654, dated 6 May 1850, with accompaniment from Superintendent of Cotton Experiments. 7. Government reply, No. 4207, dated 23 May 1850. 8. Government letter, No. 740, dated 23 January 1851.

‡ 1. Collector's letter to Revenue Commissioner, No. 346, dated 24 February 1849, with an accompaniment from Superintendent of Cotton Experiments. 2. Revenue Commissioner's letter to Government, No. 1446, dated 15 March 1849.

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both my predecessor, Mr. Bell, and the Revenue Commissioner, Mr. Townsend, expressed an opinion that native cotton, unless clean picked, should not be purchased. No instructions were, however, then received from Government on this point, probably because the further report promised by Mr. Blount was not forwarded.

4. In the following year, the instructions conveyed in the Government* letters, dated 19th February 1850, No. 1221, and 6th April 1850, No. 2611, were to "procure the best picked cotton which can be obtained at a price commensurate to the greater value it has or ought to have in the market, over cotton which has been carelessly gathered." In his letter to the Collector, however, dated 23d April 1850, No. 90,† Mr. Blount clearly explained that clean picked native cotton "could not be had, unless at a price that must have incurred a loss of 15 to 20 rupees the candy." Such a price he did not consider it expedient to give, in which I presume, the collector, Mr. Bell, concurred, although he does not expressly say so in his letter, handing up that from Mr. Blount. In the 4th para. the superintendent stated that he had agreed for the delivery of 485 candies of native cotton, which, I would submit, it is obvious, from the tenor of the previous part of his letter, could not have been "clean picked," and must therefore have been more or less impure and mixed with leaf. In the Government letter, ‡ dated 23 May 1850, No. 4207, Mr. Blount's explanation was declared to be satisfactory.

5. It was regarding some of this cotton of the crop of 1849-50, that the Honourable the Court of Directors wrote in a despatch, dated 5 November 1851, forwarding a copy of a letter from the secretary to the Manchester Commercial Association, in which it is said that the native cotton, per "Armide," was full of leaf and other refuse matter. An extract from a letter § from Mr. Blount, which was forwarded direct to Government, containing his explanations on this point is annexed.

6. In the Government letter to your predecessor, dated 2d January 1851, No. 34, it was directed that the quantity of cotton to be purchased for consignment to the Honourable the Court of Directors, should be fixed at the same as that required in the previous year. In another letter from Government of the same date, No. 29, however, it was, with reference to a communication from the late Collector of Belgaum, Mr. Reeves, addressed to your department, dated 24th December 1851, No. 1367, left to the discretion of the Collector to discontinue such purchases altogether. This led to a reference from the late First Assistant, Mr. Goldfinch, then in charge of the collectorate direct to Government, stating that in his opinion the time had not come for Government to withdraw from the market. To this a reply was sent, dated 23d January 1851, No. 740, of which a copy is annexed, authorising Mr. Goldfinch to use his own discretion in the matter.

7. In the correspondence of 1851, there is no specific reference to native cotton, and looking to the terms of the letter with which it closed, and which gave a general power to do what might be "deemed best for the permanent interests of the district, and the furtherance of the cotton trade," I am of opinion that there was no necessity for purchasing any of that description of cotton at all; Mr. Blount, however, seems to have thought otherwise. He considered that he was still obliged to buy a certain quantity of native cotton under the prior instructions, although contrary to his own judgment; and as in the previous year, not being able to procure the article clean picked at a price which would not have entailed loss, he was compelled to take the best of the ordinary kind he could get, by advances to the ryots. It may be necessary to explain that these advances had all been made, and a large portion of the cotton received, before I took charge of the collectorate on the 1st May 1851, the rest being delivered within a month or two after.

8. In his letter, dated 2d January last, No. 3, of which a copy was forwarded to you with mine of the 9th idem, No. 51, and which was written before the Collector of Customs had objected to the cotton of the first consignment, Mr. Blount distinctly stated that the native cotton purchased for two years (including 1850-51), was in no way superior to the ordinary quality. He therefore proposed that no more should be purchased, unless clean picked, in which I concurred, and final orders were given on the subject in the Government resolution forwarded with your memorandum, dated 8th March last, No. 523.

9. I have entered into the above detail for the purpose of showing that Mr. Blount has all along been opposed to the purchase of native cotton, unless in the rare case of its being procurable of a superior quality at a reasonable price, and that the fact of a large quantity of the ordinary leafy, and consequently inferior article, having been purchased during the two last years, has been duly brought to notice.

10. I would further beg to request your attention to the statement in Mr. Blount's letter, dated the 24th ultimo, No. 157, forwarded with my indorsement of the same date, No. 1436, to the effect that he did not think the sample of native cotton (from the Belgaum districts), which Government decided might be taken for consignment to the Honourable Court, any better than that he had already forwarded to Bombay, and which had been condemned.

* Copies included in correspondence noted above.

† Copy included in correspondence noted above.

‡ Copy included in correspondence noted above.

§ No. 9, dated 7 January 1852.

demned. I have ascertained from him, that he more particularly referred to the second class Belgaum native cotton, which although rejected, must have been superior to that from Dharwar, as is proved by the higher price which it fetched, viz. 98 rupees per candy, whilst the former was sold for 85 rupees per candy.

11. The whole of the Belgaum native cotton (and American also), had been purchased from the ryots, and was in store, and part of it had been ginned before Mr. Blount took charge of the experiments in that collectorate in July 1851.

12. I trust that what is above stated will satisfy you, that as regards the native cotton at least, little if any blame can attach to Mr. Blount on account of its being of ordinary or "inferior" quality.

13. With regard to the American cotton (the whole of which had been bargained for, and the advances made before I received charge), it may be necessary that you should be informed of the following circumstances, as the correspondence on the subject did not pass through your department. In November last, Mr. Stranack, the agent of Messrs. Ritchie, Stewart & Co., complained of some cotton of that variety offered for sale to him by Baladass & Co., of Beteegherry, the principal dealers in the article in this collectorate, as having been fraudulently adulterated, which led to the head of the firm being tried under Regulation III. of 1829, when on conviction he was fined 500 rupees. I thereupon, at Mr. Blount's request, ordered the whole of the cotton belonging to this firm at different villages to be detained, until he could examine it, and select the bales purchased for Government. This he did, so far as it could be done by the sampling gimlet, but none of the bales were cut open except at the villages, where the cotton had been complained of by Mr. Stranack, all of which Mr. Blount rejected. He also took the precaution of securing for Government as much as possible of the cotton cleaned by this firm after the complaint had been preferred against them by Mr. Stranack, and in the preparation of which it was believed that more care was taken.

14. I should state, that I had in the first instance suggested to Mr. Blount that some, if not all, the bales should be opened in the course of this inspection, and my late first assistant, Mr. Goldfinch, also represented the necessity of a thorough examination. I was, therefore, surprised to find afterwards, that with the exceptions above stated, the only test adopted had been that of the sampling gimlet. Mr. Blount, however, explained that he had not time, nor the necessary means and appliances, for a more detailed examination. He was actively engaged from the 15th November to the 15th March, in sampling and weighing the cotton; and, no doubt, to have opened and repacked every bale belonging to Baladass & Co. would have been a very tedious operation, and have rendered impossible the despatch of the whole consignment before the monsoon. As matters have since turned out, it seems evident that the alternative of opening a bale here and there, which might, I should think, have been adopted, would have been insufficient, especially as the cotton rejected at Bombay was by no means confined to that purchased from the said firm, as is proved by a comparison of the statement in Mr. Spooner's 20th para., with the marks and names of dealers specified in Mr. Blount's answer to the first query. The cotton of Baladass & Co., however, was decidedly the worst, as it appears that about one-fourth was rejected, whereas this was the case with only about one-ninth of all the rest taken together.

15. With reference to the 9th para. of Mr. Spooner's letter, I would observe, that from a comparison of the statement there given, with that appended to his 20th para., it does not appear that Mr. Blount had very exact preknowledge of the relative qualities of the different batches of cotton. Thus, of the batch marked AA, one of those which he said contained the best, 16 bales out of 65, being about one in four, were rejected, whilst of that marked N put down amongst the bad ones, the condemned bales were only 14 out of 147, or one in ten and a half. Mr. Blount did not point out the worst of all, that marked E, in which out of 103 bales, 56, being more than half, were rejected.

16. The marks K and O, the former put down among the good ones, and the latter among the bad, include all the American cotton that was purchased direct from the ryots and cleaned on the Government saw-gins at Annigherry, except two bales among those marked AA. Taking the whole together, the proportion of rejected bales was about one-ninth, which, although small as compared with that of many of the other marks, was certainly much more than it ought to have been, under the circumstances.

16*. That most of the American cotton was classed as of second quality, may be easily accounted for by the fact, that in 1850-51 it was greatly mixed with the native variety in the fields, and I cannot but suppose that a good deal of the merchants' cotton, if the bales had been opened and examined, would have been found much the same. The comparison of the Government cotton with that of the merchants was only made by samples, which as appears from the 38th para. of Mr. Spooner's report, do not always fairly represent the real quality of the cotton. I hope that I have now discovered the true way of checking the mixture in the fields in future, by sifting the seeds, as explained in my letter, dated 2d ultimo, No. 1294.

17. With

* *Vide* paras. 26 and 35 of Mr. Spooner's report.

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17. With reference to your 8th query, I beg to state, that when Mr. Blount was at Bombay, I wrote to ask him if he suspected that any of the cotton had been tampered with in transit, with a view to inquiries being made on the subject, and he wrote, in reply, that he saw no reason whatever for such a suspicion.

This includes the two items of 889 bales and 1 bale in Mr. Spooner's statement.

18. There is a mistake in the statement appended to the report of the Acting Collector of Customs in regard to the assumed price of the native cotton from Belgaum up to Bombay, which is put down at 108 rupees. This was about the cost of the native cotton of the first quality which was shipped to England. The average cost of the 870 bales of second quality which were rejected, and which weighed at Bombay 133 candies 37 lbs., was Rs. 93. 9. 9. per candy, so that instead of there having been a loss on the sale, there was a profit of Rs. 378. 8. 8., which reduces the total loss from Rs. 2337. 3. to Rs. 422. 9., being less than the extraordinary charges on account of godown rent, &c.

19. The other seven bales entered in the statement are evidently those of dirty cotton taken out at the screws from that of first-class quality, as stated in Mr. Spooner's 34th para. 20.

20. Mr. Blount has now adopted the plan of cutting open every bale, which, after being carefully examined, is, if approved of, speedily and cheaply repacked by means of a small screw which he has had made on purpose. The bales are thus reduced to about one-third of their former size, and, from their compact form and being secured by ropes, the cotton does not bulge out at the seams, so that little or no injury will be occasioned by dust on the road. This plan, from what I have seen of it, seems likely to answer admirably, and I would venture to express a hope that should there be any question regarding the propriety of retaining Mr. Blount's services, it may be made to depend upon the quality of the first consignments of cotton of this season.

21. In conclusion, I would beg to express my regret that, as appears from the Government Resolution dated 10th April last (of which I presume you have a copy), the tenour of my letter dated 16th March 1852, No. 355, should have exposed me to the charge of indifference. As it was proposed that Mr. Blount should proceed to Bombay to examine the cotton, and as he appeared quite confident that it would turn out at least as good as that of the private merchant's with which some of it had been compared, I thought that no definite judgment could be formed until the results of such examination were known, and therefore abstained from any detailed remarks on the subject; I beg, however, to assure you that I felt anything but indifferent on the subject.

22. As regards Mr. Blount, I would also venture to state, that although he may have erred in relying too much on samples as a test of quality, I have never seen any reason for considering him indifferent to his duties. On the contrary, I should be disposed to coincide in the opinion of his merits recently expressed by the late Acting Collector, Mr. Goldfinch, in his letter to your predecessor, dated 25th February, 1851, No. 2970, paras. 2 and 9.

23. The circumstance of this infrequent attendance at the screws complained of in the 45th para. of Mr. Spooner's letter may very possibly have been owing to indisposition, as he mentioned to me in a private letter from Bombay that he was unwell during the latter part of his stay there.

24. The original accompaniments received with your letter under reply are herewith returned.

Dharwar, Collector's Office,
11 October 1852.

I have, &c.
(signed) J. S. Law,
Collector.

(No. 148 of 1852.)

To J. S. Law, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to furnish the following replies to the questions contained in your letter, No. 1327 of 1852, with reference to the cotton forwarded to the Collector of Customs, on account of Government, of the crop of 1850 and 1851:

Question.—1. Of how many bales did the consignment of cotton referred to, in the letter of the Collector of Customs, dated 16th February 1852, No. 125, consist; what number of them was New Orleans, and what number of country cotton; and from whom were all the bales purchased?

Answer.—I do not know what particular lot of cotton is referred to by Mr. Young in his letter, No. 125 of 1852, to the address of the secretary to Government. The whole number of bales of cotton forwarded during the season was, from Dharwar, New Orleans, 4552,

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4552, and native, 2d class, 617; from Belgaum, New Orleans, 155; bales, native, 1st class, 207 (11 of which are yet to be forwarded); 2d class, 868, the New Orleans cotton marked.

◇	228	Bales were purchased of Davidass, resident of Gudduck.
◇	147	" " of Goorhissapah, resident of Nurregul.
◇	296	" " by advances to ryots in Annegherry Mahal.
◇	119	" " of Mullaya, resident of Annegherry.
◇	421	" " by advances to ryots in Annegherry Mahal.
KK	63	" " of Davidass, resident of Gudduck.
AC	137	" " of Arlapa Naik, resident of Raneebednoor.
AC	8	" " of Davidass, resident of Gudduck.
⊕	142	" " of Arlapa Naik, resident of Raneebednoor.
E	103	" " of Baladass, resident of Beteegerry.
F	60	" " of Bamajee Goondoo, resident of Kunoullee.
◇	2	169 " " of Ajapa Talee, resident of Gootul.
		28 " " of Moodkurja, resident of Gootul.
		58 " " of Moodkurja, resident of Havanoor.
		64 " " of Coorvuttapa, resident of Havanoor.
		172 " " of Chenbussaya, resident of Nagloor.
◇	3	110 " " of Arlapa Naik, resident of Raneebednoor.
		178 " " of Pootapah, resident of Havanoor.
◇	818	" " of Baladass, resident of Beteegerry.
◇	91	" " of Soobrow, resident of Itteghee.
P	230	" " of Arlapa Naik, resident of Raneebednoor.
		45 " " of Buslingapa, resident of Raneebednoor.
DO	350	" " of Baladass, resident of Beteegerry.
B. D.	450	" " of Baladass, resident of Beteegerry.
A A	25	" " of Mullessaya, resident of Annegherry.
		4 " " of Davidass, resident of Gudduck.
		34 " " of Goorluissapa, resident of Nurregul.
		2 " " of ryots of Annegherry.

NATIVE COTTON.

◇	301	Bales were purchased by advances to ryots in Dumbul Talooka.
◇	203	" " by advances to ryots in Annegherry Mahal.
◇	57	" " by advances to ryots in Annegherry Mahal.
◇	56	" " of Currebussaya in Annegherry Mahal.

COTTON PURCHASED IN BELGAUM DISTRICT.

A H	99	Bales American, purchased by advances to ryots in Sumpgaon Purusghur, and Hoongoond Talooks.
B A	56	Bales American, purchased by advances to ryots in Badamee Talook.

NATIVE COTTON.

R N	103	Bales purchased by advances to ryots in Badamee Talook.
HZ	34	" " by advances to ryots in Purusghur and Hoongoond Talook.
N B	58	" " by advances to ryots in Sumyrgaum Talooka.

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- [NI] 173 Bales purchased by advances to ryots in Sumyrgaum Talooka (11 yet in the district and Vingorlah).
 B I 376 „ „ by advances to ryots in Sumyrgaum Talooka and Hoon-goond.
 [6] 331 „ „ by advances to ryots in Sumyrgaum Talooka and Purusghur.

2. Were the purchases made in each instance by yourself, or by your subordinates? If by the latter, what precautions were taken to secure cotton of the best quality?

All the cotton, except that bought of the ryots, was bargained for by myself personally. The contracts were written out in my office, and executed by the different mamlutdars, by whom the money was paid on my advising them to do so. The cotton purchased of the ryots was advanced for generally by the Government native officials, some was advanced for by the carcoon employed to look after the giving of the cotton, but in these instances the advances were always made in the presence of the patel and coolcurnees of the villages, and the accounts of such advances witnessed and signed by them. In all bargains made for cotton, it is specified in the body of the agreement that it is to be of the best quality procurable.

3. What was the price paid, per khundee, for each description of cotton; was it above or below the market price, and are the dealer's receipts forthcoming?

The price paid for New Orleans cotton, ginned and packed, was 88* rupees per candy of 784 lbs., and for native, ginned and packed, 70 rupees the candy. The prices paid were neither above nor below the market, but the same as paid by other parties (Messrs. Ritchie, Steuart & Co. purchased American cotton 88 rupees, previous to my making any purchases). On delivery of the cotton, the original of the agreements were delivered to the various parties from whom the cotton was purchased; vouchers for all such sums are on record both in my office and in the office of the native officials, who paid the money.

4. At the time of purchase was the cotton loose, or in bales, and by whom was it inspected when brought in to be ginned?

At the time of purchasing from the dealers the cotton was uncleaned (seed cotton); bargained for to be cleaned and packed, and passed or rejected. On delivery the cotton was sampled either by me or in my presence. The cotton purchased of the ryots was inspected, and received or rejected by the carcoon employed to attend to the cleaning of the cotton.

5. Who superintended its packing after being ginned, and what arrangements were made for its safe transit to Coompta, the bunder from which it appears to have reached Bombay?

The cotton purchased from the dealers was cleaned and packed under their own immediate superintendence, or by their servants; that purchased of ryots, by carcoons employed at the gin stations. I beg to explain that it was impossible for me to inspect the cotton before cleaning. If the work was all in one village I could have done so; but the work going on at the same time in many different villages, widely scattered over the two districts, rendered it not only impracticable but impossible for me to do so; nor could I have done so through native assistance, unless with an establishment very much greater than what is now entertained. For the safe transit of the cotton to the coast, I contracted with several parties, and took a security bond for the safe delivery of the cotton to my agent at the ports. These contractors in every instance failed to perform their engagements. On this head, I will make you a special report as soon as I have time to prepare it. On the failure of the contractors, I sent the cotton in charge of the peons attached to the experiments or furnished me from the Collector's establishment.

6. Was it consigned to any, and whose, agent at Coompta; and was any report made by that officer on its arrival there, and if so, what was the purport of it?

The most of the cotton was consigned to Mr. G. N. Smith, at Coompta, a gentleman who was recommended for the agency by the Collector of Canara, in 1848. The rest to Mr. A. P. Sequeira, at Vingorla, a transmission agent at that place. They advised me of the receipt of the cotton, but their remarks are confined solely to the good or bad condition of the gunnies on delivery at the port.

7. How long was the cotton in transit to Coompta; how long was it detained there; and was it shipped alone, or with other cotton belonging to merchants?

The cotton was from 15 to 20 days in transit; but owing to difficulty of procuring carriage, it was very late being got out of the district. I commenced weighing and forwarding early in November, and did not complete the work until April. The cotton does not appear to have been detained at the port of shipment, but forwarded as early as practicable. I cannot say whether it was shipped alone, or with cotton belonging to merchants.

8. When

* Except [E] 60 bales bought afterwards on decline in market at 80 rupees per candy.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 837

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8. When you inspected the bales in Bombay, was there anything in their appearance which led you to suspect that they had been tampered with in transit; and if so, was the circumstance noticed at the time, and to whom?

On inspecting the bags in Bombay, I could see nothing which would induce a belief that the cotton had been tampered with in transit. Many of the gunnies were in very bad condition, torn and much worn from frequent loading and unloading on the road to the ports; and in consequence, the cotton damaged and discoloured from exposure.

9. In the 2d para. of your letter to Government, dated 14th June last, No. 106, you state, "I had a memorandum of the marks of all the cotton which I had forwarded, and from it knew the good from the inferior native cotton." In compliance with what instructions was this "inferior" cotton consigned to Bombay for transmission to the Honourable the Court of Directors?

I keep a regular entry of every bale of cotton, mark, number, and weights; and of course I was at no loss to point out which was first class native cotton, and which second or inferior. The instruction by which I was guided in making the purchase of native cotton is contained in a letter from A. Malet, Esq., Chief Secretary to Government, to the Collector of Dharwar, No. 1221 of 1850. I beg to explain that the larger portion of the native cotton pronounced inferior was only comparatively so. It was not inferior to the great bulk of the native cotton of the districts, but inferior to what was denominated first class native cotton.

I have, &c.

Dharwar,
11 September 1852.

(signed) John M. Blount,
Superintendent of Cotton Experiments, S. M. C.

DESCRIPTION of COTTON.	BALES CONSIGNED BY THE SUPERINTENDENT.				COST TO GOVERNMENT.											
	Their Number.	Their Marks.	Weight.		By Purchase.	By Transmission to Coompta and Vingorla.	By Transmission to Bombay from Coompta and Vingorla.	TOTAL COST.								
			4.	5.					6.	7.	8.	9.				
			<i>Cnds.</i>	<i>lbs.</i>	<i>Rs.</i>	<i>a.</i>	<i>p.</i>	<i>Rs.</i>	<i>a.</i>	<i>p.</i>	<i>Rs.</i>	<i>a.</i>	<i>p.</i>			
New Orleans	228	◇	37	42	3,260	11	5	277	14	5	143	7	5	3,682	1	3
	147	◇	33	213	2,927	14	6	249	8	7	123	5	3	3,300	12	4
	296	◇	51	357	5,149	2	1	334	7	4	185	10	8	5,669	4	1
	119	⊕	20	759 ½	1,845	4	-	136	4	9	77	11	11	2,059	4	8
	421	Ⓚ	75	283 ½	6,834	8	3	489	13	7	277	11	5	7,602	1	3
	63	KK	11	35	971	14	10	71	12	7	41	12	10	1,085	8	3
	145	AC	26	164 ½	2,307	5	5	118	14	2	103	3	5	2,529	7	-
	142	⊕	25	126	2,214	2	3	118	8	7	103	6	2	2,436	1	-
	103	E	16	523 ½	1,466	11	8	87	8	6	63	10	3	1,617	14	5
	60	◇	10	124 ½	812	10	10	71	1	9	39	9	5	923	6	-
	491	◇	85	113 ½	7,491	2	6	567	13	8	332	4	11	8,391	5	1
	288	◇	50	50 ½	4,405	11	1	353	4	-	202	10	2	4,961	9	3
	818	◇	149	658	13,189	14	1	1,166	6	8	608	12	1	14,964	-	10
	91	◇	15	0	1,320	-	-	105	-	-	58	-	9	1,483	-	9
	275	Ⓚ	50	589 ½	4,476	-	2	358	2	-	195	3	4	5,029	5	6
	350	DO	55	124 ½	4,856	14	1	386	1	9	223	9	5	5,466	9	3
	450	BD	78	262 ½	6,902	2	5	548	5	9	311	6	3	7,761	14	5
	65	AA	11	507 ½	1,024	15	5	94	9	3	48	4	9	1,167	13	5
	56	B	7	703 ½	639	4	5	69	1	8	28	6	9	736	12	10
		A												1,286	2	2
	99	AH	13	343 ½	1,114	2	3	119	9	1	52	6	10			
TOTAL	4,707	-	824	493 ½	73,210	7	8	5,723	4	1	3,220	10	-	82,154	5	9

(continued)

DESCRIPTION of COTTON.	BALES CONSIGNED BY THE SUPERINTENDENT.			COST TO GOVERNMENT.			
	Their Number.	Their Marks.	Weight.	By Purchase.	By Transmission to Coompta and Vingoria.	By Transmission to Bombay from Coompta and Vingoria.	TOTAL COST.
	2.	3.	4. 5.	6.	7.	8.	9.
			<i>Cnds. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
Native Cotton	301	◇ G	53 660	3,839 12 1	371 - -	166 9 -	4,377 5 1
	56	◇ I	10 166 ½	714 13 9	71 7 9	33 2 6	819 8 -
	203	◇ A	27 308	2,741 1 -	243 - 10	133 ¼ 8	3,118 - 6
	57	◇ T	9 738 ½	782 5 5	64 9 11	35 6 9	882 6 1
	34	⊠ HZ	4 596 ¾	286 8 8	43 9 10	19 7 3	349 9 9
	58	N B	9 53 ½	765 10 8	64 11 6	32 7 2	882 13 4
	173	⊠ NL	26 625	2,781 11 5	234 4 10	95 14 7	3,111 14 10
	376	◇ BI	51 500 ½	4,128 7 9	462 11 1	204 10 3	4,795 13 1
	331	◇ 6	43 636 ½	3,640 7 2	409 11 1	182 - 2 6	4,232 4 9
	103	RN	15 171 ½	1,105 11 11	133 2 8	55 14 1	1,294 12 8
TOTAL - -	1,692	- -	262 536 ½	20,786 9 10	2,118 5 6	959 8 9	23,864 8 1
GRAND TOTAL	6,399	- -	1,087 246 ½	93,997 1 6	7,841 9 7	4,180 2 9	106,018 13 10

Dharwar, }
11 September 1852. }

(signed) John M. Blount,
Superintendent of Cotton Experiments, S. M. C.

(No. 158 of 1852.)

To J. S. Law, Esq., Collector, Dharwar.

Sir,

IN answer to your letter, No. 1418 of 1852, requesting more particular explanation with reference to some of the questions contained in your letter, No. 1327 of 1852, in relation to the cotton forwarded by me on Government account during the past season, I have the honour to state in further explanation of the 4th paragraph of your letter, No. 1327, and 1st paragraph of No. 1418, that the bales of cotton purchased of the dealers were sampled, some in the sides, some in the ends, some in the middle, and some in all directions, and that where I detected mixed cotton, it was refused. The instrument used for sampling is called a gimlet, a piece of iron with a flat blade with teeth cut along the edges. The shaft is long enough to permit this blade to reach any part of the bale. It is pushed into the bale, twisted round, and when pulled out brings along with it a portion of cotton. From such sample the cotton is passed or rejected. No samples of cotton were deposited by the dealers at the time of purchase; at the time of examining the cotton I passed or rejected it on my own judgment of its quality.

2. With reference to my answer to the 9th question of your letter, No. 1327 and 1418, I beg to state that I have repeatedly reported that I could not get clean picked native cotton by the offer of a reasonable advance over the price for ordinary cotton, nor can such cotton be got unless at so high a cost that there would be no probability of the realising either in Bombay or England its original cost. Ordinary to good native cotton, such as composed the bulk of the native cotton forwarded last season, might have been had to the extent of many thousand candies, but such cotton as is called in the invoice first class native, is not to be had without compulsion, or unless at such a price (as I have stated above) as would not again be got for it either here or at home.

3. In answer to the concluding paragraph of your letter, No. 1418 of 1852, I do not recollect the marks of the cotton I saw opened; but from previous examination there appeared to be more or less bales of mixed cotton in all the lots forwarded.

I have, &c,

(signed) J. M. Blount,
Sup. of Cotton Expts., S. M. C.

Dharwar, 24 September 1852.

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III.
Bombay.

(No. 2603 of 1852.)

From *W. Courtney, Esq.*, Revenue Commissioner, Southern Division, to *J. S. Law, Esq.*,
Collector of Dharwar.

Sir,

It would appear from the list embodied in the first answer given in Mr. Blount's letter of the 11th ultimo, No. 148, accompanying yours of the 11th instant, No. 1534, that the following Bales of New Orleans and country cotton were purchased in the Dharwar and Belgaon collectorates from ryots, not regular dealers or merchants.

In Dharwar.

NEW ORLEANS COTTON.		COUNTRY COTTON.	
Marks.	No. of Bales.	Marks.	No. of Bales.
O - - - -	296	G - - - -	301
K - - - -	421	A - - - -	203
AA - - - -	2	T - - - -	57
		L - - - -	56
Total - -	719	Total - -	617
GRAND TOTAL - - - -		- 1,336 Bales.	

In Belgaon.

NEW ORLEANS COTTON.		COUNTRY COTTON.	
Marks.	No. of Bales.	Marks.	No. of Bales.
AH - - - -	99	RN - - - -	103
B - - - -	56	H2 - - - -	34
A - - - -		NB - - - -	58
Total - -	155	B - - - -	173
		NI - - - -	376
		BI - - - -	331
		o - - - -	
		Total - -	1,075

Grand Total 1,230 bales, or, in all, 2,566 in both Collectorates. If this be correct, I have the honour to request that you will have the goodness to ascertain and inform me with reference to the first part of the second answer, and latter part of the fourth answer in Mr. Blount's letter, whether the acceptance or rejection of the whole of this cotton was left entirely to the "Karcoon employed to attend to the cleaning of the cotton."

2. In his 5th answer, Mr. Blount says: "The cotton purchased from the dealers was cleaned and packed under their own immediate superintendence, or by their servants." Be good enough to inform me what measures, if any, were adopted for ascertaining that the bales so delivered contained cotton of the description bargained for.

III.
Bombay.

840 PAPERS RELATING TO MEASURES TAKEN SINCE 1847 OF

3. You will be pleased at the same time to furnish me with copies of the reports of the agents at Coompta and Vingorla, adverted to in the superintendent's 6th answer.

Poona, Revenue Commissioner's Office,
20 October 1852.

I have, &c.
(signed) *W. Courtney*,
Revenue Commissioner, S. D.

(No. 1721 of 1852).

From *J. S. Law*, Esq., Collector of Dharwar, to *W. Courtney*, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to forward a copy of a letter from the Superintendent of Cotton Experiments, conveying the information called for in your letter dated 20th ultimo, No. 2603.

2. As stated in the 11th para. of my previous letter, the Belgaum cotton had been received from the ryots (by the karcoons in charge of the several gin-houses) before Mr. Blount took charge of the experiments in that collectorate.

3. I would beg to point out that the information required in your second para. had been already furnished, in the letter from Mr. Blount, No. 158, dated 29th September last, of which a copy was forwarded with my previous report. In order, however, to make the matter clearer, I beg to explain that the course hitherto adopted has been this: after the cotton crop has been gathered, in the months of March and April, the Superintendent entered into agreements with the dealers to furnish a certain number of bales of cotton, of a quality corresponding with samples produced by them, on account of which he made advances in full. After the rains, when the cotton belonging to these dealers had been cleaned, and packed in gunny-bags, he went round to the different villages where it was stored, and selected the bales for Government out of those not otherwise disposed of, by sampling in the manner described in the letter above referred to; if approved of, the cotton was then received.

4. As only a portion of the numerous documents forwarded by Mr. Blount related to the state in which the cotton arrived at the ports of shipment, I have caused extracts to be made of those parts of Mr. Smith's letters which relate to the subject. Only a small quantity of cotton was shipped at Vingorla; and nothing is said in the letters or statements of Mr. Sequiera, the agent there, as to the state in which it arrived.

5. Copies of two of the tabular statements sent by Mr. Smith are also forwarded, as specimens. As the information regarding the state of the gunny-bags is the same as that in the letters, it seemed unnecessary to copy the whole of them.

6. I would beg to explain that there is nothing unusual in the circumstance of many bales having arrived at Vingorla with the gunny-bags much torn. This cannot be altogether avoided, when they are conveyed on the backs of bullocks through extensive jungles. Carts are used as much as possible, but they cannot be procured for the whole quantity.

Dharwar Collector's Office,
18 November 1852.

I have, &c.
(signed) *J. S. Law*,
Collector.

(No. 173 of 1852.)

To *J. S. Law*, Esq., Collector of Dharwar.

Sir,

IN answer to the letter of the Revenue Commissioner, Southern Division, No. 2603 of 1852, received with your endorsement, dated 26th instant, No. 1608 of 1852, I have the honour to state that the whole of the cotton mentioned in the first paragraph of the Revenue Commissioner's letter, with the exception of 56 bales, marked **I** was purchased of the ryots of the Dharwar and Belgaum Districts. In answer to the reference to the first part of second and latter part of my fourth answer, in my letter to your address, No. 148 of 1852, what is meant is, that the cotton purchased of the ryots was received by the karcoons from the ryots, at the gin-houses, or at the village where the ryots resided; the cotton was purchased by advances, as I have stated, and it was necessarily left with the karcoons in charge of the gins to accept or reject the cotton on his own opinion of its quality, and that all cotton purchased of the dealers was bargained for and secured by myself. What is meant in the latter part of the fourth answer is, that the cotton received of the dealers, after it was freed from the seeds, was inspected by me personally at the

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Bombay

the time of receiving it; and that the seed cotton purchased of the ryots was inspected, and received or rejected, by the karcoons employed at the gin stations. I examined the cotton received of the dealers; the karcoons did not receive cotton from the dealers except in one instance, in the Dumbul talooka, a balance of cotton due from two or three dealers, which was not ready for delivery at the time I was in that district, in November and December last; and this cotton was again examined by me, at Hooblee, and much of it rejected.

With reference to the fifth answer of my letter before quoted, the cotton bales were sampled by me, or in my presence; from some part of each bale a sample was taken with an instrument made for that purpose, and by that sample I judge of the quality of the cotton, taking it for granted that the cotton in each dokra was of like quality of the sample pulled from it; and from the appearance of such sample, the cotton was accepted or rejected.

I am now busily engaged in receiving cotton in the district, and have only one karcoon with me who can copy (my writer and another karcoon being sick at Dharwar) and his services I am obliged to have in assisting to weigh cotton, and I have not time to copy the letters required in the last paragraph of the Revenue Commissioner's letter, and therefore send the whole of the papers received from Messrs. Smith and Sequeira, in relation to the receipt and shipment of the cotton, which I beg to request may be returned to me for record, as they contain amongst them many receipts for money paid on the shipment of the cotton.

Guduck, Dharwar Districts,
31 October 1852.

I have, &c.
(signed) J. M. Blount,
Supt. Cotton Experiments, S. M. C.

EXTRACTS from Letters to the address of Mr. Blount, Superintendent Cotton Experiments, Southern Mahratta Country, from Mr. G. N. Smith, Transmission Agent at Koompta.

25 November 1851.

I HAVE the honour to acknowledge the receipt of your letters of the 17th and 20th instant, and in reply to inform you that every care will be taken by me to carry out the instructions contained therein.

With regard to para. 2, I beg to observe that it is very difficult to detect the presence of stones in the bales, though I am aware of the practice, and make use of an iron skewer on any suspicious bales.

18 December 1851.

I HAVE also the pleasure to inform you that the first batch of 357 bales, according to your letter of the 17th ultimo, has been shipped, and to enclose you the receipts and charges on the separate boards as required. The second batch of 228 bales has also arrived within the time required by the terms of your contract with the bullock people. The gunnies have, generally speaking, been in good order, but as a large proportion of these bales come on bandies,* they are damaged by the friction of the wheel at both ends of the bales in large patches, say to the extent of one bale to each bandy, which entails some trifling expense on repairs. I notice, for the first time in the last three years, that the weights of the cotton here exceed those as per your advices. I have no reason, however, to think there have been stones put in to increase the weight, as I have tried every possible means to discover them if put in.

* i. e. Carts.

January 10, 1852.

I HAVE the honour to forward you the account of charges, &c. on 295 bales of cotton, forwarded to Bombay, on the Pattymar Santel Pursaud, Tindal Doodba, and also a receipt for 159 bales of cotton, from the village of Roan. These bales were in good order, but some which arrived to-day were in bad condition, the original gunnies having been very old.

January 19, 1852.

I ENCLOSE a memorandum of the weights, &c., of the cotton already received, excluding those for which receipts have already been given, the receipts for which I will forward on the whole lot being received. The remainder of the cotton from Coalwad has, to my surprise, not yet arrived. Of 74 bales, which arrived on the 11th instant, 52 were in very bad order, and the carriers had divided one bale into two, and made some others into pack-saddles, or bodes, as they are called. I caught them re-stuffing the bales, and accordingly made them buy a new bag, and fill it before me. The cotton was injured in these bales by the perspiration from the bullocks' backs, perhaps, say, to the amount of half a maund. The marks on the bags most damaged were AC

27 January 1852.

I have the honour to acknowledge the receipt of your letters of the 22d instant, and in reply to state that I am equally surprised with yourself as to the deficit in the weights of the cotton from Coalwad; I am always particularly careful in weighing the cotton; I always use the Custom House scales and weights; every bale is weighed in my presence. I take down the numbers, &c. myself, and invariably make the bullock contractors do the same, comparing our totals. In addition to these precautions, I invariably weigh half the bales on one side, and half on the other of the scales.

I beg

III.
Bombay.

I beg to enclose an account of all the cotton received since my last letter, dated the 22d instant, and in future you may rely on receiving an account of all bales the day after weighing as you direct. Those bales marked ⊕ were in very bad order; so much so, that I pointed them out to the Custom House officers. The weights of those bales marked ⊕ seem to have risen considerably, and on the number being completed, I will send you a comparative statement of the bales individually that you may judge for yourself, and should you require it, I shall be happy to send you the weights of each bale from Koolwar, on the whole number being received.

20 February 1852.

In the cotton received this day, I have paid particular attention to searching all torn bales according to your instructions, and it was like searching the whole batch, for they came in such a disgraceful state that I requested the Custom House manager to give me a certificate of their state, and a list of the number of old gunnies which have been used for their repair. Four bales were beyond repairing, so I bought four new bags, repacked and re-marked them. Their marks were ⊕ 61 ⊕ 69 ⊕ 31 and ⊗ 22. The old gunny bags I have forwarded for your inspection, along with the Scinde cotton. The bandymen and peons assert that the gunnies were destroyed whilst in charge of the contractors by monkeys, &c.

5 March 1852.

I also beg to forward you a list of 133 bales of cotton with their weights, &c. The gunnies for the most part were much damaged.

14 April 1852.

I have the honour to forward you a list of cotton received lately, and also a list of charges for shipment of the same. I beg to inform you, that I have now some 32 bales on hand, whilst 21 are still, I am informed, on their road from Hawanoor, and from an accident on the Dawarnurry Ghat, some bales have been detained which I hope will arrive to-day, which will make 25 more, altogether a total of 78 bales, which shall be shipped, and an account sent in immediately they come to hand. The accident on the ghat was caused by the overturn of a bandy, by which one of the bandymen's arm has been broken; I expect from what I hear, that the whole number of bales will be in two or three days at the furthest. As noticed in the remarks in the list of bales from Hawanoor, I believe the karcoo must have meant net instead of gross weights, which oversight I have also mentioned in the receipts given to the bandymen. I am sorry that I have to inform you that the bales from Ooleycoppe arrived almost in rags, some of them had the whole of one side of the gunny completely stripped off; I am afraid the price of the three bales sent for sale, will not amount to much, I hope, however, to part with them at 69 rupees the Surat candy.

(True extracts.)

(signed) J. S. Law, Collector.

ACCOUNT of 338 Bales of Cotton received from the Superintendent of Cotton Experiments for shipment to the Collector of Customs, Bombay.

Marks on Bales.	Number of Bales.	Net Weight in Koomba.		Net Weight, as per Advices.		Increase.		Date of Weight.	REMARKS.
		Mds.	lbs.	Mds.	lbs.	Mds.	lbs.		
⊕ 2	207	985	3	966 $\frac{3}{4}$	5	18	5	18th and 19th March 1852.	The bales brought by the Sombaddies, as under, were one mass of rags, not one out of ten being in good order. They say that they have altered the weights of the several bales to suit their bullocks, but the cotton itself was little damaged.
⊕ 3	43	202 $\frac{1}{4}$	6	200 $\frac{1}{2}$	1 $\frac{1}{4}$	2 $\frac{1}{2}$	4 $\frac{1}{2}$		
⊕ 4	50	258 $\frac{1}{4}$	6	254 $\frac{3}{4}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$	- $\frac{2}{4}$		
BD	38	193 $\frac{1}{4}$	4	187 $\frac{3}{4}$	-	5 $\frac{1}{2}$	4		
TOTAL Bales	338	1,639 $\frac{3}{4}$	5	1,610	4 $\frac{1}{2}$	29 $\frac{3}{4}$	- $\frac{1}{2}$		

Kompta, 19 March 1852.

(signed) G. N. Smith,
Transmission Agent.

ACCOUNT of 446 Bales of Cotton received from the Superintendent of Cotton Experiments, Southern Mahratta Country, for shipment to the Collector of Customs, Bombay.

Marks on Bales.	Number of Bales.	Date of Receipt.	Names of Carriers.	Net Weight at Kompta.		Net Weight as per Advices.		Increase.		REMARKS.
				Mds.	lbs.	Mds.	lbs.	Mds.	lbs.	
DO	21	3 April -	Khyro Meea	59	3	97	3 ½	1 ¾	6 ½	In tolerable order.
HD	4	Ditto -	- - -	14 ¼	3	No advices.	-	-	-	
⬡	54	Ditto -	Rajapah -	272 ¼	4	269 ¼	5 ½	3	5 ¾	Two of these bales repacked in fresh gunnes, being much torn.
⬡	102	5 April -	{ Bussapah } { Poosapah }	516 ¼	-	516 ¼	-	-	-	
⬡	144	Ditto -	- - -	606 ½	5	583 ¾	3 ½	22 ½	1 ½	In good order.
⬡	39	6 April -	} Contractor, Bheem Row. }	155 ¾	3	150 ¾	5 ¼	4 ¾	4 ¾	
AH	23	Ditto -		97	5	96	1 ¾	1	3 ¼	
AA	36	Ditto -		212 ½	4	203 ¾	5 ¼	8 ½	5 ¾	
H2	23	Ditto -		96	2	92	2	4	-	
TOTAL Bales - - 446 weighing, net maunds,				2,070 ½	1	2,009 ½	5 ½	-	-	

Kompta, 7 April 1852. (signed) G. N. Smith,
Transmission Agent.

RESOLUTION on a Letter from the Revenue Commissioner, Southern Division, No. 2,919, dated 29 November 1852.

GOVERNMENT view with much displeasure the manner in which Mr. Blount has performed the responsible duties confided to him, and expended the Government money in purchasing bad cotton. His explanation of his conduct is deemed unsatisfactory.

2. From Mr. Blount's letter, No. 106, of the 14th June 1852, it appears, that he had engaged 1,145 candies of cotton, and had advanced on it 54,890 rupees, it is to be hoped that this cotton will prove to be of a superior quality to that which was sent to Bombay last year. The Acting Collector of Customs should, after the arrival of the cotton in Bombay, report on the subject; he should also be directed to send only to England such portion of the cotton as may be good, and the remainder should be disposed of at Bombay under instructions from Government.

3. Purchases of cotton on account of Government in the Southern Mahratta country to be discontinued; no cotton to be purchased except what may be absolutely necessary for the purpose of commencing the important experiment of screwing cotton at Hooblee before sending it to Bombay, and then only, in the event of purchasers of New Orleans cotton not bringing it to be screwed at the Government screws. If private traders are willing to make use of the Government screws, no cotton need be purchased at all on account of Government, and the proceedings of Mr. Blount, if entrusted with the duty of purchasing, should be carefully watched by the Collector and his Assistants.

4. The Collector of Dharwar is however to report, through the Revenue Commissioner, Southern Division, whether, under this altered state of circumstances, the services of Mr. Blount are still required, and if so, to state the duties which he should be required to perform.

5. The sum of (300) three hundred rupees may be paid to the warehouse keeper's son, Mr. M. A. De Carvalho, as suggested in para. 50 of Mr. Spooner's report, No. 726, dated the 6th August last, and charged with the other expenses incurred for the cotton in question.

6. Mr. Spooner merits the best thanks of Government for the pains he has taken in the matter.

(signed) Falkland.
D. A. Blane.
A. Bell.

17 January 1853.

III.
Bombay.

Territorial Department Revenue, No. 36 of 1853.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WITH reference to our letter, No. 15, dated 28th January last, we beg to forward copy of the documents noted in the margin,* from which your Honourable Court will learn, that we have accepted the resignation tendered by Mr. Blount of his appointment as Superintendent of Cotton Experiments, Southern Mahratta Country.

2. The unsatisfactory manner in which Mr. Blount had executed his commission in purchasing cotton having been brought to our notice before the receipt of your letter of the 18th February 1852 (No. 4), authorising an increase of pay, the permission to increase Mr. Blount's pay has not been acted on.

We have, &c.
(signed) *Falkland.*
D. A. Blane.
A. Bell.

Bombay Castle, 12 March 1853.

No. 574 of 1853.—Territorial Department Revenue.

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

Forwarded for the orders of Government.

2. THE Revenue Commissioner, Southern Division, sees no reason to dissent from the Collector's opinion on the subject.

Revenue Commissioner's Camp, Poona,
2 March 1853.

(signed) *W. Courtney,*
Revenue Commissioner, S. D.

(No. 173 of 1853.)

From the Collector of *Dharwar* to the Revenue Commissioner, Southern Division,
Sir,

WITH reference to the 4th para. of the Government Resolution, No. 479, dated 26th ultimo, forwarded with your memorandum, No. 363, dated 7th instant, I have the honour to forward the accompanying copy of a letter from the Superintendent of Cotton Experiments, Mr. Blount, tendering his resignation of his appointment, which I would beg to recommend should be accepted.

2. I would also suggest that Mr. Blount should be allowed leave of absence, without deduction of pay, for six weeks, to proceed to the Presidency, preparatory to his departure from India. I have proposed this period as the journey to the Presidency will probably require a fortnight, there being now no steamer which regularly touches at Vingorla, as used to be the case.

3. As soon as I have had time to consider the subject, and to consult the Collector of Belgaum, I will report on the measures which I may consider necessary for carrying on the cotton experiments after Mr. Blount's departure.

Dharwar Collector's Office,
Camp Tilwullee, 21 February 1853.

I have, &c.
(signed) *J. S. Law,*
Collector.

(No. 62 of 1853.)

To *J. S. Law, Esq.,* Collector of *Dharwar.*

Sir,

I BEG to inform you that I have received, through the Collector of Belgaum, copy of a resolution, No. 479 of 1853, passed by Government under date of 16 January 1853, on a letter from the Revenue Commissioner, Southern Division, No. 2919, dated the 29th November 1852, in which Government express much displeasure with me for having expended
Government

* Memorandum from the Revenue Commissioner, Southern Division, No. 574, dated 2 March 1853, with accompaniments. Resolution of Government, No. 1406, dated 5 March 1853.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 845

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Bombay.

Government money in the purchase of bad cotton in 1850-51. I much regret to see that Government consider the explanation given in my letter, No. 102 of 1852, to the Secretary to Government, unsatisfactory; but I beg again to assert that my receiving a quantity of inferior cotton was not the result of carelessness on my part, but owing to dishonest practices of the native dealers, from whom the larger portion of the cotton was purchased, in putting good and bad cotton into the same bales. I could only have discovered the bad cotton in the bales by having them all opened; and to do this, I had no houses in which to perform the work, or a sufficient establishment to attend to the selections of the cotton. I do not urge these circumstances as mere excuses, they are facts; with the cotton purchased the past season, though every attention was given at the time of sampling and receiving the cotton, to discover and refuse all bales not equal to the samples deposited with me, still on opening what cotton was received, and repacking it at Dharwar, it was found mixed with inferior cotton, to the extent of some 40 candies.

The third paragraph of the resolution states, that no cotton is to be purchased except what may be necessary for commencing the important experiment of screwing cotton at Hoobly, and none if private traders will make use of the Government screws. With reference to this paragraph, I beg to state, that in the Belgaum districts only some 14 rupees worth of cotton has been bargained for, and that I have directed no further engagements to be made. In Dharwar districts no engagement for cotton has as yet been made, but I am under a promise to the ryots in Bunkapoor to purchase the cotton produced from the American seeds received last year from Bombay, at whatever the market price may be.

I directed remission of revenue to be made on account of this cotton, but as none of the ryots have accepted the offer, the cotton, if not required by Government, will be purchased by native dealers.

In the fourth paragraph of the resolution you are to decide whether or not my services, under these altered circumstances, will be required.

In a letter which I addressed to H. E. Goldsmid, Esq., Secretary to Government, whilst at the Presidency in March 1851, I informed him that my term of engagement would expire in January 1852, and expressed my willingness to remain in my situation, if required, for a further period of (3) three years. In a subsequent letter, dated 30 December 1851, No. 256, to the address of the Secretary to Government, I asked, in the event of my services being accepted, that I might be allowed eight months' leave of absence, to visit America.

Nearly 14 months of the period for which I proposed to re-engage has passed, and as I am most anxious to visit America on matters connected with my private affairs, should you now recommend the retention of my services, I would still request my being allowed the period of absence beforementioned; which, if granted, would terminate in the early part of 1854, leaving a period of service to be performed of less than one year. It would not be to my interest to return to India for so short a period; and, under this consideration, I beg to offer my resignation, and to request that I may be relieved of the duties of Superintendent of Cotton Experiments in the Southern Mahratta country as soon as I can make a settlement of the last season's operations, and satisfactorily account for the disbursement of the moneys entrusted to me (I think this settlement may be completed in April next or before); and that Government will be pleased to continue to me my pay and allowances whilst on route to Bombay, and for a reasonable period at the Presidency, preparatory to my departure from India.

I have, &c.
(signed) *John M. Blount,*
Supt. Cotton Experiments, S. M. C.

Dharwar,
17 February 1853.

RESOLUTION on a Memorandum from the Revenue Commissioner, Southern Division, dated the 2d March 1853, No. 574.

RESIGNATION accepted,

2. Leave of absence for two (2) months from date of making over charge may be allowed Mr. Blount; the date of making over charge to be fixed by the Collector.

4 March 1853.

(signed) *Falkland,*
D. A. Blane,
A. Bell.

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Bombay.

EXTRACT Para. 3 to 11 of a Letter from the Government of Bombay to the Honourable the Court of Directors, dated 1 May (No. 19) 1847.

Revenue Cons.
1847, 3 February.
V. 698 to 704.

3. WE beg to draw your Honourable Court's attention to the letter from the Acting Collector of Dharwar, dated the 19th October 1846, and to the instructions which we caused to be communicated to him thereon, copies of which are herewith forwarded and recorded as per margin. Mr. Mansfield, it will be seen, in reporting the intended despatch to the Presidency of 500 candies of New Orleans cotton grown last season by the ryots, and purchased by Government under the sanction given in the 13th para. of your Honourable Court's despatch, No. 21, dated the 21st August 1844, very strongly urged upon us the expediency of authorising the sale of this consignment at the Presidency, instead of directing its shipment to Liverpool, as had hitherto been done, but that the latter course might be adopted with the remainder (250 candies) of last year's crop, which would afterwards be sent to Bombay.

4. We considered the reasons urged by Mr. Mansfield for having the 500 candies above alluded to sold at the Presidency of great weight, and we should not have hesitated at once to sanction the adoption of that course had we not received the instructions contained in your Honourable Court's letter of the 22d September last, which we considered precluded us from disposing of this cotton in Bombay. We accordingly informed the Collector to this effect, and directed the shipment of the whole of the 750 candies expected from Dharwar to Liverpool.

5. Your Honourable Court will observe, from our proceedings on the letter from Mr. Mansfield now under notice, and from our minute, dated the 2d February last, a copy of which will be found amongst the documents noted in the 15th para. of this letter, that a misapprehension of the size of the bales of the Dharwar cotton led us to believe that the above 750 candies, together with the 475 bales, a portion of which had been shipped in the "Clarendon," as reported to your Honourable Court in our despatch, No. 44, dated 16th November last, would bring up the number of bales to very near 5,000, and thus enable us to give immediate effect to your Honourable Court's instructions. We subsequently found, however, on further inquiry, that in this we were very much mistaken, since the Dharwar bales, or "docras," as they are termed, contain only about one-fourth of a candy, at which rate the total supply from that district for last season of which we had then advice would not exceed 987 of the screwed bales (containing one candy each), which are usually sent from this port, and which are doubtless what your Honourable Court had in view. Even adding to this 61 bales, the produce of the same season, of the transmission of which from Belgaon and Khandesh we had at that time received advices, the total number of bales would have been only 1,048, which would have come considerably short of the annual consignment desired by your Honourable Court, even if we had sent the whole of it to England, which, under the circumstances, we then thought it would be advisable to do.

6. We now proceed to explain the considerations which induced us to alter our determination in regard to sending the whole of this cotton to Liverpool, and we shall next advert to the arrangements which we had in contemplation, and those which we finally adopted with the view of meeting your Honourable Court's instructions in regard to sending home large annual consignments of 5,000 or 6,000 bales for a period of three years.

7. In reference to the first point, your Honourable Court will observe, that in the 13th and 14th paras. of a minute, dated the 5th June last (a copy of which accompanied our despatch, No. 35, of the 17th July following, our colleague, Mr. Willoughby, suggested that, in order to dispel the supposed ignorance of the mercantile community of this Presidency in regard to the endeavours which Government was making to improve the condition of the cotton cultivation, a letter should be addressed to them, informing them of what had been or was being done, and requesting their co-operation, and any suggestions which they might have to offer in promotion of the objects which Government had in view. In accordance with this suggestion, we caused a letter to be addressed

addressed to the Chamber of Commerce, and the principal mercantile firms of this place, informing them of the condition and prospects of the cotton experiments in Dharwar, and requesting them to submit any opinions or suggestions which might occur to them on the subject.

8. To the replies which we received to our Chief Secretary's communications, and which will be found amongst our proceedings recorded as per margin, we would beg to draw your Honourable Court's particular attention.

Rev. Cons. 1847.
3 February V. 679.
3 March, V. 1023
to 31. 10 March
V. 1324 to 27.
14 April, V. 2013
and 14.

9. After a careful perusal of the communications from the Chamber of Commerce, and Messrs. Leckie & Co., we could not but admit the great weight of the arguments used by them in favour of the sale of a portion of the ginned cotton here, and which were quite in accordance with the strong representations we had frequently received from the local authorities, and with the previous recorded opinions of our Board. We considered the importance of resorting to the measure recommended by the merchants, with a view to the success of the measure which had been adopted for improving the quality of the cotton, and demonstrating their practical results to the people of the country generally, so great, that feeling assured that had the matter been fully stated at an earlier period to your Honourable Court, it would have led to a modification of the instructions communicated to us for the transmission of the ginned cotton to Liverpool; we reconsidered our former resolution, and determined to modify it so far as to permit 500 bales of the cotton consigned to the Presidency to be disposed of by public auction, under the condition that the purchasers should export it to Liverpool, and we had the less hesitation in adopting this course since, while it would have the effect of establishing the character of the cotton in that market with which the growers and dealers in the interior are immediately connected, it would not interfere with your Honourable Court's object of making it generally known in the home market to which it would be ultimately conveyed. The remainder of the cotton we determined to consign direct to Liverpool, on account of Government, as we had originally proposed to do.

10. Instructions to this effect were accordingly issued on the 22d February last to the Collector of Customs at the Presidency, who, on reporting that the total number of bales which he had received amounted to 1,413, composed of the varieties denoted in the margin,* was authorised to make up the 500 bales of the whole of the Belgaum Khandesh and Broach produce, and of as much of the Dharwar produce as would be required to complete the full amount.

11. We would beg to refer your Honourable Court to the memorandum submitted with the Deputy Collector, Mr. Frere's letter, dated the 25th March last, giving the particulars of the sale of the 500 bales in question, and showing the very favourable prices obtained for them as compared with the current market rates for the best descriptions of cotton. We have caused this very satisfactory result to be communicated to the local authorities in whose districts the cotton was produced, and we would here only express a hope that, looking at the advantages attending this mode of disposing of the cotton, your Honourable Court will be pleased to allow us greater latitude to resort to it in the disposal of that which may hereafter be purchased on account of Government in the course of the experiments now in progress, when we may consider it the most advantageous plan.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 3 February 1847.—(V. 698 to 704).

(No. 1415 of 1846.)

From the Acting Collector of Dharwar to Mr. Chief Secretary *Pringle*.

Sir,

I do myself the honour to report, for the information of Government, that 500 candies of New Orleans cotton, grown last season by the ryots of this collectorate, and purchased by Government, are about being despatched to Bombay.

V. 698.

	Bales.
* New Orleans cotton from Belgaum	14
Broach cotton from Belgaum	12
Khandesh cotton	125
Ditto - - ditto	42
Dharwar cotton	1,220
	1,413

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2. I would here take the opportunity of bringing to the notice of his Honor in Council, that the only doubtful point connected with the experiment, is the uncertainty as to the price the New Orleans cotton will fetch in the Bombay market; at present it has no market value; if it had, the native traders in the habit of buying cotton here would at once purchase it as they do the native cotton, and it is therefore most desirable that this point should be settled, and until it is, the experiment cannot progress beyond the point it has arrived at, and the whole burden of purchasing the entire crop must continue, as at present, to be borne by Government.

3. The sooner this difficulty can be removed the better for Government and the experiment. To send the whole crop to England would but be to keep us another year in uncertainty, besides incurring the chances of failure connected with the transmission of the crop and its subsequent sale in England, inseparable from a speculation in which there are no private interests to promote its successful accomplishment.

4. What is wanted, however, can be obtained by selling a considerable portion of the crop in Bombay, which would at once give it a marketable value there, and insure its being purchased there, and I beg most strongly to recommend that I may be allowed to advertise the sale of the quantity now about to be despatched, in the public prints of the Presidency. This course will probably be the means of creating an interest for the experiment with the mercantile community of Bombay; and, whilst placing it on a secure basis for the future, by enabling us to ascertain what the cotton will really fetch in the market, it would relieve Government of the responsibility and trouble connected with a large outlay incurred in the purchase of the cotton; it would also place Government in a better position to judge to what extent it would be desirable to encourage the production, and engage in the purchase of cotton hereafter.

5. This, in my humble opinion, is the only way to place the experiment speedily on a satisfactory footing, and transfer it from the hands of Government to those of merchants and others connected with the cotton trade, when, and no sooner, the advantages of the measures taken by the Honourable Court of Directors for the improvement of the cotton cultivation can be really ascertained. I trust then my suggestions will meet with the approbation of the Honourable the Governor, in which case I have strong hopes that the result of the sale will place the success of the cotton experiment in the Southern Mahratta country beyond a doubt, and New Orleans cotton amongst the ordinary products of the country.

6. There will still remain 250 candies to be despatched hereafter; these, should the Honourable the Governor think expedient, can be forwarded to England, and this quantity will be abundantly ample for all purposes of experiment there.

Collector's Office, Camp Hooblee, }
19 October 1846.

I have, &c.
(signed) S. Mansfield,
Acting Collector.

MINUTE by the Honourable the Governor.

V. 699. In his letter dated the 19th ultimo, the Acting Collector of Dharwar reports the intended despatch to the Presidency of 500 candies of New Orleans cotton, grown last season by the ryots, and purchased by Government; and he recommends that this consignment of cotton should be sold at the Presidency, instead of being shipped to Liverpool, as has hitherto been done, the latter course being adopted with the remainder (250 candies) of last year's crop, which will be hereafter sent to Bombay.

2. The whole of this cotton has been purchased by Government from the ryots in consequence of the Honourable Court having, in the 13th para. of its letter (No. 21), dated the 21st August 1844, observed that it would not object to the purchase, direct from the cultivator, of cotton of the above description (*i. e.*, cleanly picked, &c.), to the extent of 500 to 1,000 bales in all, for shipment to Liverpool.

3. It has hitherto been usual to consign to Mr. Laird, at Liverpool, all the cotton cleaned and prepared for the market under the superintendence of the American planters, because the Honourable Court had, in the foregoing passage from its letter of 21st August 1844, stated that the cotton should be purchased from the ryots "for shipment to Liverpool."

4. Another reason which has hitherto induced Government to adopt this mode of disposing of the cotton produced in Dharwar, was its desire to meet the wishes of the Honourable Court, as contained in the following passage from its letter, dated 30th March 1842, in which it directed the annual transmission to England of 1,000 bales of cotton from the Broach cotton farm:

"So large a consignment as will, we trust, be produced by the united efforts of all the Americans, coming direct to the principal cotton mart of this country, will be calculated to draw considerable attention towards it, particularly if it be of superior quality, the impression hitherto having been that a small consignment of East India cotton of good quality is of garden growth, or that it has had so much care bestowed on its cultivation, as to afford no criterion of what might be effected on a large scale. This impression would be removed by the

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 849

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the arrival of a large parcel of cotton of the same description and quality; it would give increased confidence to the spinners, in anticipating a still larger supply the following year, and induce them to prepare machinery accordingly, and the attention of capitalists and speculators will be more effectually called to the subject of cultivating and cleaning cotton on the American system in India."

5. The reasons urged by Mr. Mansfield for having the 500 candies of cotton about to be despatched from Dharwar sold at the Presidency, carry with them great weight, and I should not have hesitated at once to sanction the adoption of that course, had we not recently received instructions from the Honourable Court, under which we are, I think, precluded from disposing of this cotton in Bombay. In its despatch of the 22d September last (para. 4), the Honourable Court has authorised us to make consignments to Liverpool to an extent of 5,000 or 6,000 bales at one time, and to continue such consignments for a period of three years. In pursuance of these instructions, the whole of the 750 candies of Dharwar cotton, referred to in Mr. Mansfield's letter now under notice, should therefore be shipped to Liverpool on their arrival here. By the term "bales," the Honourable Court has left it doubtful whether it meant bales such as those usually received from Broach, or "docras," or bales such as those generally received from Dharwar, &c.; the bales of cotton received from Broach generally contain one candy or 14 maunds each, while the Dharwar "docras" contain only from four to seven maunds of cotton each. Allowing, say five maunds to each bale or docra, the 750 candies about to be consigned from Dharwar will give 4,200 bales. These, with the 475 bales of Dharwar cotton, a portion of which has already been shipped in the "Clarendon," and the remainder is now under shipment, will bring up the number of bales to very near 5,000. In making these consignments we shall have thus had it in our power to give immediate effect to the Honourable Court's instructions.

The Collector should be informed of our views as above noticed, and requested to lose no time in shipping the whole of the 750 candies to the Presidency.

The Collector of Customs should be furnished with a copy of this letter from Mr. Mansfield, and directed, on the arrival of the cotton, to take charge of it, and procure freight for its conveyance to Liverpool.

Our proceedings in this matter should be reported to the Honourable Court, when we apprise it of the shipment to Liverpool of the consignments expected from Dharwar.

22 December 1846.

(signed) L. R. Reid.

MINUTE by the Honourable Mr. Willoughby, without date.

MR. MANSFIELD'S proposition to dispose of 500 bales of this cotton at Bombay is in accordance with the suggestion I made to the same effect in the 14th para. of my minute of the 8th June last.

V. 700.

I still think that it is an object of equal if not greater importance that the value of this cotton should be made known in the Bombay as in the Liverpool market; but under the recent orders we have received from the Honourable Court, I concur with our Honourable President in opinion that the whole crop produced must be consigned to England.

I would still, however, suggest that a sample bale be deposited at the Custom-house and Chamber of Commerce for the inspection of the public, and that we submit for the Honourable Court's consideration the advantages which are likely to ensue from our being permitted to dispose of a portion of the produce of future years on the spot.

(signed) J. P. Willoughby.

(No. 4 of 1847.)

From the Collector of Customs, Bombay, to Mr. Chief Secretary Pringle.

Sir,

I BEG leave to report, for the information of the Honourable the Governor in Council, that 2,916 bales, weighing gross 3,046 cwt. 3 qrs. and 19 lbs., have been received from Compta, the same having been consigned to me by Mr. Mercer, and request that you will have the goodness to obtain the early instructions of Government for the disposal of the same, as well as of a further consignment, which I am informed may be daily expected.

V. 701.

Bombay Custom House,
8 January 1847.

I have, &c.
(signed) H. H. Glass,
Collector of Customs.

(No. 298 of 1847.)

From Mr. Chief Secretary Pringle to the Collector of Dharwar.

Sir,

I AM directed to acknowledge the receipt of Mr. Mansfield's letter, No. 1415, dated the 19th October last, reporting the intended despatch to the Presidency of 500 candies of the cotton produced in Dharwar during the last season, and recommending this consignment should

V. 702.

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Bombay.

should be sold at the Presidency, instead of being shipped to Liverpool, as has hitherto been done, the latter course being adopted with the remainder (250 candies), which would afterwards be sent to Bombay.

2. The reasons urged by Mr. Mansfield for having the 500 candies of cotton above alluded to sold at the Presidency carry with them great weight, and the Governor in Council would not have hesitated at once to sanction the adoption of that course had Government not recently received instructions from the Honourable the Court of Directors, which preclude it from disposing of this cotton in Bombay. In its despatch, dated the 22d September last, a copy of which accompanied my letter to your address, dated the 31st ultimo, No. 4411 (para. 4), the Honourable Court has authorised Government to make consignments to Liverpool to the extent of 5,000 or 6,000 bales at one time, and to continue such consignments for a period of three years.

3. In pursuance of these instructions the Governor in Council has determined that the whole of the 750 candies of Dharwar cotton now under notice shall be shipped to Liverpool, and he accordingly desires that you will lose no time in forwarding this cotton to the address of the Collector of Customs at the Presidency, who will be instructed, on receipt of it, to procure freight for its conveyance to Liverpool.

Bombay Castle, 28 January 1847.

I have, &c.
(signed) *R. K. Pringle,*
Chief Secretary to Govt.

(No. 299 of 1847).

From Mr. Chief Secretary *Pringle* to the Collector of Customs, Bombay.

V. 703. Sir,
I AM directed by the Honourable the Governor in Council to acknowledge the receipt of your letter, No. 4, dated the 8th instant, and in transmitting for your information the accompanying copy of my letter of this date to the Collector of Dharwar, to request that you will, on the arrival of the whole of the cotton therein alluded to, procure freight for its conveyance to Liverpool.

2. When the cotton has been shipped, you will be pleased to submit the bills of lading, and a descriptive list of the bales, which latter you are requested to prepare with the greatest care, it being of importance to prevent any mistakes in distinguishing this from any other consignment of cotton.

3. The Governor in Council being desirous of allowing the public an opportunity of examining the quality of this cotton, and believing that this may be best done by depositing one sample bale at the Custom-house and another at the Chamber of Commerce, I am directed to authorise you to appropriate one of the bales to this purpose, and to make over another to the Chamber of Commerce, who will be informed direct of the wishes of Government on the subject.

Bombay Castle, 28 January 1847.

I have, &c.
(signed) *R. K. Pringle,*
Chief Secretary to Govt.

(No. 300 of 1847.)

From Mr. Chief Secretary *Pringle* to the Secretary to the Chamber of Commerce.

V. 704. Sir,
WITH reference to the 15th para. of my letter to your address of this date, No. 288, I am directed to acquaint you that, with the view of effecting, to some extent at least, the object therein noticed, of allowing the public an opportunity of judging of the character and quality of the cotton produced last season in Dharwar, the Honourable the Governor in Council has instructed the Collector of Customs at the Presidency to deposit in the Custom-house for inspection a bale of cotton, forming portion of a recent consignment from the above district, and to hand over another bale to the Chamber of Commerce for the same purpose.

Bombay Castle, 28 January 1847.

I have, &c.
(signed) *R. K. Pringle,*
Chief Secretary to Govt.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 851

III.
Bombay.

EXTRACT Bombay Revenue Consultations, 3d February 1847.

(No. 679.)

No. 679.

From the Secretary to the Government of Bombay to the Secretary to the Chamber of Commerce, Messrs. *Forbes & Co.*, Messrs. *Remington & Co.*, and Messrs. *Leckie & Co.*

Sir,

THE endeavours which Government has, for some time past, been making with the view of introducing an improved system of cultivating and cleaning cotton in the Southern Mahratta country having been attended with the most favourable results, and the advantages already gained holding out a fair promise of success in the event of the removal of certain impediments which are now found to oppose themselves to it, I am directed by the Honourable the Governor in Council to request that you will lay before the Chamber of Commerce for their careful consideration the following detail of the measures connected with this subject, and of their results up to the close of the last fair season, and at the same time to express his earnest hope that the Chamber will afford its cordial co-operation, and submit any suggestions which may occur to it towards the promotion of the important objects which Government has in view.

2. These experiments were commenced in 1843, under the superintendence of Mr. Mercer, an American cotton planter of great experience, zeal and energy. That gentleman arrived in Dharwar in April of the above year, and selected for his farming operations the village of Koosgul, in the Hooblee talooka, which, with about 200 acres planted by the ryots, formed the field of his first year's operations.

3. In the second year, 1844-45, Mr. Hawley, another American planter, was sent to this collectorate, and he also had an experimental farm at Gurrug. Mr. Mercer continued his farm at Koosgul during this year, and the ryots planted about 2,600 acres of land.

4. In 1845-46 Mr. Mercer represented that the experimental farms were only a useless expense to Government; that the American system of cultivation was not adapted to India; that the natives of India were, from their knowledge of the climate and capabilities of the soil, able to cultivate better and much more economically than any European; and requested that the farms might be abolished, and that in order to ascertain how far the climate and soils throughout the collectorate were adapted to the New Orleans cotton, and also that a knowledge of its qualities might be disseminated among the ryots, he might be allowed to cultivate, on contract, fields in all the talooks. To this proposition Government assented, and 550 acres were accordingly planted with New Orleans cotton by the ryots for Mr. Mercer, in addition to 10,000 acres on their own account; the result of which was to establish the important fact that wherever the season had been favourable for grain crops the New Orleans cotton had been quite successful. In the eastern portions of the Dummul and Nowlgoond talooks there was a very great deficiency of rain, and all descriptions of crops, including the New Orleans cotton, failed.

5. From the above the Chamber will observe that what has been done in respect to the planting of the New Orleans cotton, from the commencement up to the present period, as regards the produce, there were in—

1843-44	-	-	-	-	-	-	-	36 bales.
1844-45	-	-	-	-	-	-	-	190 ditto.

And the produce of 1845-46 at from 1,200 to 1,500 bales.

6. It had often been brought to the notice of Government that one great difficulty connected with the introduction of the New Orleans cotton into the Southern Mahratta country, was the impossibility of cleaning it with the common native machinery, owing to the tenacity with which the wool adheres to the seed, and in order to obviate this, Government, at the recommendation of Mr. Mercer, procured and forwarded to Dharwar 12 saw-gins, all of which have been set up, and put in working order by Mr. Mercer.

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Bombay.

7. Government has hitherto purchased all the New Orleans cotton produced by the ryots, and the number of bales given in para. 5 of this letter includes, in the two first years, the produce of the Government farms, as well as that purchased from the ryots; and in the third year, that planted on contract for Mr. Mercer, on the part of Government, and also that planted by the ryots on their own account.

8. At the outset of the experiments the buying and cleaning of the whole of the cotton produced was superintended by the American planters, but the cultivation of the New Orleans cotton became afterwards so extended, that Mr. Mercer has found it necessary to contract with native traders, who go round and purchase the cotton from the ryots, and are allowed for their trouble one anna per maund, which is deducted from the price sanctioned by Government to be paid for the cotton, namely, 12 annas, a rate which is stated still to leave a remunerating price to the ryot for his produce.

9. Mr. Mercer has likewise made over to these traders most of the saw-gins giving them, for the expense of cleaning, the same sum it would have cost Government had it been cleaned under Mr. Mercer's own superintendence, and that gentleman remarks in a recent letter, that "the native dealers are now buying the cotton from the cultivators, and ginning it, paying all the expenses of the same, having the sole management of it, and, except that they have not the ownership of the gins, and are dependent on Government to purchase the clean cotton, have the whole thing in their own hands."

10. In a late communication from the Acting Collector of Dharwar, he states that "the New Orleans cotton has been cultivated to such an extent throughout the collectorate that its qualities are well understood by the ryots, and there will be no further necessity of Government planting any on its own account. There is at present sufficient seed to plant 100,000 acres, and the ryots are perfectly willing to plant it to any extent, provided the sale of the produce is guaranteed to them. At present, Government is the sole purchaser."

11. From the above detail the Chamber will observe that, as far as Government is concerned, it has done all that could reasonably be expected for the promotion of the cotton experiments in the Southern Mahratta country. The New Orleans cotton is now extensively cultivated, the ryots are fully sensible of its advantages, the machinery necessary for separating the wool from the seed has been successfully introduced, and is freely taken on hire by the people, who it may be expected will not be *wary* of advancing another step, and becoming themselves the owners by purchase of the machinery.

Sic orig.

12. But the experiment cannot be considered beyond the reach of failure until the superior marketable value of the ginned cotton is generally recognised, and such a regular demand for it is in consequence produced, as will suffice to keep the machines in full employ, and to encourage their extended use. Up to the present period the ryots have had the guarantee of Government that all the cotton they produce shall be bought at the rate of 55 rupees per candy. It is obvious, however, that it would not be proper to continue this system for any lengthened period, even if it were practicable, and the experiment appears already to have reached that stage when the mercantile community may be reasonably expected to come forward and freely purchase a product, the improved quality of which will doubtless command a high price in the London and China markets.

13. It is a want of a market for the cotton grown in the Southern Mahratta country, and the consequent dependence of the growers on Government alone for its *procure*, that constitute the impediments to which allusion is made in the 1st para. of this letter.

Sic orig.

14. If the mercantile community have hitherto displayed but a limited interest in these experiments, the Governor in Council feels persuaded that it has arisen only from want of information as to the extent to which they have advanced, and it is for the purpose of supplying this deficiency that I have been directed to address the Chamber on this occasion, and in doing so, I am instructed to intimate the apprehension entertained by Government, that unless a demand

a demand is created for the improved cotton produced in the Southern Mahratta country, an experiment which has proceeded thus far with such promising results must fail, and with it perhaps the only reasonable prospect of this fertile district being able to compete with America in the growth of its staple product; and it is therefore to the mercantile community that Government must look to occupy the field from which it is itself desirous to withdraw, whenever it sees a prospect of doing so without a risk of failure.

15. These views would have induced the Governor in Council to direct that the greater portion, if not the whole of the cotton purchased by Government, and now ready for the market, should be exposed for sale at the Presidency, in order that its character and quality might become fully known to the mercantile community here, but recent instructions from the Honourable the Court of Directors requiring that, with a similar object as respects the home market, a large quantity of gin-cleaned cotton should be consigned to England, he regrets that it will not be in his power at once to carry out these views, and that he must content himself for the present with having brought the facts connected with the subject thus prominently to the notice of those whose immediate vicinity to the scene of the operations will enable them to contribute the most efficient aid towards developing their results.

16. In conclusion, I am desirous to state that the Honourable the Governor in Council will at all times be glad to receive from the Chamber any opinions or suggestions which may tend to the promotion of an object so important at once to the interests of commerce and to the public resources.

Bombay Castle, 28 January 1847.

I have, &c.
(signed) R. K. Pringle,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 3d March 1847.—V. 1023 to 1031.

From the Secretary to the Chamber of Commerce to Mr. Chief Secretary Pringle.

Sir,

I HAVE the honour, on behalf of the Chamber of Commerce, to acknowledge receipt of two letters from you, Nos. 288 and 300, respectively, of 1847, dated 28th January last, detailing the efforts of Government to introduce and extend an improved system of cultivating and cleaning cotton in the Southern Mahratta country, and the consequences, actual and anticipated, thence resulting.

2. I am instructed to say that the Chamber feels the liveliest possible interest in the subject of your communications, and much gratification in observing the extent to which the production of an improved cotton has, under the auspices of Government, been carried.

3. The Chamber is desirous of bringing immediately to the notice of the Honourable the Governor in Council the very great desirableness of disposing of such a quantity of this cotton now at the Presidency as may at once determine its value in the market, and make that value known to the native mercantile community and growers in the country.

4. The Chamber has observed what is stated in para. 15 of the communication now under acknowledgment as to the instructions from the Honourable the Court of Directors requiring that, with a similar object as respects the home market, a large quantity of gin-cleaned cotton should be consigned to England; but it is respectfully suggested that such instructions might, in the circumstances, be sufficiently carried out by sending, say 500 bales, or one half of the quantity now ready for shipment to England, leaving the remainder for immediate sale in the market of Bombay.

5. A particular reason for the course here proposed exists in the present state of our cotton market, the value of the staple, in consequence of late advices from England, being much higher than it has been for a considerable time, and an advantageous price being thus all but certain to be secured for the cotton in question, and it must be quite unnecessary to point out how desirable it is in the present state of this trade to give speedy and convincing evidence to the ryots of the value of any improvement in their produce. Should the whole of this cotton be now consigned for sale in England, the Chamber has reason to believe, not only that the effect will not be so striking, but that actually by excluding the chances of sale for the China market, to which it may be found to be best adapted, it may not be beneficial at all to the same extent. It is thought proper to add, that the sale here of any such small quantity as is named by the Honourable the Governor in Council could lead to no practical result whatever.

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Bombay.

6. While the Chamber is indisposed to write speculatively in addressing themselves to Government, I am instructed to bring particularly to notice the probable falling off in the growth of cotton in the United States of America consequent upon the great fiscal changes that have recently been effected at home, and which, by throwing open the markets of Great Britain, offer increased inducements to the more extended cultivation of other produce, thereby leaving a much larger field, and consequently improved prospects of demand, for cotton, the growth of India. In this point of view, the good price which the Chamber anticipates for the cotton now under notice, if brought at once to market, is not expected to act as a delusion or false guide, to the ryots, or others, but rather as an evidence of future permanent remunerating prices, if the trade should be allowed a natural freedom in expanding itself according to the demands and changing circumstances of the markets of the world.

7. Referring to para. 12 in your principal letter, the Chamber entirely concurs in the opinion therein expressed, that the experiments (of Government) cannot be considered beyond the reach of failure until the superior marketable value of the ginned-cotton is generally recognised, and such a regular demand for it is in consequence produced as will suffice to keep the machines in full employ, and encourage their extended use, while the mercantile community are quite prepared to come forward and freely purchase a product, the improved quality of which will doubtless command a high price in the London and China markets; but in the present state of European mercantile agency and operation in this country, it would certainly be considered out of the sphere of most, if not all, merchants here to occupy the field which Government has been doing as respects the ryots, involving, as it would do, the maintenance of establishments in the interiors, and for the present, the only support which English merchants can contemplate affording must be limited to the purchase of the cotton when brought here to market, and which, as has just been remarked, they are quite prepared to do.

8. Further referring to para. 12 in your letter, I am instructed to inquire whether the candy named as that for which Government has hitherto guaranteed the price of 55 rupees, be the Surat candy, or if not, what other; and to request on behalf of the Chamber, information as to the cost per candy of bringing this cotton from the place of growth to Bombay, as this latter item must form an important element in any estimate of the price which could be regularly secured to the cultivators, or calculation as to the prudence of such guarantee as Government has hitherto afforded. Otherwise, the Chamber will at all times be happy to advise and co-operate with Government in a matter of which they recognise the importance equally to the interests of commerce and to the public resources.

Bombay Chamber of Commerce,
9 February 1847.

I have, &c.
(signed) *John Connon*, Secretary.

MINUTE by the Honourable the Governor, subscribed to by the Board.

V. 1024. For the disposal of the subject of this letter generally, I beg to refer to my separate minute of this date.

The Collector of Dharwar may be called upon to furnish the information requested in the 8th para.

18 February 1847.

(signed) *G. Clerk*.

(No. 437 of 1847).

From Mr. Chief Secretary *Pringle* to the Collector of Dharwar.

V. 1025. Sir,
In transmitting the accompanying extract (paras. 1 and 8) of a letter from the Secretary to the Chamber of Commerce, dated the 9th instant, I am directed by the Honourable the Governor in Council to request that you will furnish the information required in the latter para.

Bombay Castle, 22 February 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

V. 1026. From Messrs. *Leckie & Co.* to Mr. Chief Secretary *Pringle*.

Sir,
We have the honour to acknowledge receipt of your letter of 28th ultimo, communicating the result of the endeavours used by Government during the past three years towards introducing an improved system of cultivating and cleaning cotton in the Southern Maharashtra country, and we beg that you will do us the favour to convey to the Honourable the Governor in Council our best thanks for these interesting particulars, together with the assurance of our earnest desire to afford every assistance in our power towards accomplishing the important objects for which these experiments were entered upon.

We

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 855

III.
Bombay.

We observe that the quantity of cotton produced from New Orleans seed during the season 1845-46, and cleaned with the saw-gins provided by Government, is estimated at 1,200 to 1,500 bales, and we gather from the 5th paragraph of your letter, that it is the intention of Government, under instructions from the Honourable the Court of Directors, to ship the whole of this quantity to England.

We, however, take the liberty to suggest whether, as a means of establishing the fact of the superiority of this cotton over the ordinary native produce, it would not be desirable to dispose of a portion of the quantity on hand (say from 200 to 500 bales) by public auction in Bombay. Should the result of such sale be satisfactory (as we confidently anticipate would be the case), the attention of the whole mercantile community (European and native), would be attracted to this cotton, and the best chance of providing a regular market for it be thereby afforded; for if it be proved to be an article readily saleable in Bombay at high prices relatively with other cotton, there will hereafter be no lack of native purchasers willing to take it from the ryuts at the places of growth, and transmit it to this market for sale. Whereas the sale of the whole quantity in England, however advantageous, will not present so immediate and tangible a result to the parties primarily interested, viz: the cultivators and cotton dealers.

We fear that it will not be in the power of the English merchants of Bombay to take the place of Government as direct purchasers from the ryuts, owing to the difficulty of procuring trustworthy agents on the spot; and also to the circumstance of such operations being foreign to the usual scope of English mercantile business. But we feel confident that their anxiety to improve and benefit the cotton trade will induce them to afford all the assistance in their power towards encouraging the production of an improved article by giving it a marked preference in their purchases whenever such may be offered for sale in Bombay.

We have, &c.
(signed) *Leckie & Co.*

To *R. K. Pringle*, Esq., Chief Secretary.

Sir,

HAVING been informed that Government have a large quantity of cotton grown at Dhawar from New Orleans seed, at present in store at Bombay, we beg leave to inquire whether they are inclined to dispose by sale of the whole or of a portion of it, if any price has been fixed for the same, or whether they are open to an offer.

V. 1027.

Bombay,
3 February 1847.

We have, &c.
(signed) *Higginson & Cardwell.*

MINUTE by the Honourable the Governor.

V. 1028.

I CANNOT but admit the great weight of the arguments used by the Chamber of Commerce and Messrs. Leckie & Co., in favour of the sale of a portion of the ginned cotton here, and which are quite in accordance with the strong representations we have so frequently received from the local authorities, and with the recorded opinions of the Board. The importance of resorting to this course, with a view to the success of the measures which have been adopted for improving the quality of the cotton, and demonstrating their practical results to the people of the country generally, is so great that I am inclined to think if it had been fully stated to the Honourable Court at the time they issued the instructions under which we thought it would be necessary to send the whole of the cotton to England, it would have led to a modification of those instructions.

I am therefore strongly disposed to reconsider our former resolutions on this point, and if my colleagues concur with me in this view, I would propose to modify it so far as to permit 500 bales of the cotton to be disposed of by public auction here, under the condition that the purchasers should export it to Liverpool, which, while it would have the effect of establishing the character of the cotton in that market, with which the growers and dealers in the interior are immediately connected, would not interfere with the Honourable Court's object of making it generally known in the home market, to which it would be ultimately conveyed. The remainder of the cotton might be consigned direct to England on account of Government, as was originally proposed.

It would be well also in reporting on the subject, to bring strongly to the notice of the Honourable Court our sense of the advantages attending this mode of disposing of the cotton, in order that, if they think fit, greater latitude may be allowed us to resort to it in the disposal of that which may be hereafter purchased on account of Government in the course of these experiments, when we consider it the most advantageous plan.

(signed) *G. R. Clerk.*

18 February 1847.

III.
Bombay.

MINUTE by the Honourable Mr. Reid.

V. 1029.

I CONCUR in the view taken by the Honourable the President. I have always thought that the surest means of encouraging the cotton experiments are to let the ryots know the price which the cotton experimented on will produce in the only market with which they are acquainted, that of Bombay. And it has been only in consequence of the positive injunction of the Honourable Court to send such cotton to England in quantities greater than we have hitherto been able to supply, that sales at the Presidency have not long since been adopted. I trust the Honourable Court, when our present measure is reported to them, will see the expediency of such deviation from their instructions.

(signed) L. R. Reid.

19 February 1847.

MINUTE by the Honourable Mr. Willoughby.

V. 1030.

THE Honourable President's proposition is in accordance with the opinion I have recorded in former Minutes, and I think, under the circumstances of the case, the Honourable Court will approve of a deviation from their instructions to the extent suggested, and for which the present very high rate of freight to Liverpool is, I think, an additional reason.

(signed) J. P. Willoughby.

20 February 1847.

(No. 435 of 1847.)

From Mr. Chief Secretary Pringle to the Officiating Collector of Customs.

V. 1031.

Sir,
WITH reference to my letters quoted in the margin,* I am directed to inform you that, in consequence of the urgent representations of the mercantile community, and of the officers in the interior, as to the great advantage which would attend the sale in this market of a portion of the cotton which it was intended to consign to Liverpool, from the greater prospects which such a course offers of making its marketable value soon and generally known to the growers and dealers in the interior, the Honourable the Governor in Council has determined so far to modify his former resolution on the subject as to permit 500 bales of the size usually sent from this port to be disposed of here by public auction, on the condition that they shall eventually be exported by the purchasers to Liverpool.

2. It would be desirable that the cotton to be so disposed of should, if circumstances permitted, be composed of equal proportions of Dharwar and Candesh ginned cotton, and of the foreign and indigenous varieties, and that the lots should be so distributed as would best test their respective values, but as Government is not aware of the total quantity you may have now on hand, or be in immediate expectation of receiving from the above collectorates, or of the proportions of each kind of cotton of which it is composed, you are requested to submit an early report on these points.

3. In order to obtain the full advantage from this measure, you will be pleased to give timely notice of the particulars of the proposed sale, both in the English and native newspapers, as soon as you receive final instructions in regard to its details.

Bombay Castle,
22 February 1847.

I have, &c.
(signed) R. K. Pringle,
Chief Secretary.

EXTRACT Proceedings of Government in the Territorial Department, Revenue, dated 10 March 1847.—V. 1324 to 27.

(No. 45 of 1847.)

From the Acting Collector of Customs, Bombay, to Mr. Chief Secretary Pringle.

V. 1324:

Sir,
WITH reference to para. 2d of your letter, No. 435, dated 22d instant, I beg leave to forward a memorandum of the quantity of each description of cotton on hand, and to observe that the consignments expected to arrive from Compta and Khandeish, as stated in Mr.

* No. 3928, dated 19th November 1846. No. 62, dated 9th January 1847. No. 299, dated 28th January 1847. No. 362, dated 10th February 1847.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 857

Mr. Glass's letters, quoted in the margin,* having subsequently been received, I am not aware whether any more cotton is about to be despatched from those collectorates.

III.
Bombay.

Bombay Custom House,
24 February 1847.

I have, &c.
(signed) R. Spooner,
Acting Collector of Customs.

MEMORANDUM showing the quantity of each Description of Cotton in charge of this Department.

No. of Bales of the Size usually sent from Bombay.	DESCRIPTION OF COTTON.	Quantity in Lbs.	REMARKS.
14	New Orleans Cotton, from Naginhal farm.	4,579	Received from the Collector of Belgaum in 40 packages.
12	Broach Cotton, from Naginhal farm.	4,045	Received from the Collector of Belgaum in 33 packages.
125	Candeish Cotton, from Dhurumgaum factory.	41,671	Received from the Collector of Candeish in 169 and 180 packages, and stated to have been cleaned upon the Government saw-gins.
42	Candeish Cotton from Julgaum factory.	14,095	Received from the Collector of Candeish, in 134 packages, and cleaned as above stated.
1,220	Dharwar Cotton.	4,11,040	Received in several consignments from Compta in 3,690 packages.
1,413	Bales.	4,75,430	Lbs.

(Errors excepted.)

Bombay Custom House,
24 February 1847.

(signed) R. Spooner,
Acting Collector of Customs.

(No. 564 of 1847.)

From Mr. Chief Secretary *Pringle* to the Officer in charge of the Office of Collector of Customs at the Presidency.

Sir,

I AM directed by the Honourable the Governor in Council to acknowledge the receipt of your letter, dated the 24th ultimo, No. 46, transmitting a memorandum of the quantity of Government cotton which you now have on hand; and to acquaint you that the 500 bales of cotton which he has been determined to sell here in the manner indicated in my letter, No. 435, dated the 22d ultimo, should consist of the whole of the Belgaum, Khandeish, and Broach produce enumerated in your memorandum, and of as much of the Dharwar produce as may be required to make up the full number of 500 bales.

V. 1325.

2d. You will now be pleased to give effect without delay to the instructions which have been already communicated to you on this subject in my letter above quoted.

Bombay Castle,
5 March 1847.

I have, &c.
(signed) R. K. Pringle,
Chief Secretary.

(No. 565 of 1847.)

From Mr. Chief Secretary *Pringle* to the Secretary to the Chamber of Commerce.

Sir,

I AM directed to acknowledge the receipt of your letter, dated the 9th ultimo, conveying the sentiments of the Chamber of Commerce, on the points noticed in my communication of the 28th January last, No. 288, relative to the introduction of an improved system of cultivating and cleaning cotton in the Southern districts of this Presidency, and to inform you that, under the circumstances stated by the Chamber, and the strong arguments advanced in favour of the sale in this market of a portion of the cotton cleaned by saw-gins under

V 1326.

* Letters dated 8th and 20th January last, Nos. 4 and 13.

III.
Bombay.

under the superintendence of the American planters, the Honourable the Governor in Council has caused the requisite instructions to be issued to the Collector of Customs for selling by public auction (of which timely notice will be given by advertisement in the newspapers) 500 bales of the cotton which he has now on hand, on the understanding that the purchasers are to export the same to Liverpool.

Bombay Castle, 5 March 1847. I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Govt.

(No. 567 of 1847).

From Mr. Chief Secretary *Pringle* to Messrs. *Higginson & Cardwell*.

Gentlemen,

V. 1327.

In acknowledging the receipt of your letter, dated the 3d ultimo, requesting to be informed whether Government will dispose by sale of the whole or a portion of the cotton grown at Dharwar, from New Orleans seed, at present in store in Bombay, I am directed by the Honourable the Governor in Council to inform you that instructions have this day been issued to the Collector of Customs to make arrangements for the sale, by public auction (of which timely notice will be given by advertisement in the newspapers) of 500 bales of the cotton which he has now on hand, on the understanding that the purchasers are to export the same to Liverpool.

Bombay Castle, 5 March 1847. I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Govt.

ЭКСТРАКТ from the Proceedings of Government in the Territorial Department, Revenue, dated 14 April 1847.—V. 2013 & 2014.

(No. 62 of 1847.)

From the Acting Deputy Collector of Customs, Bombay, in Charge, to Mr. Chief Secretary *Pringle*.

Sir,

V. 2013.

WITH reference to your letter (No. 564), dated the 5th instant, I beg leave to report, for the information of the Honourable the Governor in Council, that 500 bales of cotton have, as therein directed, been sold at rates varying from 107 to 132 rupees per Surat candy.

2. I beg leave to annex a memorandum, showing the particulars of the sale in question.

3. The market price of the best cottons on the day in question, was 100 rupees per candy for Surat, 85 rupees for Compta, and 87 rupees for Oomerawuttee.

Bombay Custom House, I have, &c.
25 March 1847. (signed) *H. B. E. Frere*,
Acting Deputy Collector in Charge.

MEMORANDUM showing the Particulars of the Sale of Cotton.

Number of Bales.	Number of Original Packages.	DESCRIPTION OF COTTON.	NAMES of PURCHASERS.	RATE per Surat Candy.
				<i>Rs. a. p.</i>
14	40	New Orleans, from Belgaum, produce of Naginhal farm.	Messrs. Bates & Co. -	120 - -
12	33	Broach cotton, produce of Belgaum Collectorate farm.	Messrs. Lancaster & Co.	125 - -
67	160	Candeish cotton, produce of Dhurrumgam factory.	Messrs. Peel, Cassels & Co.	107 - -
58	180	- Ditto - ditto - ditto - -	Messrs. Lancaster & Co.	124 - -
42	134	Candeish cotton, produce of Julgaum factory.	- Ditto - - -	132 - -
307	928	Dharwar cotton, produce of that collectorate.	Messrs. Higginson & Cardwell.	113 - -

(signed) *H. B. E. Frere*,
Acting Deputy Collector in Charge.

(No. 878 of 1847.)

FROM Mr. Chief Secretary *Pringle* to the Revenue Commissioner, Northern Division.

Sir,

I AM directed by the Honourable the Governor in Council to transmit, for your information, copies of the documents noted in the margin,* on the subject of the sale by public auction at the Presidency of [500] five hundred bales of the cotton raised and cleaned by the saw-gin under the superintendence of the American planters, and to request that you will be pleased to communicate this very satisfactory result to the collectors of Broach and Khandeish, with instructions that the same may be made generally known to the people of those districts.

Bombay Castle,
12 April 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

No. 71 of 1849.—Territorial Department Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WE have the honour to submit, for your Honourable Court's approval, the annexed copies of our proceedings on the subject of a proposal for selling by public auction, at the Presidency, a portion of the cotton intended for consignment to England which has been cleaned by the saw-gin at the experimental establishment at Broach.

Rev. Cons. 1849:
4 April. V. 4070
to 76.
2 May. V. 5517
to 20.
2 May. V. 5768
to 72.

2. The question was first raised by Mr. Landon, the superintendent of cotton experiments at Broach, in a letter dated the 3d March last, in which he informed the collector of his having despatched to Bombay 71 candies and 70 lbs. of saw-ginned cotton, and recommended that it should be sold at the Presidency, instead of being consigned to England, as directed by your Honourable Court.

3. Mr. Landon stated that this investment had been ginned by two of the large gins at the Umjud Bagh in the short space of 16 days, being at the rate of nearly 2½ candies per day for each gin, and that he believed this to be "an out-turn which greatly exceeds anything of the kind that has ever before been obtained from a like number of saws in the same time in this country, and which proves the immense superiority of the large power gins when properly and efficiently worked."

He also intimated that he hoped with the aid of these two gins, and some others at Surat, to be able to supply 300 candies more cotton in time for shipment to Bombay before the commencement of the monsoon, and that he was the more desirous of having the first investment sold in Bombay, "from the circumstance that so long a period must elapse before the result of a consignment to England can be ascertained, as to render the returns when received of but little value as a guide to parties interested, in consequence of the varying state of the markets."

4. In submitting Mr. Landon's proposition for our favourable consideration, Mr. Shaw, the Revenue Commissioner, Northern Division, stated that, in addition to the reasons urged by that gentleman for the sale of this cotton in Bombay, he considered it desirable "that all such investments should be sold by auction at the Presidency, as it places the real value of the cotton prominently before the mercantile community, and removes the doubt which natives are apt to form of an exaggerated estimate having been placed on it."

5. On

* Extract para. of a letter to the Officiating Collector of Customs, No. 564, dated 5th March 1847. Letter from ditto, No. 46, dated 24th February 1847, with accompaniment. Letter to ditto, No. 564, dated 5th March 1847. Letter from ditto, No. 62, dated 25th March 1847, with accompaniment.

III.
Bombay.

5. On a consideration of the arguments adduced on this occasion in support of the above proposition, we came to the decision that it was not advisable for us to authorise any departure from your Honourable Court's instructions to send home annually a certain quantity of saw-ginned cotton, and that even were it deemed advisable to do so, this could not be done till after the annual consignment required by your Honourable Court had been provided for.

6. We, moreover, informed Mr. Shaw that we deemed it questionable whether the real value of the cotton would be so well tested by the sale of a small consignment in Bombay as it would be by the price which the manufacturers at home would give for it, as, even if disposed of here, it would be consigned for eventual sale to England, and the value put on it in the Bombay market might not be upheld by the rates realised at home.

7. With a subsequent letter, dated the 18th ultimo, No. 704, Mr. Shaw submitted two further communications from the collector of Broach and Mr. Landon, in which those officers expressed themselves as being still strongly of opinion that it would be to the advantage of the experiment to sell a portion of the Broach consignment at the Presidency with the view of influencing the natives in favour of the objects of the experiments.

8. We are of opinion that there is much weight in the arguments brought forward by these officers in favour of this proposition, and, although we are not warranted in permitting a departure from your Honourable Court's instructions, except on the strongest grounds being shown, we are still disposed to think that the reasons assigned in this case will be considered by you sufficient to warrant a deviation from your orders so far as to admit of our authorising a small portion of this cotton being disposed of in this country.

9. We have accordingly instructed the collector of customs to sell by public auction in Bombay (100) one hundred candies of the cotton received from Broach, on the understanding that it shall be consigned to England, previous notice of the sale being given to the mercantile community. Mr. Young has been directed to report the result of the sale to Government, and to arrange, if possible, with the purchasers that the final result of the consignment to England may be communicated to us.

10. We shall keep your Honourable Court duly advised of our further proceedings in connexion with this subject.

We have, &c.
(signed) *J. P. Willoughby.*
D. A. Blane.

Bombay Castle, 11 May 1849.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 4 April 1849.—V. 4070 to 76.

(No. 473 of 1849.)

From the Revenue Commissioner, N. D., to Mr. Acting Secretary *Courtney*.

V. 4070.

SUBMITTED for the favourable consideration of the Right Honourable the Governor in Council, recommending that the present investment amounting to 71 candies and 70 lbs. be advertised for sale in the local newspapers, and put up to auction at the Presidency Custom House.

2. As Mr. Landon mentions, in the 4th para. of his letter, the hope of being able to supply 300 candies more of the same cotton, this amount may either be sold or shipped to England, as the outturn of the present sale might render advisable, but in addition to the strong reasons mentioned by Mr. Landon in his concluding para. of his letter, it is desirable that all such investments should be sold by auction at the Presidency, as it places the real value of the cotton prominently before the mercantile community; and removes the doubt which natives are apt to form of an exaggerated estimate having been placed on it.

(signed) *A. N. Shaw,*
Revenue Commissioner, Northern Division.
Revenue Commissioner's Camp,
Danna Districts, Bandora,
9th March 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 861

(No. 83 of 1849.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to transmit in original a letter of this day's date received from Mr. Landon, Superintendent of the Broach cotton experiments, and to recommend for the reasons assigned by him, that the consignment of ginned cotton, amounting to 71 candies, 70 lbs., lately forwarded by him to the care of the collector of customs at the Presidency, be made over to the President of the Chamber of Commerce, for disposal by sale in the Bombay market.

Broach Collector's Office,
3d March 1849.

I have, &c.
(signed) J. M. Davis,
Collector.

III.
Bombay.

V. 4071.

(No. 42 of 1849.)

To J. M. Davis, Esq., Collector of Broach.

Sir,

WITH reference to the 1st para. of Government letter, No. 7532 of the 5th Decēber last, to the address of the Revenue Commissioner, N. D, I have the honour to inform you that a part of the cotton therein alluded to was despatched from Broach to the collector of customs at Bombay, on the 26th ultimo.

2. It consists of 138 bales, containing 71 candies and 70 lbs., and was ginned by two of the large gins, at Umjud Bagh, in 16 days, being at the rate of nearly $2\frac{1}{2}$ candies per day for each gin.

3. This, I believe, is an outturn which greatly exceeds anything of the kind that has ever before been obtained from a like number of saws in the same time in this country, and which proves the immense superiority of the large power gins when properly and efficiently worked.

4. As I hope to be able to supply 300 candies more with these two gins and those at Surat, in time for shipment to Bombay before the commencement of the monsoon, and having kept a separate account of the entire cost of this lot, and under the impression that it might serve a useful purpose to have it sold in Bombay, and a complete statement of the pecuniary result made out for the information of parties engaged in cleaning cotton in the native mode; I would respectfully suggest that this shipment be consigned to one of the principal firms at the Presidency, with instructions to sell it on commission in the same manner as if it were a private transaction.

5. Should it be the pleasure of the Right Honourable the Governor in Council to allow it to take the course here suggested, the object in view would perhaps be best attained by placing it in the hands of the President of the Chamber of Commerce, whose position as the head of that institution would enable him with the greatest facility to bring it to the notice of both English and China buyers.

6. I would remark that this cotton is the produce of the ordinary kupas of the district; it was purchased at the current bazaar rates, and cost in the aggregate rupees four thousand nine hundred and twenty, anna one, and pies eleven (*Rs.* 4920. 1. 11.)

7. The expenses of the experimental establishment at Broach for the 16 days during which this cotton was prepared, for every object whatsoever, exclusive of the superintendent's and engineer's salaries, were rupees two hundred and ninety-eight, annas three, and pies seven (*Rs.* 298. 3. 7.), which, added to the cost of the kupas, and the packing and shipping charges, gives rupees five thousand five hundred and ninety-six, annas six, and pies nine (*Rs.* 5,596. 6. 9.) as the cost of the 71 candies and 70 lbs., laid down in Bombay, where, according to the present prices, it will, I think, sell readily for 85 to 86 rupees per candy.

8. Should it sell in Bombay for 85 rupees per candy, the pecuniary result of the investment will be nearly as follows, viz:

	<i>Rs.</i>	<i>a.</i>	<i>p.</i>
Proceeds of 71 candies at 85 rupees - - - - -	6,035	-	-
Net proceeds of 167 $\frac{1}{2}$ culsees of seeds sold - - - - -	879	6	-
	<i>Rs.</i> 6,914	6	-

Cost and Charges, viz. :—

169 $\frac{1}{2}$ bhars kupas - - - - -	<i>Rs.</i> 4,920	1	11
Gunnies, ropes, twine, &c., and packing 138 bales - - - - -	205	9	3
Shipping charges and freight to Bombay - - - - -	172	8	-
Total proportion of expenses of the establishment for 16 days, exclusive only of European salaries - - - - -	298	3	7
	<i>Rs.</i> 5,596	6	9
Showing a profit of rupees - - - - -	<i>Rs.</i> 1,317	15	3

III,
Bombay.

On the investment, less the commissions on the sale. This is a rough sketch of the probable result; but it will, I think, be found to vary but little from an accurate statement which I am prepared to furnish immediately on receipt of the account of sale. I shall endeavour to make the season's operations show an equally favourable average, except in the case of the hand-power gins, which cannot be worked as cheap proportionally as the large ones.

9. In conclusion, I beg to add, that I am the more desirous of having this investment sold in Bombay, from the fact, that so long a period must elapse before the result of a consignment to England can be ascertained, as to render the returns, when received, of but little value as a guide to parties interested, in consequence of the varying state of the markets.

I have, &c.
(signed) *J. Landon*,
Superintendent Cotton Experiments.

Broach, Superintendent's Office,
3 March 1849.

(No. 133 of 1849.)

From the Collector of Customs to Mr. Acting Secretary *Courtney*.

V. 4072.

Sir,
In forwarding the accompanying copy of a letter, No. 39, dated 28th ultimo, from Mr. Landon, Superintending Cotton Experiment at Broach, for the purpose of being laid before the Right honourable the Governor in Council, I have the honour to request the favour of the instructions of Government as to the disposal of the cotton therein alluded to.

I have, &c.
(signed) *H. Young*,
Collector of Customs.

Bombay, Custom House,
5 March 1849.

(No. 39 of 1849.)

To *Henry Young*, Esq., Collector of Customs, Bombay.

V. 4073.

Sir,
I HAVE the honour to forward you herewith a memorandum of 138 bales of ginned cotton, shipped on the 26th instant to your address, per boat "Rampursad," Tindal Heera Doobla.

2. This cotton forms part of the quantity authorised in Government letter, No. 7532 of 1848, to be ginned and shipped to the Presidency out of the current year's crop.

3. As I am desirous of testing the advantage or otherwise of the Bombay market for this kind of cotton, I beg to apprise you that it is my intention to request that Government will be pleased to allow it to be sold at the Presidency. In the meantime, I beg to request the favour of your causing the bales, marked K, Nos. 1 to 32, to be separated from the remainder of the lot, so as to be examined without difficulty in case of need.

4. I also request that you will have the goodness to have it weighed immediately on its arrival, and favour me with an account of the weight.

I have, &c.
(signed) *J. Landon*,
Superintendent Cotton Experiments.

Broach, Superintendent's Office,
28 February 1849.

(No. 40 of 1849.)

MEMORANDUM of 138 bales of saw-ginned cotton, shipped on board the boat "Rampursad," Tindal Heera Doobla, on the 26th February 1849, and consigned to the Collector of Customs at Bombay.

THIRTY-TWO bales, marked K, and numbered 1 to 32:

Gross.	Tare.	Net.
13,684 - - -	448 =	13,241 lbs.

106 bales, Nos. 33 to 138:

43,977 - - -	1,484 =	42,493 lbs.
--------------	---------	-------------

(E. E.)

Broach, 28 February 1849.

(signed) *J. Landon*,
Superintendent Cotton Experiments.

MINUTE by the Honourable Board.

V. 4074.

THE Honourable Court wish the cotton to be sent home for sale on their account, and not disposed of in Bombay, as they consider it desirable that they should for the present have the means of ascertaining the value set on the different descriptions of Indian cotton by the manufacturers at home; and even were it considered advisable so far to depart from their instructions as to sanction the sale of a small portion on their account in Bombay, we could hardly do so till the annual consignment required by the Court had been provided for.

It is moreover, I think, questionable whether the real value of the cotton would be so well tested by the sale of a small consignment in Bombay, as it will be by the price which the manufacturers at home will give for it; as even, if disposed of here, it would be consigned for eventual sale to England, and the value put on it in the Bombay market might not be upheld by the rates realised at home.

The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 863

The Collector of Customs should therefore be requested to procure freight as usual for this cotton to Liverpool, and submit the necessary documents for transmission to the Honourable Court.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

19 March 1849.

(No. 2091 of 1849.)

From Mr. Acting Secretary *Courtney* to the Revenue Commissioner, N. D.

Sir,

I HAVE laid before the Right honourable the Governor in Council your memorandum, No. 473, dated 9th instant, and enclosures, from the Collector and the Superintendent of Cotton Experiments at Broach, recommending that an investment of 71 candies and 70 lbs. of cotton, lately forwarded to the Presidency by Mr. Landon, be put up to auction.

2. The Honourable the Court of Directors, I have been desired to state, wish the cotton to be sent home for sale on their account, and not disposed of in Bombay, as they consider it desirable that they should for the present have the means of ascertaining the value set on the different descriptions of Indian cotton by the manufacturers at home; and even were it considered advisable so far to depart from their instructions as to sanction the sale of a small portion on their account in Bombay, this could hardly be done till the annual consignment required by the Court had been provided for.

3. It is moreover, his Lordship in Council is of opinion, questionable whether the real value of the cotton should be so well tested by the sale of a small consignment in Bombay as it will be by the price which the manufacturers at home will give for it; as even, if disposed of here, it would be consigned for eventual sale to England, and the value put on it in the Bombay market might not be upheld by the rates realised at home.

4. Under these circumstances, the Collector of Customs has been requested to procure freight as usual for this cotton to Liverpool, and submit the necessary documents for transmission to the Honourable Court.

I have, &c.
(signed) *W. Courtney,*
Acting Secretary to Government.

Bombay Castle, 24 March 1849.

(No. 2092 of 1849.)

From Mr. Acting Secretary *Courtney* to the Collector of Customs.

Sir,

IN acknowledging the receipt of your letter, No. 133, dated the 5th instant, requesting instructions as to the disposal of a quantity of cotton sent you by the Superintendent of cotton experiments at Broach, I have been directed by the Right honourable the Governor in Council to request that you will procure freight as usual for this cotton to Liverpool, and submit the necessary documents for transmission to the Honourable the Court of Directors.

I have, &c.
(signed) *W. Courtney,*
Acting Secretary to Government.

Bombay Castle, 24 March 1849.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 2d May 1849.—V. 5517 to 20.

(No. 207 of 1849.)

From the Collector of Customs to Mr. Acting Secretary *Courtney*, dated 10 April 1849.

Sir,

IN forwarding the accompanying copies of letters, as per margin,* I have the honour to request the favour of your obtaining the instructions of Government as to the disposal of the cotton therein referred to.

2. The constant applications with which I am obliged to trouble Government as regards the disposal of cotton consignments, would be avoided if his Lordship in Council would be pleased to grant me power to ship for England all cotton consigned to me for that purpose, reporting and sending up all shipping papers appertaining to such cotton at the completion of each shipment. In special cases, of course, it would be my duty to apply to Government for orders.

I have, &c.
(signed) *H. Young,*
Collector of Customs.

Bombay, Custom House,
10 April 1849.

* 1. From the Collector of Surat, No. 127, dated 31st ultimo. 2. From the Assistant Superintendent of cotton experiments in Khandeish, No. 52, dated 2d instant.

III.
Bombay.

(No. 127 of 1849.)

To *Henry Young*, Esq., Collector of Customs, Bombay.

Sir,

V. 5518.

In reference to the accompanying extract and copy of a letter from Mr. Landon, the Superintendent of Cotton Experiments, I have the honour to apprise you that I have shipped on board the vessel "Hooree Kadri Sowace," Tindal Walla Runchore, owner Bhugwandass Goculdass, through Goolam Ali Dowlut Dulal (41), forty-one bales of cotton, as received from Mr. Landon. Two peons, named in the margin, have been sent in charge of the cotton; and I request the favour of an acknowledgment of the receipt of the above bales in good condition.

1. Abdul Gunny.
2. Kurreemoodeen.

Surat, Collector's Office,
31 March 1849.

I have, &c.
(signed) *E. G. Fawcett*, Collector.

(No. 52 of 1849.)

To the Collector of Customs, Bombay.

Sir,

I beg to advise you of the despatch to Colsett Bunder this day of three hundred and five (305) bags of saw-gin cleaned cotton, as per enclosed invoice,* being the property of Government, and consigned to you, in compliance with instructions conveyed in copy of Government letter, No. 1074, dated 15th March 1846.

2. The bales are numbered from 1 to 305, making an aggregate net weight of 33,183 lbs., comprising as follows:

Indigenous, from 1 to 276, weighing 30,227 lbs.
New Orleans, from 277 to 305, weighing 2,956 lbs.

I have, &c.
(signed) *Thos. Price*,

Assistant Superintendent Cotton Experiment in Charge.

Superintendent's Office, Dhurruangaum,
2 April 1849.

MINUTE by the Honourable Board.

V. 5519.

MR. YOUNG may be granted the authority he applies for; but it will be necessary to inform him of the quantities and varieties of cotton authorised by the Honourable Court to be procured from the several collectorates each season, as any excess will require special instructions.

The cotton referred to in his present communication should be consigned to the Honourable Court, and shipped for Liverpool, as usual

(signed) *Falkland*,
J. P. Willoughby,
D. A. Blane.

17 April 1849.

(No. 2726 of 1849.)

From Mr. Acting Secretary *Courtney* to the Collector of Customs.

Sir,

V. 5520.

I HAVE been directed to acknowledge the receipt of your letter, No. 207, of the 10th instant, with enclosures, and to inform you, that the Right honourable the Governor in Council has been pleased to grant you the authority solicited in your 2d para., as regards the disposal of the cotton consignments which you may receive from the several experimental establishments at this Presidency.

2. I am to acquaint you, that the following supplies of saw-ginned cotton have been authorised by the Honourable the Court of Directors to be procured from the several cotton-growing districts each season for consignment to England: any excess of this quantity will require special instructions for its disposal.

NORTHERN DIVISION.

					Bales, of $\frac{1}{2}$ a Candy each.
Candeish, Indigenous	-	-	-	-	2,000
Broach	"	-	-	-	1,000
					3,000

SOUTHERN

* Third batch of 1848-49, 305 bags.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 865

III.
Bombay.

SOUTHERN DIVISION.				Bales, of		
				$\frac{1}{2}$ a Candy each.		
Dharwar,	New Orleans	-	-	-	1,000	
"	Indigenous	-	-	-	1,000	
					2,000	
Belgaum,	New Orleans	-	-	-	500	
"	Indigenous	-	-	-	500	
					1,000	
TOTAL Bales				-	-	6,000

3. The cotton referred to in your present communication should be consigned to the Honourable Court, and shipped for Liverpool, as usual.

I have, &c.

(signed) *W. Courtney,*

Acting Secretary to Government.

Bombay Castle, 23 April 1849

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 2 May 1849.—V. 5768 to 72.

(No. 704 of 1849).

From the Revenue Commissioner, Northern Division, to Mr. Acting Secretary *Courtney*.

Sir,

WITH reference to the correspondence noted in the margin,* I do myself the honour to submit a further communication on the subject from Mr. Davies, dated 4th instant, No. 140, enclosing a letter from Mr. Landon, of the 30th ultimo, reporting that he has made another consignment of 115 candies 338 lbs. of Broach saw-ginned cotton to the Collector of Customs at the Presidency, and there yet remain about 115 candies more to be shipped from Broach to complete the amount Mr. Landon has been directed to transmit to Bombay, under the instructions of Government, dated 5th December, No. 7532 of 1848.

V. 5768.

2. I very respectfully hope I may be forgiven in again recommending the adoption of Mr. Landon's suggestion, contained in the concluding part of his letter, of selling a portion of this cotton at the Presidency, a measure strongly advocated also by Mr. Davies, the Collector, and that I may be pardoned in mentioning, if the Right honourable the Governor in Council is desirous of furnishing a certain quantity of cotton as a consignment to the Honourable the Court of Directors, I am informed privately by Mr. Channing that the ryots in Belgaum, who have cultivated the New Orleans cotton under his instructions, are experiencing great distress on account of not being able to obtain a market for it, and that he himself is most desirous to be permitted to purchase the whole, or a portion, of their crops for shipment to England.

3. As I feel satisfied in my opinion, from what I saw and heard last year at Manchester, that the New Orleans cotton grown by Mr. Channing will be more esteemed in England than any cotton grown in Broach from native seed, I very respectfully venture to solicit that the wishes both of Messrs. Channing and Landon may be complied with, viz., that a portion of the Broach cotton be sold at the Presidency, and that Mr. Channing may be allowed to furnish the required amount of cotton to complete the investment to the Honourable the Court of Directors, and that, if this proposition is permitted to have any weight with Government, Mr. Channing be further directed to transmit, before the close of the season, which is fast approaching, as much of the consignment in cotton, the growth of the present year, as he can furnish.

I have, &c.

(signed) *A. N. Shaw,*

Revenue Commissioner, Northern Division.

Revenue Commissioner's Camp,
Allibaugh, 11 April 1849.

(No. 140 of 1849.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

Sir,

IN continuation of my letter, No. 88 of the 3d ultimo, I have the honour to forward in original a letter, No. 60 of the 30th ultimo, being a further advice by the Superintendent of cotton experiments of a consignment to the care of the Collector of Customs at the Presidency of 115 candies 338 lbs. of Broach ginned cotton on Government account.

V. 5769.

2. The

* Revenue Commissioner's endorsement to Government, No. 473, of 9th March 1849. Government letter, No. 2091, of 24th March 1849.

III.
Bombay.

2. The recommendation contained in the concluding part of Mr. Landon's letter was penned prior to his being made aware of the decision of Government upon a similar recommendation regarding the last batch, expressed in its letter No. 2091 of the 24th ultimo, forwarded with your endorsement No. 585 of the 27th idem.

3. In the face of those instructions, I hope I shall not incur the charge of presumption in once more respectfully advocating the adoption of Mr. Landon's suggestion. It is indeed but too obvious, as remarked by that gentleman, that the result alone of local sales of ginned cotton is likely to influence those amongst whom it is desired to render popular the use of the American system of ginning. Mr. Landon has with truth remarked, that hitherto the results of sales made in England have become known in India only after the lapse of from one to three years; and that the knowledge thus tardily disseminated is, for all practical and stimulative purposes, valueless as a guide to the local dealers in the current operations. As an instance in point, I may venture to remind you, that the results of last season's ginning have not yet been made known at Broach; and as the present export season is fast drawing to a close, it is more than probable that the success, or other result, of the operations of the spring of 1848 will only be understood in time for the crop of 1850, a whole season having intermediately passed away unenlightened by the experience of its predecessor.

4. With the greatest deference, I would submit that the comparative merits of ginned over "churka" cleaned cotton, are already sufficiently known and appreciated in the home market, nor do the intelligent English brokers stand in need of the untiring application of precept and example required by the prejudiced natives of India to induce them to adopt improved principles of commerce. If it is deemed to be an object to establish a standard of value for Indian ginned cotton in the English market, its sale at Bombay to English buyers is in itself an attainment of that end, while the immediate knowledge thus gained to the local merchants must be of the greatest practical conduciveness towards accomplishing an object for which a large pecuniary sacrifice has been thought to be ultimately immaterial.

5. With this view, but with many apologies for my boldness in suggesting it, I would humbly recommend a re-consideration of the question.

I have, &c.
(signed) J. M. Davies,
Collector.

Broach, Collector's Camp, Mulligaum,
4 April 1849.

(No. 60 of 1849.)

To J. M. Davies, Esq, Collector of Broach.

Sir,

WITH reference to my letter No. 42, of the 3d instant, I have the honour to report, for the information of the Right honourable the Governor in Council, the following further shipments of cotton to the collector of customs at the Presidency, on account of the 300 candies authorised to be supplied out of the current year's crop; viz.:

200 bales cleaned by two power gins, at Umjud Bagh, in 22 days,	Candies. lbs.
weighing net - - - - -	97 454
1 bale cleaned by hand-power gins, at Ahmode, weighing net -	0 352
41 bales cleaned by hand-power gins, at Surat, weighing net -	17 316
TOTAL - - -	115 338

2. There yet remains, I have the honour to state, about 115 candies to complete the 300 authorised, which I am now enabled to say will, if no unforeseen accident occurs, be cleaned by the two gins at work at Umjud Bagh by the 24th of April, after which, these gins will be continued in operation on account of private parties.

3. I have also the honour to state, that I have hired the four gins at Surat for the remainder of the season to a native dealer, who is to work them himself, and pay at the rate of one rupee per diem for the use of each gin. This arrangement I consider a favourable one, both for Government and for the interest of the experiments in that zillah, as, should this party succeed in working them profitably, it is to be hoped it will be the means of inducing others to follow his example hereafter.

4. I regret to have to report, that, in consequence of the difficulty of procuring hands to work them properly, and from other causes, I have been unable to get the gins at Ahmode and Jumbooseer worked in a manner that would be advantageous to the interest of Government, or at all likely to bring them into favourable notice with the local cotton cleaners; I might, perhaps, have been able to work them with about the same effect as last year; but a reference to the table accompanying my letter No. 91, of the 31st October last, exhibiting the result of last year's operations at both these stations, will at once show that that effect was only to entail a useless expense upon Government, and to cause the machines to appear as unsuccessful competitors of the churka, as regards both cost and quantity of work done. Under these circumstances, I have deemed it advisable to allow them to remain idle for the present season, rather than have them only nominally worked.

5. I avail

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 867

III.
Bombay;

5. I avail myself of this occasion to again respectfully represent to Government the very great importance of disposing of the experimental cotton at the Presidency, instead of shipping it to England, as I find one of the prominent objections brought forward by the native dealers to the adoption of the saw-gin, is the want of a ready home market for ginned cotton. It is vain to represent to them the handsome profits realised for that kind of cotton in England; they say, and truly, that all their operations have reference to, and are controlled by, the Bombay market; and if it can be shown to them that ginned cotton can be furnished at a less cost, and will find a ready sale there, at better prices than the native cleaned, they will give the gins a trial. On referring to the many English sales of Government cotton distributed over the records of this department, I observe they bear the date from one to three years subsequent to the shipments of which they are the results, and can therefore have no value whatever, except as records of the state of the Liverpool and London markets in times past; whereas, were all the experimental cotton to be immediately sold on its arrival at Bombay, and the result of the sales at once communicated to the native dealers in the cotton districts, for comparison with the prices obtained for that cleaned in the native mode, it would, in my humble opinion, prove the most eloquent and influential advocate the gins have ever had.

6. This course would likewise enable Government, by a comparison of the cost of cleaning, &c., at the different establishments in the Presidency, to ascertain in whose hands the experiments were most efficiently and economically conducted.

I have, &c.
(signed) J. Landon,
Superintendent Cotton Experiments.

Broach, Superintendent's Office,
30 March 1849.

MINUTE by the Honourable Board.

THE quantity of cotton required from Broach for transmission to Liverpool was stated in the Government letter to the Revenue Commissioner, Northern Division, to be 300 candies, or 600 bales.

V. 5770.

The quantity supplied up to the present time is—

	Candies.	lbs.
As per Revenue Commissioner's memorandum, No. 473 of 9 March (being 138 bales) - - - - -	71	70
Ditto - - ditto - - letter No. 704 of 11 April - - -	97	806
	169	6
Cotton cleaned at Surat, as per Mr. Landon's letter, appended to that of the Revenue Commissioner last quoted - - -	17	316
TOTAL - - -	186	322

leaving somewhat less than 114 candies to be supplied of the quantity ordered to be purchased this season: this is very nearly the same as the amount stated in the Revenue Commissioner's letter of 4th April, para. 1.

Mr. Landon, the collector of Broach, and the Revenue Commissioner, are still very strongly of opinion that it would be to the advantage of the experiment to sell a portion of the consignment at the Presidency, with the view apparently of influencing the natives in favour of the objects of the experiments established by Government.

There is, I am free to admit, much weight in the arguments adduced by those officers in favour of their proposition: at the same time we are, to a certain extent, bound to carry out the instructions of the Honourable Court, which are to consign the cotton to them, and we should not permit a departure from them, unless on the strongest grounds.

I am, however, disposed to think that the reasons assigned in this case will be considered by the home authorities sufficient to warrant a deviation from their orders, so far as to admit of our authorising a small portion of this cotton to be disposed of in this country; and I think, therefore, we may sanction 100 candies being sold by public auction in Bombay: previous notice should, of course, be given to the mercantile community, and it should be arranged, if possible, that the final results of the consignment to England may be communicated to Government.

Whatever may be received from Broach beyond the above should be shipped for Liverpool, as usual.

Any proposition for the purchase of cotton at Belgaum in excess of the regulated consignment for the season, can be considered, if brought forward by the local authorities; in the meantime an extract, para. 2 of Mr. Shaw's letter, may be sent for the information and remarks of the Revenue Commissioner, Southern Division.

24 April 1849.

(signed) Falkland.
J. P. Willoughby.
D. A. Blane.

III.
Bombay.

(No. 2841 of 1849.)

From Mr. Acting Secretary *Courtney* to the Revenue Commissioner, Northern Division.

Sir,

V. 5771.

I HAVE been directed by the Right honourable the Governor in Council to acknowledge the receipt of your letter, No. 704, dated the 11th instant, submitting two communications from the Collector of Broach and the Superintendent of the cotton experiments in that district on the subject of the supply of saw-ginned cotton, which has been transmitted this season to the Presidency for consignment to England, as directed by the Honourable the Court of Directors.

2. From this correspondence it appears that Mr. Landon, the collector, and yourself are still very strongly of opinion that it would be to the advantage of the experiment to sell a portion of the consignment at the Presidency, with the view apparently of influencing the natives in favour of the objects of the experiments established by Government.

3. His Lordship in Council admits that there is much weight in the arguments adduced by those officers and yourself in favour of this proposition; at the same time Government are to a certain extent bound to carry out the instructions of the Honourable Court, which are to consign the cotton to them, and it should not permit a departure from them, unless on the strongest ground.

4. The Governor in Council is, however, disposed to think that the reasons assigned in this case will be considered by the home authorities sufficient to warrant a deviation from their orders, so far as to admit of its authorising a small portion of this cotton to be disposed of in this country. Instructions have accordingly been this day sent to the Collector of Customs to sell (100) one hundred candies by public auction in Bombay, previous notice being, of course, given of this sale to the mercantile community; and the Collector has been requested to arrange, if possible, that the final result of the consignment to England may be communicated to Government.

5. Whatever quantity of cotton may be received from Broach beyond the above, will be shipped for Liverpool, as usual.

6. Referring to your 2d para., I am to state, that any proposition for the purchase of cotton at Broach in excess of the regulated consignment for the season, will be considered, if brought forward by the local authorities; in the meantime an extract of your letter has been sent for the information and remarks of the Revenue Commissioner, Southern Division.

Bombay Castle, 28 April 1849.

I have, &c.
(signed) *W. Courtney*,
Acting Secretary to Government.

(No. 2843 of 1849.)

From Mr. Acting Secretary *Courtney* to the Collector of Customs, Bombay.

Sir,

V. 5772.

WITH reference to my letter dated the 23d instant, No. 2726, I have been directed to transmit, for your information, the annexed extract, paras. 1 to 5, of a communication this day addressed to the Revenue Commissioner, Northern Division, No. 2841, and to inform you, that the Right honourable the Governor in Council has been pleased, for the reasons therein stated, to authorise your selling by public auction at the Presidency (100) one hundred candies of the saw-ginned cotton received from the experimental establishment at Broach, on the understanding that it shall be consigned to England.

2. The result of the sale of this cotton in Bombay should be reported to Government: you will, of course, cause previous notice to be given to the mercantile community; and his Lordship in Council desires that you will arrange, if possible, with the purchasers, that the final result of the consignment to England may be communicated to Government.

Bombay Castle, 28 April 1849.

I have, &c.
(signed) *W. Courtney*,
Acting Secretary to Government.

EXTRACT of a Letter from the Court of Directors to the Government of Bombay, dated 12 September (No. 16) 1849.

Para. 5. Under the circumstances represented in your letter of the 11th May last (No. 71), we approve of your having directed 100 candies of Broach cotton, cleaned by the saw-gin, to be sold by auction at Bombay, with the view of ascertaining the relative value in the local market of cotton so cleaned, and in the hope of influencing the native growers and dealers in favour of that mode of preparing it. You will, however, continue to forward to us the annual consignment, agreeably to our former orders, as the point which it is most necessary to ascertain is the value set on the different descriptions of Indian cotton by the manufacturers in this country, a correct knowledge of which is of the greatest importance as regards the future conduct of our experimental operations.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 869

(No. 96 of 1849.)—Territorial Department, Revenue.

III.
Bombay.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

In continuation of our despatch No. 71, dated the 11th ultimo, we do ourselves the honour to submit, for the information of your Honourable Court, the accompanying copy of a letter from the Collector of Customs at this Presidency, No. 340 of the 4th instant, and of its enclosed accounts sale of 192 bales of Broach cotton, weighing 99 candies, 6339 decs., which were sold by public auction on the 19th ultimo. Revenue Cons. June 1849. V. 7916 to 18.

2. Your Honourable Court will observe that the net amount realised is (after deducting sundry charges incurred at the Presidency) Rs. 9,291. 10. 4.

Bombay Castle, 23 June 1849.

We have, &c.
(signed) J. P. Willoughby.
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 18 June 1849.—V. 7915 to 7918.

(No. 340 of 1849.)

From the Collector of Customs to Mr. Chief Secretary Malet.

Sir,

With reference to Mr. Acting Secretary Courtney's letter, No. 2843, dated 28th April last, I have the honour to submit, for the purpose of being laid before the Right Honourable the Governor in Council, an account sale of 192 bales Broach cotton, weighing 99 candies 6339 decimals, which were sold by auction on the 19th ultimo, and knocked down to Messrs. Leckie & Co., at the rate of 94 rupees per candy of 784 lbs. The net amount realised is (after deducting sundry charges incurred in Bombay, as per margin*) Rs. 9,291. 10. 4., which I have placed to the credit of the Collector of Broach in my books, and advised him accordingly. V. 7915.

2. Arrangements have been made with the purchasers that the final result of the consignment to England should be communicated to this department, for the information of Government.

Bombay Custom House,
4 June 1849.

I have, &c.
(signed) H. Young,
Collector of Customs.

ACCOUNT OF SALE of 192 Bales of BROACH COTTON sold this day, the 19th of May 1849, on Account of Government. V. 7916.

DATE.	LOT.	PURCHASERS.	COTTON.	PRICE SOLD FOR.	AMOUNT, RUPEES.
1849: 19 May	No. 1	Messrs. Leckie & Co.	192 bales of saw-ginned cotton, received from the experimental establishment at Broach, weighing, gross cwt. - - 726 2 9 Deduct tare, at 17 lbs. per bale 29 0 16 Net cwt. - - 697 1 21 7 cwt., per Surat candy, are - 99 candies, 6339 dec. - -	At 94 rupees per candy.	Rs. a. p. 9,365 9 5

* 99 Candies, 6339 Decimals, at 94 rupees per Candy - 9,365 9 5
Deduct charges - 73 15 1
Net amount realised - - - Rs. 9,291 10 4

III.
Bombay.

	Rs.	a.	p.
<i>N.B.</i> —Amount paid to Bhimjee Girdhur, for landing the above bales, weighing and stowing them in the godown, and again removing from the godown, weighing and delivering to the purchasers, as per bill	37	5	9
Ditto to crier, for attending the auction and giving notice of the sale in the bazars, as per bill	5	—	—
Ditto to the "Bombay Times" Editor for advertising the above sale, as per bill	5	12	—
Ditto to "Telegraph and Courier's" ditto for ditto, as per bill	6	6	—
Ditto to "Gentleman's Gazette" ditto for ditto, as per bill	7	6	—
Ditto to "Chabook" ditto for ditto, as per bill	3	5	4
Ditto to "Summachar" ditto for ditto, as per bill	4	12	—
Ditto to "Jami Jamshed" ditto for ditto, as per bill	4	—	—
	73	15	1
Amount credited to the Collector of Broach	9,291	10	4
	Amount	Rs.	9,365 9 5

(Errors excepted.)

Bombay Custom House,
19 May 1849.

(signed) *H. Young,*
Collector of Customs.

MINUTE by the Honourable Board.

V. 7917. THE results of this sale should be communicated to the Revenue Commissioner, Northern Division. The Honourable Court should also be informed.

11 June 1849.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

(No. 3930 of 1849.)

V. 7918. From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,

WITH reference to para. 4 of Mr. Acting Secretary Courtney's letter to your address, No. 2841, dated the 28th April last, I have been directed by the Right Honourable the Governor in Council to transmit for your information the accompanying copy of a letter from the Collector of Customs at the Presidency, No. 340, of the 4th instant, and of its enclosed account sale of 192 bales of Broach cotton, weighing 99 candies, 6339 decimals, which were sold by public auction on the 19th ultimo.

Bombay Castle,
18 June 1849.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 5 October 1855.—V. 8557 to 8559.

(No. 1344 of 1855.)

V. 8557. From the Officiating Commissioner of Customs, Salt and Opium, to Mr. Officiating Chief Secretary *Young*.

Sir,

I HAVE the honour to report the receipt by this department of three packages of cotton,* consigned by the Collector of Ahmedabad.

2. As Government purchases of cotton have been discontinued, I wrote to Mr. Hadow for information as to why the cotton was sent to this Department, and in what year it was produced, and whether it is American (New Orleans) or native cotton.

3. Mr. Hadow states, that "the cotton has been consigned for transmission to England agreeably to Government instructions, dated 21st March 1851;" and further, "that two Indian maunds and seven and a half seers of the New Orleans cotton is a portion of the purchase affected from the advance sanctioned to be made to the late Mr. Price, in Government

* Three (3) packages of cotton, the produce of the Ahmedabad Collectorate. Indian maunds 14, seers 18½.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 871

ment letter, No. 3233, dated 21st March 1851, and the remainder, the produce of the New Orleans cotton, for the years 1852-53 and 1853-54, purchased on account of Government, as noted in the margin.*

III.
Bombay.

Vide para. 1 of Government Resolution, No. 698, 4 February 1854.

4. The cotton of 1851-52 and 1852-53, is slightly discoloured from age, and that of 1853-54 is in good condition.

5. It would be useless sending such a small quantity to England, and I would beg to recommend that it be disposed of by public auction here, the sale proceeds being credited to the Collector of Ahmedabad.

14 Indian maunds
18½ seers.

6. High prices rule in the market for cotton, at the present time.

Bombay Office of
Commissioner of Customs, Salt and Opium,
12 September 1855.

I have, &c.
(signed) *R. Spooner*,
Officiating Commissioner of Customs,
Salt and Opium.

RESOLUTIONS on a Letter from the Officiating Commissioner of Customs, Salt and Opium, No. 1344, dated 12th September 1855, reporting the Receipt by his Department of Three Packages of Cotton, consigned by the Collector of Ahmedabad, for transmission to England, and recommending that the Cotton be disposed of by Public Auction at the Presidency.

V. 8558.

MR. SPOONER may be authorised to dispose of the cotton received by him, in Bombay, reporting the result of the sale.

2. The resolution quoted by Mr. Spooner has reference to the Southern Mahratta country only.

(No. 4133 of 1855.)

To the Officiating Commissioner of Customs, Salt and Opium, (the Collector of Ahmedabad being informed).

V. 8559.

1 October 1855.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 17 November 1855.—V. 9538 and 9539.

(No. 1599 of 1855.)

From the Officiating Commissioner of Customs, Salt and Opium, to Mr. Officiating Chief Secretary *Young*.

V. 9538.

Sir,

WITH reference to Government Resolution, No. 4133, dated 1st instant, I have the honour to report, for the information of his Lordship in Council, that the cotton therein referred to has been sold, and that the net amount realised is Rs. 140. 8., yielding a profit to Government of rupees twenty-seven, eleven annas, and ten pies (Rs. 27. 11. 10.) as shown in the margin.†

2. I beg

	Indian Maunds.	Seers.
* Portion of the produce of 1851-52	2	7½
Produce of 1852-53	11	15
„ 1853-54	1	11
	14	33½
Deduct deficiency in baling, screwing, &c.	-	15½
Cotton consigned	14	18½

† Three packages of cotton the produce of the Ahmedabad Collectorate.

	Rs.	a.	p.
Actual cost as per invoice received with the Ahmedabad Collector's letter No. 611, 14th August 1855	112	12	2
Net amount realised on sale in Bombay	-	140	8
Net Profit to Government	Rs. 27	11	10

872 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

2. I beg to forward herewith a sale list of the said Cotton (Appendix A.)

3. The amount of rupees one hundred and forty, and eight annas (Rs. 140. 8.) will be credited to the Collector of Ahmedabad.

I have, &c.

Bombay Office of
Commissioner of Customs, Salt and Opium,
29 October 1855.

(signed) *R. Spooner*,
Officiating Commissioner of Customs,
Salt and Opium.

APPENDIX (A).

SALE LIST of Three Bales of AHMEDABAD COTTON, sold by Private Sale on account of Government on
27 October 1855.

1. DATE.	2. LOTS.	3. DESCRIPTION OF COTTON.	4. PURCHASES.	5. WEIGHT.	6. PRICE SOLD FOR.	7. AMOUNT RUPEES.	8. TOTAL AMOUNT.
1855.	Nos.			<i>Cwts. grs. lbs.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
- 27 Oct.	1.	1 Bale of New Orleans ginned cotton.	Bhimjee Gir-dhur.	5 - 4			
	2.	1 Bale of New Orleans ginned cotton.	Bhimjee Gir-dhur.	5 1 -			
	3.	1 Bundle of New Orleans ginned cotton.	Bhimjee Gir-dhur.	1 - -			
		3 Packages.	Total <i>Cwts.</i>	11 1 4			
		Deduct tare at 26 lbs. per each bale, and 8 lbs. for the bundle - -		- 2 4			
			Net <i>Cwts.</i>	10 3 -			
		Or, Candies of 784 lbs.		1420 lbs.	at <i>Rs. 92 per candy.</i>	141 4 7	141 4 7
		Deduct boat, cart, and cooly hire incurred in landing the above bales, weighing and stowing them in the warehouses - - - -					- 12 7
					Net Amount - - - <i>Rs.</i>		140 8 -

<i>N.B.</i> —Actual cost of cotton as per invoice received with the Ahmedabad Collector's letter, No. 611, of 14 August 1855 - - - - -	112 12 2
Amount realised on sale in Bombay - - - - -	140 8 -
Net Profit to Government - - - <i>Rs.</i>	27 11 10

Bombay Custom House, }
29 October 1855.

(signed) *Richard Spooner*,
Officiating Commissioner of Customs, Salt and Opium.

(Nos. 4656 and 4657 of 1855.)

V. 9539. COPIES forwarded to the Collector of Ahmedabad and acting Civil Auditor, for their information.

Bombay Castle,
5 November 1855.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 873

No. 129 of 1849.—Territorial Department, Revenue.

III.
Bombay.

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

Honourable Sirs,

IN fulfilment of the promise made in the 14th para. of our letter, No. 90, dated 20th June last, we now do ourselves the honour to transmit herewith our proceedings* connected with the cessation, as far as Government is concerned, of the experiments for the improvement of the growth of cotton in the Broach Collectorate of this Presidency.

2. Your Honourable Court will perceive, that the question of the abolition of these experiments arose out of a proposition made by the Collector of Khandeish for the extension of Mr. Landon's superintendence to the experiments in that province. The Revenue Commissioner, Northern Division, having been requested to consult the Collector of Broach on this suggestion, submitted a correspondence with that officer, from which it appeared that, although Mr. Landon had not been specially appointed by us, yet, for all practical purposes, he had the entire superintendence of not only the Broach, but the Khandeish establishment also, and was in the receipt of the same salary and allowances as his predecessor, Mr. Simpson, who performed the same duties.

3. Mr. Landon, in reporting in his letter of the 23d March last on the state of the experiments under his superintendence at Broach, stated, that from the 6th February preceding up to that date he had found it extremely difficult, with the utmost personal exertion on his part, to obtain a sufficient quantity of cotton to keep two gins at the Umjud Bagh in constant work. The Collector of Broach, in submitting this letter to the Revenue Commissioner, stated, that Mr. Landon despaired of the hand gins lately made up ever becoming popular in that collectorate, unless some power other than manual labour could be successfully employed in working them; that all attempts to work the gins set up by Mr. Simpson at Jumboosur and Ahmode, as well as the two remaining hand gins at Broach, had been relinquished by Mr. Landon, as either impracticable or unprofitable; and that no native of that district had expressed a wish to possess one of these machines. Mr. Davies further reported, that the united efforts of two former superintendents (Messrs. Mercer and Simpson) to extend ginning on the American principle had entirely failed.

4. It appearing evident from these statements that little success has attended the attempts to introduce the saw-gins into use in the Broach Collectorate, and as past experience has proved that the American varieties of cotton are not adapted to this district, we were of opinion that it would be a waste of public money any longer to continue the expensive experiments in that collectorate; and as the engagement with Mr. Landon was only for one season, which had passed, and Mr. Laidlaw, the engineer's covenant had also expired, we thought this a favourable opportunity for abolishing those situations, and winding up the affairs of the experiment. We therefore requested the Revenue Commissioner to instruct the Collector to close the whole concern on the 31st July last, as proposed by him.

5. We at the same time informed the Revenue Commissioner, that, should Mr. Landon be inclined to undertake to carry on the business on his own account, we had no objection, on his agreeing to keep the gins and buildings in repair, and to feed the cattle, to his being offered the free use of them for six months; after which, he should pay a fair rent for their use; and that in the event of his declining this offer, the same terms might, as recommended by him, be given to any native company willing to keep the gins, machinery, and cattle, in good condition.

6. Mr. Landon, in a letter dated 29th June last, to the address of our Chief Secretary, as also in one which he addressed the Collector of Broach, and a copy of

* Rev. Cons. 1849:—1st March, V. 2768 to 71; 13th June, V. 7426 to 32; 8th August, V. 9250 to 55; 22d August, V. 10,281; 22d August, V. 10,898 to 10,902; 5th September, V. 10,995. Letter from the Accountant-general (No. 79), dated 25th August 1849, with enclosure. Minute by Right Honourable Governor, dated 6th September 1849, subscribed to by the Board. Letter to the Accountant-general (No. 5619), dated 14th September 1849.

III.
Bombay.

of which was submitted to us by the Revenue Commissioner, expressed his willingness to accept of our offer, but requested that the period might be extended to the 30th April 1850. Concurring with the Revenue Commissioners that it would be desirable to allow Mr. Landon the free use of the premises, &c., for the above period, we authorised a compliance with that gentleman's request, on the terms proposed by Mr. Davies in his letters to Mr. Shaw of the 12th and 28th June last, and at the same time authorised that officer to empower the Collector to invite tenders for renting the buildings, &c., for a year, or term of years, from the expiration of the above date.

7. We beg to refer your Honourable Court to the Revenue Commissioners' letter to our Chief Secretary's address, No. 1612, dated 6th ultimo, in which you will perceive he submits certain suggestions in regard to the terms on which the buildings, machinery, and cattle attached to the late cotton experiments at Broach, are to be temporarily transferred to Mr. Landon. In approving of the course therein suggested, we requested the Revenue Commissioner to instruct the Collector to place himself in communication with the Honourable Company's solicitor, with the view of preparing the necessary deed. Mr. Shaw was at the same time informed that it must be clearly understood that no demand for labour, or charge of any kind, on account of any additional saw-gins or machinery of any description which Mr. Landon may choose to erect during the term of his lease, will be admitted by us, and that such additions will become the property of Government on the expiration of the present agreement.

8. We beg to call your attention to a statement forwarded with the proceedings accompanying this letter, which, in accordance with our request, our Accountant-General procured from the Collector of Broach, exhibiting the whole cost of the experiments for the improvement of the growth of cotton in that district, from their commencement in 1840-41 up to their abolition in July last, and to inform you that we have requested Mr. Elliot to prepare and submit to us a similar return for each of the other Government cotton experiments in this Presidency, embracing every item, as far as possible, of disbursements, and of returns, in the shape of profit, and to be accompanied with a general statement for the whole Presidency.

9. Our further proceedings in connexion with this subject will be reported in due course, and we trust that those herein given will meet with your Honourable Court's approval.

Bombay Castle,
17 September 1849.

We have, &c.
(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 1 March 1849.—V. 2768 to 2771.

(No. 321 of 1849.)

From the Revenue Commissioner, Northern Division, to Mr. Acting Secretary *Courtney*.

V. 2768.

Sir,
I HAVE the honour to submit a letter, No. 163 of 9th instant, from the Collector of Khandeish, suggesting that Mr. Landon's superintendence be extended to the establishment at Dburungaum.

2. Mr. Landon's intentions with respect to the project in furtherance of which he was temporarily placed in his present situation have not yet been declared; but in the event of his continuance in the Government employ, I would beg to recommend the Collector's proposal for favourable consideration, as calculated in my opinion to be attended with advantage.

I have, &c.
(signed) *D. A. Blane,*
Revenue Commissioner, N. D.

Revenue Commissioner's Camp, Tannah Districts,
Bhewndy, 17 February 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 875

(No. 163 of 1849.)

To *D. A. Blane*, Esq., Revenue Commissioner, Northern Division.

Sir,

THE Government Cotton Factory at Dhurrumgaum, in this collectorate, having lately received a visit from Mr. Landon, the superintendent of cotton experiments at Broach, for purposes connected with the experiments in that zillah, I availed myself of the opportunity to inquire his opinion of the works at Dhurrumgaum, and the progress of the experiment here, respecting which he appeared to think that as much had been done as under the circumstances could have been expected from the Assistant in charge, and more than had been done by the assistant in charge at Broach in similar time.

2. Notwithstanding the zealous performances of Mr. Price, the Assistant Superintendent in charge of the cotton experiments at Dhurrumgaum, to which I cheerfully bear witness, yet, as neither he nor the Collector have ever served an apprenticeship in an American ginning and baling cotton establishment, where alone a knowledge may be gained of all the economic improvements in this branch of industry, some further advice would at times be useful to them, especially as new buildings and machines are in constant course of erection; therefore, until Government may have a duly qualified cotton superintendent, such as the American cotton planters are, available for residence in this zillah, to superintend the experiments on the spot, I would beg to recommend that Government be pleased to appoint Mr. Landon the Superintendent at Broach, as superintendent also over the cotton experiments in this province, visiting it once or twice in the year, and favouring Mr. Price with such directions as in his greater experience may seem to him necessary. This arrangement, I feel confident, would be productive of benefit to the public service.

I have, &c.

(signed) *Alexander Elphinston*,
Collector.

Khandeish, Collector's Office, Camp Dhurrumgaum,
9 February 1849.

MINUTE by the Honourable Board.

THE Revenue Commissioner should consult the Collector of Broach, under whom Mr. Landon is at present employed, on this proposition.

(signed) *Falkland*,
W. Cotton,
L. R. Reid,
J. P. Willoughby.

19 February 1849.

(No. 1439 of 1849.)

From Mr. Acting Secretary *Courtney* to the Revenue Commissioner, Northern Division.

Sir,

WITH reference to your letter No. 321, dated the 17th instant, submitting one from the Collector of Khandeish, No. 163 of the 9th idem, suggesting that Mr. Landon's superintendence be extended to the establishment at Dhurrumgaum, I have been directed by the Right Honourable the Governor in Council to suggest that you consult the Collector of Broach, under whom that officer is at present employed, on this proposition.

I have, &c.
(signed) *W. Courtney*,
Acting Secretary to Government.

Bombay Castle, 27 February 1849.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 13 June 1849.—V. 7426 to 32.

(No. 959 of 1849.)

From the Revenue Commissioner, Northern Division, to Mr. Acting Secretary *Courtney*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1439, of 27th February last, requesting my predecessor to consult the Collector of Broach, under whom Mr. Landon is at present employed, regarding a proposition from Mr. Elphinston, begging that Mr. Landon may be appointed to superintend the cotton experiments in the Khandeish Collectorate.

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V. 2769.

V. 2770.

V. 2771.

V. 7426.

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2. In reply to this reference, I beg to submit, for the information of the Right Hon. the Governor in Council; the accompanying correspondence as per margin,* with the Collector of Broach, who states it as his opinion, in his letter of the 7th March last, that although Mr. Landon has not been specifically appointed by Government, yet for all practical purposes he has the entire superintendence of the Broach and Khaundeish establishments, and that he is in the enjoyment of the same salary and travelling allowances as his predecessor, Mr. Simpson, who performed these duties.

3. The agitation of the above question has led to the consideration of another point, viz., as to whether the period has not arrived for Government to altogether withdraw, and leave the cotton experiments of Broach to lean on their own resources.

4. When Mr. Landon was appointed at Broach by the Honourable Court of Directors, it was upon an understanding that he was only to be employed by Government for one season. He was then, as will be seen by the accompanying correspondence, to establish himself as an agent in purchasing cotton, and to require no further assistance from Government. Mr. Landon has not, however, adhered to this arrangement, and, upon being required to state his future plans, has intimated that he is not prepared to fulfil his intentions. He writes, "As regards my own plans for the future, I have the honour to state, that it is still my intention to carry my original proposition into effect as soon as I can acquire the local knowledge necessary to enable me to surmount the various obstacles which at present stand in the way of my doing so with a fair chance of success." He then alludes to those difficulties which chiefly consist in the competition to be expected from the natives, and adds, "I have found it extremely difficult, with the utmost personal exertions on my part, to obtain a sufficient quantity to keep two gins at the Umjud Bagh in constant operation, from the 6th February to the present time;" and concludes that he has not ascertained "beyond a doubt whether a supply of water for the engine can be depended upon throughout the dry season," for which reasons he wishes to be continued in the office of superintendent till after the rains of 1850.

Mr. Landon's
letter, No. 49,
dated 23 March
1849, para. 2.

5. The Broach experiments seem signally to have failed in introducing amongst the natives the use of the saw-gin, on which subject Mr. Davies (in para. 3 of letter No. 91) observes, "The united efforts of two former superintendents (Messrs. Mercer and Simpson) to extend ginning on the American principle, have unfortunately resulted in nothing, and the present superintendent, Mr. Landon, appears to entertain no hope of the hand-gins lately made up becoming popular in Broach, unless some power other than manual labour can be successfully employed in working them." This failure is still more deplorably depicted in a subsequent communication (para. 7 of letter No. 173, of 30 April last): "All attempts to work the gins set up by Mr. Simpson at Jumbooseer and Ahmodé, as well as the two remaining hand-gins at Broach, have been relinquished by Mr. Landon, as either impracticable or unprofitable, nor has any native of Broach expressed a wish to possess one of these machines.

6. From the little success that has attended the attempts to introduce the saw-gins into use in the Broach zillah, and, as it has been determined that the American varieties of cotton are not adapted to the climate of this district, I am reluctantly compelled, as I cannot observe the object of continuing so large an expenditure to be lavished on cotton experiments in a district where every attempt to grow exotic cotton and the introduction of the saw-gin amongst the natives have lamentably and utterly failed, to coincide in the recommendation of the adoption of Mr. Davies' suggestions, as contained in the 10th and 11th paras. of his letter, No. 91 of 7th ultimo, viz., that the whole concern be closed on the 31st July next, and the establishment, including the superintendent and the engineer, paid up and discharged. I would, however, suggest, if Mr. Landon is inclined to undertake to carry on the business on his own private account, he may be offered the free use of the gins and buildings and cattle for a limited time, say six months; after which he should be called upon to pay a fair rent for the same, and that, should he refuse this offer, it might be made to any native company upon the same terms, upon their entering upon an agreement to keep the gins, machinery, and cattle in good condition.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

Revenue Commissioner's Camp, Tanna Districts,
Mahableschwur, 16 May 1849.

(No. 91 of 1849.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern Division.

Sir,

V. 7427.

I HAVE the honour to acknowledge the receipt of your endorsement (No. 424 of the 3d instant), on a correspondence between the Collector of Khaundeish, your predecessor, and Government,

* From the Collector, No. 91, of 7th March 1849. To ditto, No. 509, of 14th March 1849. From ditto, No. 173, of 30th April 1849, with accompaniments.

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Government, on the subject of appointing Mr. Landon, superintendent of cotton experiments for Khandeish as well as for Broach, and requiring my opinion thereon.

2. Mr. Landon draws the same salary and travelling allowance as was paid to the late superintendent of experiments for both provinces. Mr. Landon has, moreover, visited Khandeish. It would appear, therefore, that for all practical purposes Mr. Landon has the entire superintendence, though it was not specifically conferred upon him in Government's letter No. 4879, of the 18th August 1848, appointing him to Broach.

3. I am not aware of Government's ulterior views with regard to Mr. Landon; but I am humbly of opinion that the time has arrived when Government may with advantage curtail the heavy monthly expenses (1,200 rupees), twelve hundred and upwards, of the Broach establishment. The united efforts of two former superintendents (Messrs. Mercer and Simpson) to extend ginning on the American principle, have unfortunately resulted in nothing, and the present superintendent, Mr. Landon, appears to entertain no hope of the hand-gins lately made up becoming popular in Broach, unless some power other than manual labour can be successfully employed in working them.

4. We have therefore been fain to fall back upon the power-gins, which have undoubtedly been worked hitherto under Mr. Landon, aided, it is but fair to say, by Mr. Laidlaw's thorough repairs of last rains, with unprecedented success. But, with this exception, nothing has been attained which was not already established in respect of the inherent advantages of power-gins; and it is highly desirable that further experiments should now be thrown upon their own support, and the process of ginning cotton by an expensive Government establishment give way to private enterprise, such as I understand to have been Mr. Landon's purpose in revisiting Broach.

I have, &c.
(signed) J. M. Davies,
Collector.

Collector's Office, Broach, 7 March 1849.

COLLECTOR of Broach's Letter (No. 91 of 7 March 1849), relative to the Cotton Experiments in Khandeish being superintended by Mr. Landon, Superintendent of Broach.

(No. 509 of 1849.)

WITH reference to the 3d para. of his letter, the Collector is requested to state what reductions in the Broach cotton establishment he proposes, and in what manner he recommends the employment of the establishment to be retained.

2. The Collector is also requested to consult Mr. Landon, who, on his coming to India, proposed after a time falling back upon his own resources, and endeavouring by private enterprise to benefit his own interests, as well as those of the country, to be kind enough to explain what his future plans are, as he mentioned, in his letter of 24 November last (No. 101), that he was not then prepared to commence business on his own account. Government letter, No. 4880, of 18th August 1848.

3. The Revenue Commissioner regrets to hear that Mr. Landon appears to entertain no hope of hand-gins becoming popular in Broach. He had anticipated, as hand-gins in the Southern Mahratta country had given satisfaction, and a 24 saw-gin worked by hand by eight people will clean, the Revenue Commissioner believes, considerably more cotton than eight persons working the churka can do, that a different result would have been the case.

4. A power-mill has probably many advantages over a hand-gin; but it requires a larger capital to keep up its establishment; without, therefore, discussing the importance of power-gins compared with hand-gins, the Revenue Commissioner would feel himself obliged if the Collector would request Mr. Landon to show what quantity of work can be done by a hand-gin, and the difference between that done by an equal quantity of labourers working the native churka, and to explain why, both machines being worked by hand, that the hand-gin should be unpopular when worked by eight men; it will clean, perhaps, more and better cotton than an equal or larger number of workmen can do with the churka, which is in common use throughout Goozerat.

(signed) A. N. Shaw,
Revenue Commissioner, N. D.

Revenue Commissioner's Camp,
Tanna Districts, Bandora, 14 March 1849.

(No. 173 of 1849.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement, No. 509, of the 14th ultimo, requiring further information relative to the Broach Cotton Experimental Establishment connected with Mr. Landon's project of setting up machinery on his own account.

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2. In reply, I beg to transmit correspondence noted in the margin* which has taken place between Mr. Landon and this department, on the points mooted in your endorsement under reply. Mr. Landon, you will perceive, is not prepared to commence operations on his own account until after the rains of 1850, and wishes to be allowed to retain his present appointment till that period. My memorandum of the 26th ultimo was written with the view of ascertaining from Mr. Landon what practical steps had been taken by him for paving the way to his proposed enterprise. The undertaking in question, involving, it is to be presumed, a considerable permanent outlay, I deemed it proper to ascertain whether, among other points, the consent of the owner of the Umjud Bagh premises had been obtained to the project of erecting thereon steam machinery; I invited Mr. Landon, in short, to open his views, in order that Government might be better able to form an opinion as to the advisability of retaining his services in so expensive and hitherto unsuccessful an experiment as that of endeavouring to induce the mercantile community of Broach to adopt the American mode of ginning their kuppas. On all these points Mr. Landon has maintained, it will be perceived, a strict reserve.

Mr. Secretary
Melvill's letter of
16th June 1848.

3. The Honourable Court have guaranteed to Mr. Landon "the free use for a limited time of the gins, machinery, and building at Broach;" but these concessions that gentleman would appear to undervalue, since no proposition involving an acquiescence in the boon has hitherto emanated from him pending the introduction of his own machinery one year and a half hence.

4. In a letter to your predecessor's address, No. 373, of the 5th December last, I did myself the honour to forward a letter and statement, received from Mr. Landon, in which that gentleman made it appear that the power gins worked by bullocks were doing under him nearly three times as much as they had ever done before. In the concluding part of the 6th para. of my letter I remarked, that it now remained to be tested whether the experience of the whole season would bear out the estimate then founded on Mr. Landon's short experiment. The season's operations having been brought to a close on the 24th instant, I am enabled to offer the following abstract comparison of the result of the operations of 1848 under Mr. Laidlaw, and of 1849 under Mr. Landon.

Paras. 3 and 4 of
Collector's letter,
No. 196, of the 1st
June 1848.

5. Mr. Laidlaw, with the united aid of the power-gins at Broach, and of (8) eight hand gins (four of which were worked at Surat, and four at Jumbooseer and Ahmode) cleaned within a mean period of 54 days 520½ bhars of kuppas on Government account. Mr. Landon, in 64 working days, with the power-gins only, has ginned 700 bhars. To give a closer comparison: Mr. Laidlaw, with the power-gins alone, which had not then undergone thorough repair for some years, ginned 299 bhars of kuppas in 64 days. Mr. Landon, in precisely the same number of days, has ginned 700 bhars, with the same machinery, but the machinery had been taken to pieces, renewed in parts, and put into thorough repair by Mr. Laidlaw, just before Mr. Landon's arrival. The anticipations, therefore, formed by the latter gentleman, of an increased out-turn from the gins, have been realised, notwithstanding that his improved method of yoking the bullocks (commented upon in the 3d para. of my letter of the 5th December last) had subsequently to be relinquished in favour of the old method, and notwithstanding also that his improved mode of feeding the gins (*vide* para. 4 of the same report) was only applied to one gin.

6. Whether, therefore, the increased out-turn of the power-gins is justly referrible to Mr. Landon's working, or to Mr. Laidlaw's previous repairs, the result has been to place the former gentleman in full knowledge of the capacity of the machinery in question.

7. But with regard to the much more important question of extending the benefit of the American machinery, by the adoption of the less cumbrous and less expensive hand-gin (the use of which was so much more dwelt upon and advocated by Mr. Landon's predecessors, Messrs. Mercer and Simpson) nothing appears to have been done in advance during the season just brought to a close, with the exception of letting the Surat gins at rather a late period of the season to Merwanjee Hormusjee of that city, with what success I have not been made acquainted. All attempts to work the gins set up by Mr. Simpson at Jumbooseer and Ahmode, as well as the two remaining hand-gins at Broach, have been relinquished by Mr. Landon as either impracticable or unprofitable, nor has any native of Broach expressed a wish to possess one of these machines. Mr. Landon has not yet replied to several calls requesting him to furnish the particular information required in the 3d para. of your endorsement under reply. I may mention, however, that there can be no doubt as to the superiority over the native churka of the hand-gin. In a letter, No. 203, of the 8th June last, to your predecessor's address, I gave the result of a trial of a hand-gin fitted by Mr. Laidlaw, with an iron periphery (to give greater impetus to the wheel). The result was, an out-turn of 304 lbs. of cleaned cotton per diem for two successive days, employing eight men, at four annas each, and one woman at two annas, a candy of 784 lbs. would thus be cleaned at Rs. 5. 7. 8. while by the native churka the cost of cleaning the same quantity is seldom less than 10 rupees, and the cotton cleaned should be better also. But for a statement of the practical difficulties attending the introduction of the hand-gin, I beg to refer you to paras. 7 and 16 of my report, No. 196, of the 1st June last, already alluded to. Subsequent experience has quite confirmed what I then predicted.

8. I have

* Letter to Mr. Landon, No. 109 of the 20th March. Ditto from ditto, No. 49 of the 23d idem. Memorandum to ditto, No. 122 of the 26th idem. Ditto from ditto, No. 61 of the 31st idem.

8. I have been favoured by Mr. Landon with a drawing of a shed which he would introduce into the villages, for the purpose of storing kappas, in lieu of the present pit system. The suggested improvement is no new one, and the subject will be found to be most ably treated in a printed "letter addressed to the Government of Bombay by the Chamber of Commerce at that Presidency, on the subject of extending and improving cotton cultivation in India," dated 21st January 1841. Indeed I doubt much whether the ryots, uninterested as the bulk of them are in the treatment of cotton once removed from the field, and not by any means sure of being reimbursed by the wukharias or brokers, would consent to go to the expense of the projected store-shed.

9. Mr. Landon, it will be observed, is sanguine of keeping the gins at work during the rains, and of thus effecting a saving of expense at a time when things have hitherto been mostly at a stand-still: I confess that I do not altogether share in Mr. Landon's anticipation.

10. Upon the whole, I am compelled to revert to the opinion already expressed in my letter, No. 91, of the 7th ultimo, and to recommend the immediate reduction of the Broach establishment. I would even advocate the entire withdrawal, for the present, of the experimental funds, hitherto so liberally devoted, but with so little success, to the furtherance of mercantile improvement. I would abolish the offices of superintendent and engineer (for which the lapse of Mr. Laidlaw's covenant affords facilities, and the mechanist himself is not desirous of retaining his present situation), and get rid of the whole establishment; and if Mr. Landon really intends prosecuting the experiment on his own account (and his extensive private dealings, during the past season, must have given him considerable insight into the state of the question) the liberal offer of the Honourable Court might be fulfilled by relinquishing to that gentleman, for the whole of the ensuing season, the free use of the gins, buildings, and machinery, inclusive of the use of the cattle (Mr. Landon undertaking to feed them), and of the rent (100 rupees monthly) due to the proprietor of the Umjud Bagh.

11. Should Government concur in this proposition (and, with the utmost attention paid to the subject, I can offer no better counsel), the concern, in so far as Government is concerned, might be advantageously closed on the 31st July next.

12. Mr. Landon's report upon the season's operations will soon, I am given to understand, be completed. This, together with any further information received from Mr. Landon, I shall of course do myself the honour to lay before you.

Broach, Collector's Camp, Mehgaum,
30 April 1849.

I have, &c.
(signed) *J. M. Davies*,
Collector.

P.S.—13. Since closing this, I have received from Mr. Landon a letter, No. 77, of yesterday's date, to be found amongst the accompaniments, giving the district information respecting the comparative merits of the hand-gin and native churka. In this communication Mr. Landon has, in my opinion, effectually settled the question of introducing the former machine, if its adoption is made to depend upon sheer manual labour.

14. Mr. Landon, in the last paragraph of this letter, recommends that Government go to the further expense of having cast at the Presidency a few suitable wheels and pinions, to be disposed of with the (hand) gins at a low rate. In other words, Mr. Landon would advocate the extension of a system of experiments to test the practicability of converting the hand-gin into a bullock-power machine. I am, however, entirely of opinion that Government should not risk further expenditure in the experiment, which more properly belongs to the undertaking in which Mr. Landon is himself professedly embarked.

1 May 1849.

(signed) *J. M. Davies*, Collector.

(No. 109 of 1849.)

To *James Landon*, Esq., Superintendent of Cotton Experiments, Broach.

Sir,

I HAVE the honour to transmit for your report upon the subjects discussed, an extract (paras. 2 to 4) of a letter, No. 509, of the 14th instant, received from the Revenue Commissioner, Northern Division.

Broach, Collector's Camp, Shukkerpore,
20 March 1849.

I have, &c.
(signed) *J. M. Davies*,
Collector.

(No. 49 of 1849.)

To *J. M. Davies*, Esq., Collector of Broach.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 109, of the 20th instant, transmitting an extract (paras. 2 to 4) of a letter from the Revenue Commissioner, Northern Division, No. 509, of the 14th idem, desiring to be informed of my future plans with respect to the proposition which I made on first coming to India, and requesting me to show what quantity of work can be done by a hand-gin, and the difference between that done by an equal number of labourers working the native churka; and to explain why, both machines being worked by hand, the hand-gin should be unpopular.

2. As regards my own plans for the future, I have the honour to state, that it is still my intention to carry my original proposition into effect as soon as I can acquire the local knowledge necessary to enable me to surmount the various obstacles which at present stand in the way of my doing so, with a fair chance of success.

3. The chief of these obstacles, I beg to state, is the uncertainty as to my being able to procure a sufficient supply of kuppas, owing to the opposition of the native dealers, combined with the village officers, to prevent the ryots from selling it to any but themselves, and to the trouble alleged by the ryots to have been given when furnishing kuppas to my predecessors for Government. From whatever cause this obstacle arises, I may mention, as a proof of its existence, that I have found it extremely difficult, with the utmost personal exertion on my part, to obtain a sufficient quantity to keep two gins at the Umjud Bagh in constant operation, from the 6th of February to the present time.

4. It is also highly necessary for me to ascertain beyond a doubt whether a supply of water for the engine can be depended on throughout the dry season, and whether fuel of a suitable kind and in sufficient quantities can be got at reasonable rates.

5. I have reason to expect, however, that another season's experience will enable me to determine all these points satisfactorily, should Government be pleased to continue my present engagement for that period, in which case I will not fail to have my machinery in Bombay in time for transmission to Broach, immediately after the monsoon of next year.

6. In the meantime, I shall be able to make the establishment at Umjud Bagh pay all its own expenses (exclusive of the superintendent's salary), by ginning cotton for the local dealers; and trust also that I may be able to induce some of them to take gins, and work them themselves, as they seem to regard them much more favourably than they did before I raised them to their present state of efficiency.

7. I take this occasion to say also, that if Government will be pleased to abolish the kullee system, I am firmly of opinion that in three years afterwards nearly half the cotton of this district would be cleaned by saw-gins.

8. I here merely intimate the importance of doing away with this mode of keeping the kuppas in the villages; but if desired to do so, I shall be happy to explain fully the very pernicious influence it has upon the whole character of the cotton of the district. I am enabled to speak from my own knowledge on this subject, having personally inspected the kullees of about 50 villages.

9. The information and explanations called for by the Revenue Commissioner on the subject of the hand-gin I will do myself the honour to furnish in a few days.

I have, &c.

(signed) *J. Landon*,
Superintendent Cotton Experiments.Broach, Superintendent's Office,
23 March 1849.

(No. 122 of 1849.)

MEMORANDUM.

WITH reference to Mr. Landon's letter, No. 49, of the 23d instant, the Collector would feel obliged to Mr. Landon for some additional information on the following points, in order to enable the Revenue Commissioner and Government to decide upon the question of continuing Mr. Landon's services beyond the period named by the Honourable Court of Directors:

First. What steps (if any) have been taken for ascertaining the practical opinion and experience of the Government engineer attached to the Broach Cotton Experimental Establishment, on the points noticed in paragraph 4 of Mr. Landon's letter; the supply, namely, of water and fuel, so essential to the application of steam machinery?

Secondly. Should it be contemplated by Mr. Landon to erect steam machinery (with the consent of Government) on the Umjud Bagh premises, have the sentiments of the landlord, Merwanjee Hormusjee, been ascertained on the subject; and should they be favourable to the

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the undertaking, is Mr. Landon prepared to release Government from all the expenses of the establishment, to take the machinery and stock of the factory at a valuation, and to relieve Government of its current engagement with Merwanjee, or, in the event of these premises being held to be objectionable on any score, has Mr. Landon turned his attention to any other site for his contemplated operations?

Thirdly. What data has Mr. Landon for assuming his ability to keep the gins at constant work, and thereby "make the establishment at the Umjud Bagh pay all its own expenses, exclusive of the superintendent's salary," as stated in the 6th paragraph of his letter, seeing that the experience of the last three years (*see marginal statements**), has shown the demand for the gins to be so limited as to give them only small and occasional employment from June to December of each year?

Fourthly. Mr. Landon is requested to have the goodness to explain what system he proposes should be adopted, and at whose cost, in lieu of the present system of storing the "kuppas" in pits in the village "khullees," or stackyard.

Broach, Collector's Camp, Shukurpore,
26 March 1849.

(signed) *J. M. Davies,*
Collector.

P.S.—It is requested that this paper be returned in original, with Mr. Landon's replies, a copy being retained for the superintendent's records.

(signed) *J. M. Davies,*
Collector.

(No. 61 of 1849.)

To *J. M. Davies, Esq.,* Collector of Broach.

Sir,

I HAVE the honour to acknowledge the receipt of your memorandum, No. 122, of the 26th instant, calling for some additional information on the points therein referred to, in order to enable the Revenue Commissioner and Government to decide upon the question of continuing my services beyond the period named by the Honourable Court of Directors.

2. In reply, I beg to say, as regards the first point, that the very hostile bearing assumed towards me on my first taking charge of my appointment, and continued for some time afterwards, by the engineer attached to the establishment, precluded the possibility of my consulting that officer upon any subject affecting my own interests or plans, even supposing that I could have relied upon his judgment in the matter. But as the points here referred to are among the most important ones connected with the successful prosecution of my proposed enterprise, I did not fail to procure before coming here, from competent persons, such data respecting them (and also respecting every other point connected with my project) as would enable me to decide them for myself. For the rest, I would remark, that when my machinery comes out, a mechanist will come with it to put it up, and conduct its working afterwards.

3. For

* 1846.			1847.			1848.		
MONTHS.	Number of Days on which the Gins worked:		MONTHS.	Number of Days on which the Gins worked:		MONTHS.	Number of Days on which the Gins worked:	
	On Government Account.	On Private Account.		On Government Account.	On Private Account.		On Government Account.	On Private Account.
Under Dr. Bunn.	January	10	Under Mr. Mercet.	January	4	Under Mr. Simpson.	January	—
	February	4		February	5		February	15
	March	—		March	23		March	26
	April	—	April	—	April		24	
	May	—	Under Mr. Ladhaw.	May	15	Under Mr. Ladhaw.	May	—
	June	—		June	13		June	—
	July	—		July	13		July	—
	August	—		August	—		August	—
	September	—		September	—	Under Mr. Landon.	September	—
	October	—		October	—		October	12
November	—	Under Mr. Simpson.	November	—	November		10	
December	—		December	—	December	17		
TOTAL	14	96	TOTAL	28	47	TOTAL	63	63½

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3. For a reply to your second point, I beg to refer you to the 2d para. of Mr. Secretary Melvill's letter to my address, dated East India House, 16 June 1848, a copy of which will be found on your records. I may add, however, on this point, that no pecuniary obstacles stand in the way of the prosecution of my object to the fullest extent practicable.

4. In answer to your third question, as to what data I have for assuming my ability to make the establishment at Umjud Bagh pay its own expenses by cleaning cotton for private parties, I would state, that my assumption is founded on the fact that I have already been applied to by one of the native dealers for the use of the gins for a sufficient time to accomplish that object, if he can (of which he entertains no doubt) procure a supply of kuppas. This party, I beg to state, has already commenced the purchase of a large quantity of kuppas to be brought to the go-downs before the setting in of the monsoon, to be ginned during the rainy season.

5. The average monthly expenses of the establishment for the last five months, exclusive of European salaries and the construction of new gin machinery, was rather under 440 rupees. The two gins now at work will clean easily 11 bhars a day, which, at 2½ rupees, amounts to Rs. 27. 8. as one day's hire of the gins; at this rate, 440 rupees will be earned in 16 days. In 18 days the gins will earn 500 rupees, and I hope to be able to make them earn this sum per month. The only doubt, therefore, of my being able to make the establishment pay its own expense, arises from the possibility of there being no kuppas to be had for the gins. Of this, however, there is but little apprehension, as it is estimated that from 5,000 to 10,000 bhars generally remain in this and the Baroda districts uncleaned till after the monsoon.

6. In answer to your last question, I would suggest that, in lieu of the present system of keeping the kuppas in pits in the village, khullees, temporary sheds of bamboo sticks and mats be erected in the khullees for the reception of the kuppas, or that the ryots be required to store it in their houses. In the latter case, the change would be attended with no expense; in the former, an expense of from 1½ to 2 rupees for each compartment would be incurred to be borne by the growers themselves. From the very numerous inquiries I have made on this subject among the patels and ryots, I entertain no doubt of the ready adoption of either of the above plans in lieu of the present system, and, with the sanction of Government and the assistance and co-operation of the local authorities, I feel certain of being able to carry either into effect. The improvement in the quality of the cotton that would result would be incalculable.

7. I have the honour to enclose you a rough sketch of the proposed shed, with a statement of the probable cost of the materials, as given to me by persons considered to be well informed on the subject.

8. Your memorandum is herewith returned, as requested, a copy having been kept for record.

Broach, Superintendent's Office,
31 March 1849.

I have, &c.
(signed) J. Landon,
Superintendent Cotton Experiments.

(No. 77 of 1849.)

To J. M. Davies, Esq., Collector of Broach.

Sir,

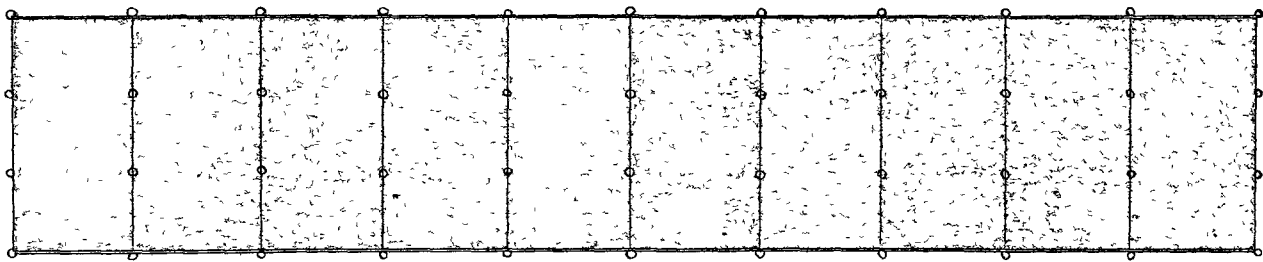
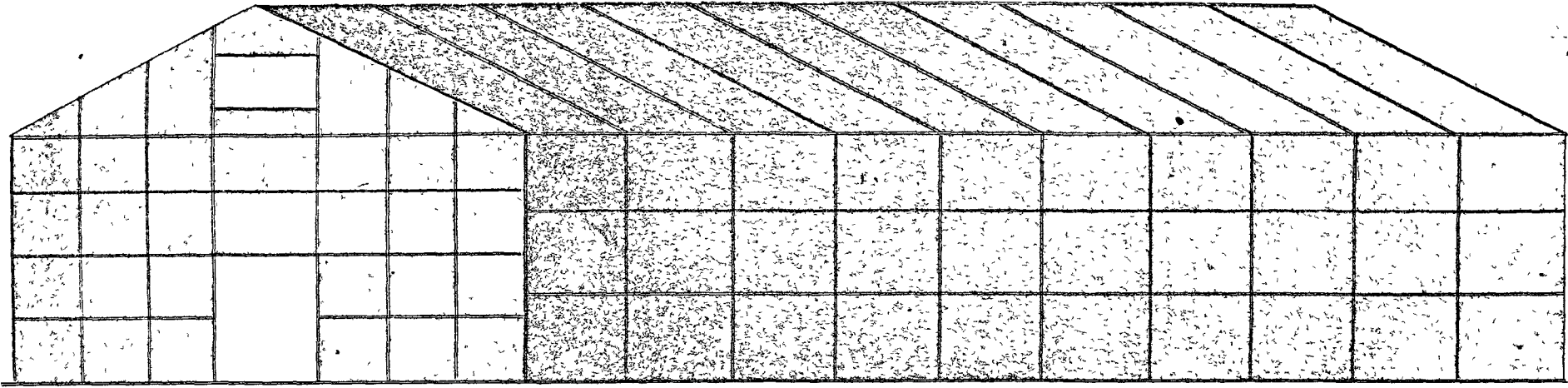
In continuation of my letter, No. 49, of the 23d March, I have the honour to submit the information called for by the Revenue Commissioner, Northern Division, relative to the work which can be done by a hand gin, and the difference between that done by an equal number of men working the Broach churka :

Pounds of Kuppas that can be cleaned with a 25 Saw-Gin in One Day, worked by Eight Men.	Pounds of Kuppas that can be cleaned in One Day by Eight Men working the Broach Churka.	Difference in favour of the Gin.	Wages of Eight Men Working the Gin per Day, at 3 Annas each.	Wages which Eight Men can earn with the Churka per Day, at 5 Maunds of Seed for a Rupee.
1,200	784	412	Rs. a. p. 1 8 -	Rs. a. p. 2 6 5

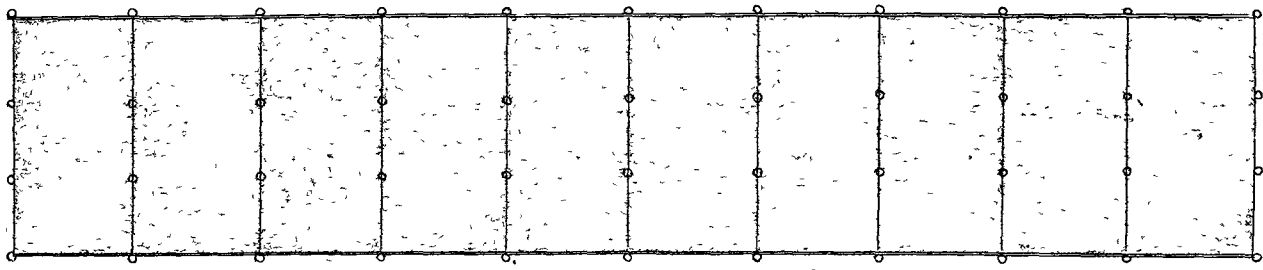
2. From the above table, it will be seen that eight men can clean with the hand-gin 412 lbs. of kuppas more than they can with the churka, while they can earn 14 annas and 5 pies more with the latter than with the former, in addition to which, the labour of the gin is much more excessive than that of the churka.

3. I have

ELEVATION OF STORE SHED FOR KUPPAS



Ground Plan



*Engineer Cotton Exp^{ts}
Broach 7th April 1849.*

To face page 882.

J. Buzze's lith.
No 296 Sess. 2. Ordered by The House of Commons, to be Printed, 24th August, 1857.
Henry Hansard, Printer.

3. I have stated 1,200 lbs. of kuppas as the quantity which can be cleaned in a day by a hand-gin; but the average work hitherto done by that machine in this district and Surat is only 605 lbs.,* which is 179 lbs less than eight men can clean with the churka.

4. The Broach churka in the hands of active men is the most efficient machine of its kind with which I am acquainted, and it requires the development of the utmost capabilities of the hand-gin to compete with it successfully. The latter having unfortunately been worked at scarcely half power on its first introduction into these districts, I have found it quite impracticable, in the little time which I have yet been able to devote to those located at the out-stations, to get them worked with any desirable effect, in consequence of the labourers refusing to do more than had been previously required of them without an unreasonable increase of wages; nor was any advantage to be derived in this respect from hiring a fresh set, as they all know how much has been done, and impose the same limit as to quantity before they will consent to work. It was only by having the kuppas weighed and deposited at the gin before the men came in the morning, and by personally overlooking them, that I was enabled to get the quantity cleaned which is named in the foregoing table. As soon as they discovered that they had cleaned more than usual, they abandoned the work.

5. Taking into consideration, therefore, that the labourers can earn more wages with less fatigue at the churka, that the average quantity cleaned by the gin has been less than eight men can clean with four churkas, and that the latter machines cost but a mere trifle in comparison with the former, it is my present impression that gins can only be successfully introduced in this district when wrought by other means than manual labour.

6. If Government would be pleased to authorise the casting at the Presidency of a few suitable wheels and pinions, to be disposed of with gins at a low rate, I entertain no doubt of being able to induce some of the principal dealers to purchase them, as they have already expressed a willingness to try the gins but for the difficulty of getting them properly worked by hand. With two pair of bullocks, to work alternately, a 25-saw-gin will clean with ease 2,000 lbs. of kuppas a day, at a cost of not exceeding 3 rupees per Surat candy of clean cotton.

Broach, Superintendent's Office,
30 April 1849.

I have, &c.
(signed) *J. Landon*,
Superintendent Cotton Experiments.

MINUTE by the Right Honourable the Governor.

THE perusal of this correspondence has reluctantly compelled me to coincide in opinion with the Revenue Commissioner, Northern Division, and the Collector of Broach, that there is no prospect of any adequate advantage in any longer keeping up these expensive experiments at Broach, and that the best course will be to close the whole concern, as far as Government is concerned, on the 31st July next, and discharge the establishment, including the superintendent and engineer.

V. 7428.

Past experience has proved that the American varieties of cotton are not adapted to the Broach Collectorate, and the attempts to introduce the use of the saw-gin have, it is evident, resulted in nothing but complete failure; it would be a mere waste of public money, under these circumstances, any longer to continue the present expensive experiments; and as the engagement with Mr. Landon was only for one season, which is now past, and Mr. Laidlaw, the engineer's, covenant has also expired, the present seems a favourable opportunity for abolishing these situations, and winding up the affairs of the experiment; and should my colleagues concur, the Revenue Commissioner may be requested to instruct the Collector to close the whole concern on the 31st July next, as proposed by him.

Should Mr. Landon be inclined to undertake to carry on the business on his own account, I have no objection to his being offered the free use of the gins and buildings, and cattle, for six months (he agreeing to keep them in repair, and feed the cattle), after which, he should pay a fair rent for their use; and in the event of his declining this offer, the same terms might be given to any native company willing to keep the gins, machinery, and cattle, in good condition, as recommended by Mr. Shaw.

26 May 1849.

(signed) *Falkland*.

MINUTE by the Honourable Mr. Willoughby.

I AM reluctantly compelled, after a careful perusal of these proceedings, to concur in the Right Honourable the Governor's opinion, that it will be useless to continue these expensive experiments without the slightest prospect of ultimate success. I was fearful from

V. 7429.

* This was before the periphery was added; with this apparatus (1) one hand-gin cleaned 988 ½ lbs. per diem. (signed) *J. M. Davies*, Collector.

III.
Bombay.

from the first that by employing Mr. Landon in the service of Government, we should divert him from the private speculations which brought him out to India; but when he is again thrown upon his own resources, he may possibly be induced to accept the terms offered to him. I think it would be desirable to request the Accountant-general to prepare a statement exhibiting the total cost of these experiments from their commencement, and prospectively up to the date of their close, the 31st July next.

29 May 1849.

(signed) *J. P. Willoughby.*

MINUTE by the Honourable Mr. Blane.

V. 7430.

THERE is, I fear, no hope of any commensurate advantage from the further continuance of this establishment, and I therefore fully concur in its proposed abolition. A statement of the total cost of the experiment is, I think, to be desired, to show the extent of the sacrifice already made.

30 May 1849.

(signed) *D. A. Blane.*

(No. 3647 of 1849.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,

V. 7431.

I HAVE been directed to acknowledge the receipt of your letter No. 959, dated the 16th ultimo, with accompaniments, on the subject of a proposition from Mr. Elphinston, begging that Mr. Landon may be appointed to superintend the cotton experiments in the Khandeish collectorate.

2. In reply, I have been desired to state, that the perusal of the correspondence under acknowledgment has reluctantly compelled the Right Honourable the Governor in Council to coincide in opinion with you and the Collector of Broach, that there is no prospect of any adequate advantage in any longer keeping up these expensive experiments at Broach, and that the best course will be to close the whole concern, as far as Government is concerned, on the 31st July next, and discharge the establishments, including the superintendent and engineer.

3. Past experience, I am to observe, has proved that the American varieties of cotton are not adapted to the Broach Collectorate, and the attempts to introduce the use of the saw-gin have, it is evident, resulted in nothing but complete failure; it would be a mere waste of public money, under these circumstances, any longer to continue the present expensive experiments; and as the engagement with Mr. Landon was only for one season, which is now past, and Mr. Laidlaw, the engineer's, covenant, has also expired, the present seems to his Lordship in Council a favourable opportunity for abolishing these situations, and winding up the affairs of the experiment, and you will therefore have the goodness to instruct the Collector of Broach to close the whole concern on the 31st July next.

4. Should Mr. Landon be inclined to undertake to carry on the business on his own account, his Lordship in Council has no objection to his being offered the free use of the gins, and buildings and cattle, for six months (he agreeing to keep them in repair and feed the cattle), after which, he should pay a fair rent for their use; and in the event of his declining this offer, the same terms might be given to any native company willing to keep the gins, machinery, and cattle, in good condition, as recommended by you in your letter under acknowledgment.

I have, &c.

(signed) *A. Malet,*
Chief Secretary to Government.

Bombay Castle, 1 June 1849.

(No. 3649 of 1849.)

From Mr. Chief Secretary *Malet* to the Accountant-General.

Sir,

V. 7432.

I HAVE been directed to forward for your information the accompanying copy of a letter I have this day addressed to the Revenue Commissioner, Northern Division, authorising the abolition of the cotton experiments at Broach, and to request the favour of your preparing a statement exhibiting the total cost of these experiments from their commencement, and prospectively up to the date of their close, namely, the 31st July next.

You will have the goodness to furnish the statement as soon as possible, in order that the subject may be speedily laid before the Honourable the Court of Directors.

I have, &c.

(signed) *A. Malet,*
Chief Secretary to Government.

Bombay Castle, 1 June 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 885

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 8th August 1849.—V. 9250 to 9255.

III.
Bombay.

From J. Landon, Esq., to Mr. Chief Secretary Malet.

Sir,

WITH reference to the 4th paragraph of your letter to the address of the Revenue Commissioner, Northern Division, No. 3647, of the 1st instant, I respectfully beg to state that I had the honour to forward my reply to the proposition of Government through the Collector of Broach, on the 12th idem.

V. 9250.

As it is on my part a private matter, I take the liberty of addressing Government direct on the subject, to say that it is still my desire to establish myself in Broach in the manner originally proposed on my first coming to India, as soon as I can satisfactorily determine the points referred to in my letter, No. 49, of the 23d March last, also transmitted through the Collector of Broach; as a correct decision of the most material of these points can only be arrived at by carrying on the business in the meantime, and Government and the Honourable Court of Directors having already granted me the free use of the gins, buildings, machinery, &c., for a limited time, and as I came here under that grant, with the view to ascertain whether I can or cannot establish myself in this place, both to my own and the country's advantage, I trust the Right Honourable the Governor in Council will be pleased to accede to the proposition contained in the latter part of the 1st paragraph of my letter, No. 103, of the 12th instant, above referred to.

I would respectfully add, that should the result of another season's experience prove favourable, I shall be willing to relieve Government from the rent in future, and to enter into such arrangements for the gins, &c., as may be reasonable and just.

Broach, 29 June 1849.

I have, &c.
(signed) J. Landon.

(No. 1329 of 1849.)

IN submitting the accompanying correspondence, as per margin,* for the information of the Right Honourable the Governor in Council, the Revenue Commissioner does himself the honour to state, that he hopes Mr. Davies is misinformed in saying that the chances of any rent being at all realised for the use of the buildings and machinery at Broach are very problematical; neither is it necessary that the persons who use the machinery should pay the rent to the owner of the buildings, as Government being (so long as they are retained) responsible for their rent, can, he presumes, sublet them to any party who may be willing to engage them; but, upon a consideration of the whole subject, it may probably, (as an experiment), be desirable to allow Mr. Landon to use them upon the terms proposed by Mr. Davies, until the 30th April 1850, and the Collector, previous to the expiration of that date, may be empowered to advertise their being rented for a year or term of years to any other party.

V. 9251.

Revenue Commissioner's Office,
Poona, 4 July 1849.

(signed) A. N. Shaw,
Revenue Commissioner, N. D.

(No. 221 of 1849.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern Division.

Sir,

WITH reference to the concluding paragraph of Mr. Chief Secretary Malet's letter (No. 3647) of the 1st instant, forwarded with your endorsement (No. 1072) of the 2d idem, on the subject of closing the cotton experiments in Broach, so far as Government is concerned, on the 31st proximo, and offering Mr. Landon the free use of the buildings, machinery, and cattle, for (6) six months (he undertaking to keep the former in repair, and to feed the cattle), I have the honour to forward copy of a letter (No. 103) of this day's date, and received from that gentleman, begging, for the reasons assigned, that the period of the boon be extended to the end of the season, i. e. until the 30th April 1850.

V. 9252.

2. The anticipation expressed in the 9th paragraph of my letter (No. 173) of the 30th April last, with regard to the difficulty which Mr. Landon would experience of working the gins in the monsoon, has been fully borne out, the establishment having been wholly idle since the 24th April; but on this very account Mr. Landon now feels, that should he obtain the free use of the buildings and machinery for six months only, which period would expire on the 31st January next, he would have no chance of making the undertaking pay its expenses. He therefore solicits that the boon be extended for the season, including the busy months of February, March, and April, as some counterpoise to the idle months of August, September, and October.

3. To

* 1. From the Collector, No. 221, of 12th June, 1849, with accompaniment. 2. To ditto, No. 1187 of 19th ditto. 3. From ditto, No. 242 of 28th ditto, with accompaniment.

III.
Bombay.

3. To feed 12 pairs of bullocks, and keep up their drivers, will cost Mr. Landon 225 rupees per mensem, and the retention of the establishment absolutely requisite to keep up the concern will be fully 100 rupees more. On this account, perhaps, it may be considered only fair that Mr. Landon should have the advantage of all, in lieu of a part, and that the worst part of the season.

4. The difference to Government will only be (300) three hundred rupees, the rent, namely, of Merwanjee's premises for February, March, and April. Under these circumstances, I venture to recommend that Mr. Landon's prayer be complied with.

Broach, Collector's Office,
12 June 1849.

I have, &c.
(signed) *J. M. Davies*,
Collector.

(No. 103 of 1849.)

To *J. M. Davies*, Esq., Collector of Broach.

Sir,

IN acknowledging the receipt of Mr. Chief Secretary Malet's letter to the Revenue Commissioner, Northern Division, No. 3647, of the 1st instant, with your endorsement thereon, No. 215, of the 8th idem, communicating the intention of Government to discontinue the experiments at Broach, and discharge the establishment, including the superintendent and engineer, on the 31st July proximo, and stating that his Lordship in Council has no objection to my being offered the free use of the gins, buildings, and cattle for six months, I have the honour to state, in reply, that if Government will be pleased to allow me the free use of all the gins, machinery, buildings, and cattle till the end of the next season, I am willing to carry on the experiments on my own account; but as the six months named in the 4th paragraph of Mr. Chief Secretary Malet's letter, under reply, embraces the whole of the slack portion of the season, I should derive no advantage whatever from the terms offered, as the expense of feeding the cattle and keeping up the establishment would, from the present scarcity and high price of kuppas, be fully equal to, if not exceed, the profits, till the coming in of the next crop in February.

2. Should it be the pleasure of Government to allow me the use of the whole establishment for the period herein proposed, I beg to say that I shall endeavour to bring into use every kind of gin available; and should I succeed in working them to any advantage on my own account, it would perhaps be the means of interesting the natives in the subject to a greater degree than they have hitherto been through the means of the Government experiments.

Broach, Superintendent's Office,
12 June 1849.

I have, &c.
(signed) *J. Landon*,
Superintendent Cotton Experiments.

(No. 1187 of 1849.)

To *J. M. Davies*, Esq., Collector, Broach.

Sir,

IN reply to your letter No. 221 of the 12th instant, with enclosure, I beg to inform you, that a proposition from this department is before Government, contained in my letter No. 1071 of 2d instant, copy of which I forward for your information, to advertise the use of the whole cotton ginning establishment at Broach for hire to any party willing to undertake the speculation, and that it was not contemplated in that arrangement Government should bear the rent of the premises.

2. In the southern Mahratta country the impression was, that the best season for ginning cotton was during the rains; such was also the opinion of Messrs. Mercer and Hawley. I beg, therefore, before transmitting Mr. Landon's application to Government, that you will be good enough to inform me whether he is inclined to accept the use of the buildings and machinery under your charge at present, and defray all the expenses attending the custody and proper keeping of the same, if Government is pleased to allow him the use of them for one year.

Revenue Commissioner's Office,
Poona, 19 June 1849.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, Northern Division.

(No. 242 of 1849.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your letter No. 1187 of the 19th instant, and endorsement, No. 1206 of the 21st idem, both on the subject of the terms to be offered to Mr. Landon, in conformity with Government decision No. 3617 of the 1st instant.

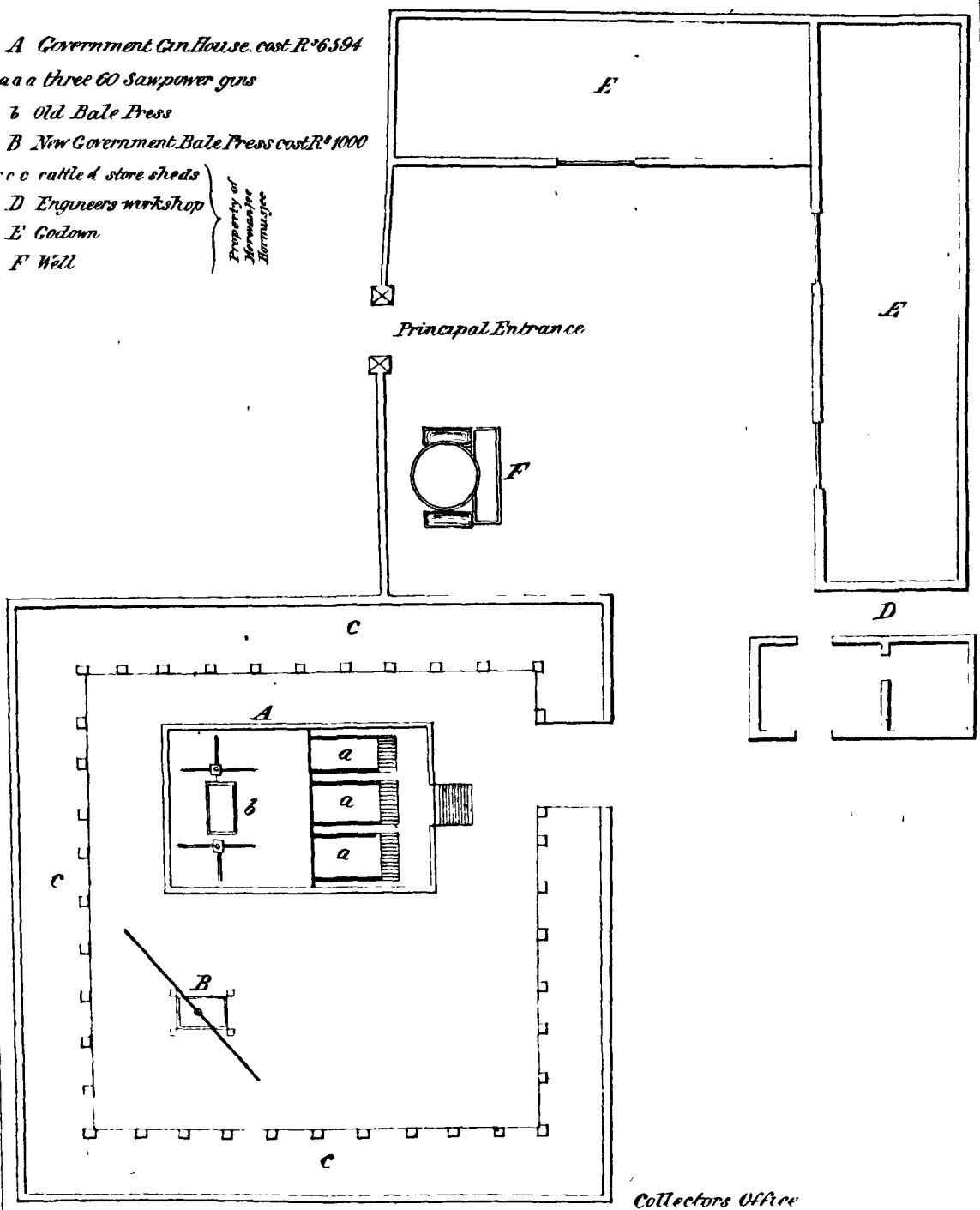
PLAN OF THE UMJUD BACH

PREMISES AT BROACH

USED AS A COTTON EXPERIMENTAL ESTABLISHMENT.

- A Government Gin House, cost R^s 6394
- aa a three 60 Sawpower gins
- b Old Bale Press
- B New Government Bale Press cost R^s 1000
- ccc cattle & store sheds
- D Engineers workshop
- E Godown
- F Well

Property of
Hormasjee
Hormasjee



Collectors Office

Broach, 28th June 1849.

(Signed) S. M. Davies

Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 887

III
Bombay

2. Those terms were, the free use of the buildings, machinery, and cattle for six months. In my letter to your address No. 221 of the 12th instant, I did myself the honour to forward a letter from Mr. Landon, with a recommendation that, for the reasons assigned, the period be extended to nine months, *i. e.*, to the end of April 1850. In reply to this, you remark, in your letter of the 19th instant, that it is not contemplated that Government should bear the rent of the premises.

3. I now do myself the honour to forward for your inspection copies of the (3) three original agreements entered into with Merwanjee Hormusjee, the owner of the Umjud Bagh, as per margin,* from which you will gather, that the rent of the premises once discontinued, Government has no further interest therein, nor can the machinery be longer kept there, except upon sufferance.

4. The first of these is the only essential document, since it provides that all new buildings erected at Government cost upon the hired premises shall become the property "of the proprietor, on the premises being given up." The subsequent agreements relate only to modifications in the amount of the rent.

5. The last agreement was laid before Government, with a letter from the First Assistant Collector in Charge, No. 167, dated the 20th November 1845, and appears to have been confirmed by Government in its letter No. 5829 of the 13th December following.

6. The nature of the agreement of the 1st January 1841 led me to propose, as a matter of course (*vide* paragraph 10 of my letter of 1st ultimo, No. 173), that Government should continue to defray the rent of the premises (100 rupees monthly) during Mr. Landon's experimental incumbency, as the only means of fulfilling the offer made by the Honourable Court, since it is obvious that Government could no longer guarantee to Mr. Landon the free use of the buildings when once the rent has been discontinued.

7. Alluding therefore to the last paragraph of your letter to Government, No. 1071 of the 2d instant, copy of which you transmitted for my information, the chances of any rent at all being realised by Government after the expiration of or in the event of the rejection of the terms offered to Mr. Landon are very problematical. The person who uses the machinery will have to pay rent to Merwanjee for the use of the premises; and I much doubt whether, in addition to this charge, the gins will yield any separate rent to Government. Under these circumstances, the best eventual arrangement would, in my respectful opinion, be to endeavour to induce the landlord, Merwanjee Hormusjee, to take the machinery off the hands of Government, and so get quit of the whole concern. Two separate agreements, one with the owner for rent of the premises, and another with the Collector for rent of the machinery, would probably only deter persons from making use of either. I premit the possibility of Merwanjee's refusing to allow the machinery to cumber his premises without the payment of some equivalent.

8. I beg to annex a ground plan of the Umjud Bagh premises, from which you will perceive that immediately the rent is stopped, Merwanjee will be in a position to claim the Government gin-house marked (A.), which cost 6,594 rupees, as his own. The new bale press (B.), lately put up at a cost of 1,000 rupees, comes under the head of machinery, of course, and will remain to be disposed of in common with the rest of the implements appertaining to the late experiments.

9. In conclusion, and with reference to the remark contained in the 2d paragraph of your letter of the 19th instant, I beg to explain, that it was not owing to any difficulty of ginning in the monsoon months that I have ventured to recommend the extension of the period offered to Mr. Landon; it was only by reason of that gentleman's being left without cotton on hand to go on with, under circumstances which he could not have foreseen.

Broach Collector's Office,
28 June 1849.

I have, &c.
(signed) J. M. Davies,
Collector.

An agreement entered into this first day of January A.D. 1841, between J. H. Peart, Esq., on the part of the Honourable the United East India Company, and Merwanjee Hormusjee, Esq., of Broach:—Whereas the above-named Merwanjee Hormusjee, Esq., agrees, for the annual sum of (3,000) three thousand rupees, or for the monthly payment of the sum of (250) two hundred and fifty rupees, to let on rent to the Honourable the United East India Company the premises near the city of Broach called the Umjud Bagh, together with the ground attached thereto, including screws, scales, and all other appurtenances now used in preparing cotton by the above-named proprietor, Merwanjee Hormusjee, Esq.

2. It is agreed to between the above-named contracting parties that the agent or agents of the Honourable the United East India Company shall be at liberty to erect on the above-named premises such new buildings or works as may be by him or them deemed necessary for carrying on experiments and operations for the improvement of cotton, both plant and staple; such buildings, exclusive of machinery, to become the property of the proprietor on the premises being given up; and it is further agreed to by the above-mentioned contracting parties, that the agent or agents of the Honourable the United East India Company defray the expenses of the annual repairs to the above-named premises, called

* 1. Agreement by Dr. Peart, dated 1st January 1841. 2. Agreement by Dr. Burn, dated 15th June 1843. 3. Ditto by ditto, dated 5th November 1845.

III.
Bombay.

Umjud Bagh, and outhouses attached thereto; but all special repairs, such as the falling of buildings, wells, &c., shall be defrayed by the proprietor, Merwanjee Hormusjee, Esq.

3. It is agreed by both the above-named contracting parties, that this contract is to be considered to hold good, to run, and to be binding from year to year, so long as it shall please the agent or agents of the Honourable the United East India Company, in consideration of the payment to the proprietor, Merwanjee Hormusjee, Esq., of the above-mentioned stipulated rent, viz., three thousand rupees per annum, by monthly payments of two hundred and fifty rupees.

(signed) *Merwanjee Hormusjee.*
J. H. Peart,
Superintendent.

Witness,
(signed) *M. Alvaes.*

It is hereby agreed and settled between A. Burn, Esq., on the part of the Government of Bombay, and Merwanjee Hormusjee, Esq., for himself, that all the repairs of the premises at the Umjud Bagh, at present rented by Government, for the monthly payment of (250) two hundred and fifty rupees, shall be managed from this date forward by the said Merwanjee Hormusjee, Esq., on condition of his receiving power to rent out or employ for his own behalf all the land attached to the premises in question, except the following, which is reserved, viz., the small piece close in front of, and another behind, and a third to the right-hand corner side of the dwelling-house, or, in short, all that portion in the vicinity of, and on which the premises stand is to be reserved, except the part now planted as a fruit garden, and which has been and is at present under care of the said proprietor, Merwanjee Hormusjee, Esq. Further, in addition to the above, he is to receive annually (50) fifty rupees in cash. For which considerations he agrees to cancel that part of the agreement made between himself and Dr. Peart, on the part of the said Government, on the 1st January 1841, which engages for the repairs of the said premises, and now agrees to take the responsibility of all the repairs on himself; and which repairs, of whatever nature affecting the buildings, wells, walls and gates, he engages to execute to the satisfaction of the officers who may be in charge of the cotton experiments under Government, so long as the Government shall see fit to rent the above premises. Furthermore, it is agreed, that on the receipt of the last season's rent of the garden land, viz., (Rs. 135.8.) one hundred and thirty-five rupees and eight annas, and (Rs. 50) fifty rupees, by Merwanjee Hormusjee, Esq., he will immediately commence the repairs now requisite, and consider the above agreement binding from this date. Should any part of the garden land at a future period be required for building purposes by Government, the proprietor engages to give it up, on receiving compensation for the amount or value of the rent of the same, part which at the time he may be receiving for it; and he further engages that no kind of cultivation shall be allowed on any part of the land which shall be of an injurious nature to the health of people residing on the premises.

(signed) *Merwanjee Hormusjee.*
A. Burn,

Broach, 15 June 1843.

Superintendent of Cotton Experiments.

WITH reference to the two former agreements made at Broach on the part of the Government of Bombay, by Dr. Peart, dated 1st of January 1841, and by Dr. Burn, dated 15th June 1843 respectively, with Merwanjee Hormusjee, Esq., for the use of the premises of the Umjud Bagh, for the purpose of conducting experiments in the improvement of cotton, it is now further arranged and settled between Dr. Burn on the part of the Government, and by Merwanjee Hormusjee, Esq., for himself, that from and after the 1st of January 1846 the above-mentioned agreements shall be so far modified as to admit of the following arrangements. The gin-house, the large bukhar, or godown (No. 2), from the gateway, the blacksmith's and carpenter's workshop, and the square har, together with the use, as heretofore, of the screws, scales, and weights, well, &c., &c., on the premises, to be at the disposal and use of the superintendent for Government, at a monthly rent of 100 rupees; this to be the whole amount of expense on the part of Government from the above-named date for premises. The large bukhar, in which are the screws, the large bungalow, the small bungalow, the house at the gateway, being returned for use to the proprietor; and that this arrangement shall hold good so long as the Governor in Council wish and require it.

(signed) *Merwanjee Hormusjee.*
A. Burn,
Superintendent Cotton Experiments.

Broach, 5 November 1845.

Witness:
(signed) *Furdoonjee Jivrajee.*
Gordhundass Ghirdhurbhaee.

MINUTE by the Honourable Board.

WE may, I think, allow Mr. Landon the use of the buildings, machinery, and cattle, upon the terms proposed by the Collector of Broach, until the 30th April 1850, instead of only for six months from the 31st July, as at first proposed.

Mr. Davies may also be empowered to invite tenders for renting them for a year, or term of years, from the expiration of the above date, as recommended by the Revenue Commissioner, Northern Division.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

12 July 1849.

V. 9253.

(No. 4537 of 1849.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, N.D.

Sir

WITH reference to your memorandum, No. 1329, dated 4th instant, I have been directed to inform you, that the Right Honourable the Governor in Council has been pleased to allow Mr. Landon the use of the buildings, machinery, and cattle belonging to the cotton experiments, upon the terms proposed by the Collector of Broach, until the 30th April 1850, instead of only for six months from the 31st July, as at first proposed.

2. His Lordship in Council has been pleased to authorise Mr. Davies being empowered to invite tenders for renting them for a year, or term of years, from the expiration of the above date, as recommended by you.

Bombay Castle,
17 July 1849.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

V. 9254.

(No. 4539 of 1849.)

From Mr. Chief Secretary *Malet* to *J. Landon*, Esq.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to refer you to the Collector of Broach, to whom the instructions of Government have been communicated, through the Revenue Commissioner, Northern Division, on the subject of your letter, dated 29th ultimo.

Bombay Castle,
17 July 1849.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

V. 9255.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 22d August 1849.—V. 10,898 to 10,902.

(No. 1612 of 1849.)

From the Revenue Commissioner, N.D., to Mr. Chief Secretary *Malet*.

Sir,

IN submitting the accompanying letter, No. 286 of 26th ultimo, from the Collector of Broach, with its accompaniments, for the consideration of the Right Honourable the Governor in Council, I beg to state that I quite concur in the principle of the arrangements made by Mr. Davies, the Collector of Broach, in transferring, under the sanction of Government, dated the 17th ultimo, No. 4537, the experimental cotton machinery, warehouses, &c., &c., of that district to Mr. Landon; but that I am of opinion, at the same time, no machinery, instruments or apparatus, not distinctly required for working the gins actually already constructed, should be made over to him, and that if, with the approval and concurrence of the Collector, he thinks fit to make up further saw-gins, they should, at the expiration of his lease, be considered the property of Government, and no demand for labour or charge of any kind should be hereafter admitted.

2. In a list submitted by the Collector, marked (A.), of the implements and cattle to be used by Mr. Landon, there are some articles which might, I consider, be excluded, such as hoes and ploughs, &c, but I would propose leaving these minor details to be determined by the Collector.

3. The security bond submitted by Mr. Davies is for merely a nominal sum, compared with the value of the goods placed at the disposal of Mr. Landon; I would therefore suggest, that the deed should be formally drawn out at the Presidency, and a clause be added

V. 10,898.

III.
Bombay.

that the Right Honourable the Governor in Council was at any time at liberty to revoke the permission granted to Mr. Landon, without assigning any cause or liability to claim for compensation, upon the Collector seeing reason to consider that proper care and attention was not bestowed on the machinery or other Government property.

4. It must not be supposed I mean to insinuate the slightest imputation on the respectability of Mr. Landon, for I only suggest this clause as a fair precaution for the preservation of the property of Government. A gin improperly or carelessly set up will still clean cotton, although it will work itself in the operation to pieces; and as Mr. Landon may become connected with natives, it will be only a security, which the terms of the bond do not offer, to protect the machinery against negligence or improper use; and as that gentleman can, I apprehend, appreciate the liberality of Government in gratuitously allowing him the use of this valuable property, he will, I am disposed to believe, readily concur in the reasonableness of its adding a protective clause for its own defence.

5. The Collector might further be required to obtain a quarterly return, for the information of Government, to be forwarded through this department, showing the condition of the machinery, and the quantity of cotton cleaned by the same.

I have &c.

(signed) *A. N. Shaw,*

Revenue Commissioner's Office, Poona, Revenue Commissioner, Northern Division.
6 August 1849.

(No. 286 of 1849.)

To *A. N. Shaw, Esq.,* Revenue Commissioner, Northern Division.

Sir,

V. 10,800.

I HAVE the honour to transmit for your approval, and that of Government, a correspondence, as per margin,* with Mr. Landon, relative to making over to him from the 1st proximo the buildings, machinery, and cattle connected with the late cotton experimental department at this station. I also beg to append accompaniment A., a list of articles required by Mr. Landon, and accompaniment B., a form of agreement to be signed by that gentleman.

2. You will observe that I have objected to make over to Mr. Landon certain valuable articles of spare stock, which I do not conceive to come under the terms of incumbency held out to him. The spare saw-cylinders, the spare 10-inch saws, and the files, are collectively of a value of upwards of (1,500) one thousand five hundred rupees, and are therefore applicable to the manufacture of ginning machinery at other stations. Mr. Landon receives, "in good working order," four (4) power-gins (inclusive of one of 80 saws, newly erected by him), and eleven (11) hand-gins, being, in fact, the whole strength of the factory, and this I am respectfully of opinion should suffice for his experiment. If Mr. Landon contemplates erecting more machinery, it should be, I am of opinion, entirely on his own account, and therefore any articles of spare stock which he may be desirous of having, should only be given up at a fair valuation.

Broach, Collector's Office,
26 July 1849.

I have &c.
(signed) *J. M. Davies,*
Collector.

(No. 277 of 1849.)

To *James Landon, Esq.,* Superintendent of Cotton Experiments, Broach.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 115, of yesterday's date, appending a list of articles of stock which you will require in carrying on the cotton experiments on your own account, in pursuance of the terms offered you by Government.

2. In reply, I have to request that you will desire the engineer to make out and furnish you, for transmission to me, a detailed list of all the tools belonging to the large and small turning lathes specified by you. With respect to the articles enumerated in the margin† which you have included in your list, I beg to be informed of your object in desiring them, since, with all the gins made over to you in working order, they would appear to form no portion of the machinery which it is contemplated to lend you the use of, but to be articles of spare stock.

3. The "spare articles in the box belonging to the cotton thrashers," should also be distinctly enumerated.

4. I take

* Letter to Mr. Landon, No. 277 of the 19th July 1849. Reply from Mr. Landon, No. 116 of 25th July 1849. Letter to Mr. Landon, No. 283 of 26th July 1849.

† 200 grates for gins; 29 lbs. zinc plates; 1 bar cast steel, 13½ lbs.; 216 files of sorts (part in use); 1,457 10-inch gin-saws.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA, 891.

4. I take this opportunity of submitting for your perusal a draft of an agreement to be drawn up on stamped* paper, to be signed by you, previous to your receiving charge of the Umjud Bagh premises on your own account.

Broach, Collector's Office,
19 July 1849.

I have, &c.
(signed) *J. M. Davies,*
Collector.

III.
Bombay.

(No. 116 of 1849.)

To *J. M. Davies*, Esq., Collector of Broach.

Sir,

I HAVE the honour to acknowledge the receipt of your letters, Nos. 277 and 283, dated the 19th and 23d instant, transmitting the form of an agreement to be signed by me previous to receiving charge of the premises, machinery, &c. on my own account.

2. In reply to the second and third paragraphs of your letter, No. 277, I beg to inform you, that the lathe tools, and also all other tools in the engineer's shop, together with the spare articles belonging to the cotton thrashers, have been enumerated by the engineer, and a detailed list of them is herewith transmitted, agreeably to your request. Of the articles noted in the margin of your letter, the zinc plate is required for washers for the gins, the cast steel is used for repointing the lathe tools, and the files are more or less in daily use; some of the grates and saws may also be required in case of accident to those in use. It is my intention to have some new gins made up in the course of the present year, in which case all these articles will be more or less required, to be of course accounted for by me. I therefore request permission to retain them, with the exception of 721 saws, which I have taken out of the list.

3. With reference to the form of the agreement, I beg to remark, that Government has nothing whatever to do with the repairs of the premises, the whole having to be kept in good order by Merwanjee, as will appear by reference to the two last agreements made with him. With the omission, therefore, of that clause, and the insertion of the words noted in pencil in the margin of the form herewith returned, I shall be happy to sign it, and request the favour of your furnishing me with the form of the bond to be executed by the security required.

4. As the case of instruments is included in the list of tools, &c., I beg to hand you a fresh general list of all the articles I require, in supercession of the one heretofore furnished.

Broach, Superintendent's Office,
25 July 1849.

I have, &c.
(signed) *J. Landon,*
Superintendent Cotton Experiments.

(No. 285 of 1849.)

To *James Landon*, Esq. Superintendent Cotton Experiments, Broach.

Sir,

I BEG to acknowledge the receipt of your letter, No. 116, of the 25th instant.

2. The agreement has been altered in the manner suggested by you. A form of security I now transmit to be appended to the foot of the agreement; and if you will favour me with the name of the security, I shall direct the document to be prepared at once.

3. From an extract of a letter received through the Revenue Commissioner (transmitted to you this day), you will gather that your request to have the use of the buildings, machinery, cattle, &c., extended to the 30th April next, has been acceded to.

4. With reference to the articles of spare stock enumerated in the margin of my letter, No. 277, of the 19th instant, I beg to state that, upon reconsideration, I withdraw my objections to permitting you the use of the zinc plates (29 lbs.) and of the bar of cast steel (13½ lbs.), but that I continue to be of opinion that the spare grates, saws, and files (being besides those in use for occasionally sharpening the gin saws), are not of a nature to be included in the terms sanctioned in your behalf by Government. I also now add to the excluded articles the two saw cylinders for spare power-gins. A reference, however, will be made to the Commissioner for his instructions in respect of these excepted articles, and, pending the reply, I take it upon myself to authorise your retention of all the other articles enumerated in your revised list.

Broach, Collector's Office,
26 July 1849.

I have, &c.
(signed) *J. M. Davies,*
Collector.

* Afterwards corrected, and plain substituted for stamped.

III.
Bombay.

FORM of an AGREEMENT.

I, James Landon, now residing at Broach, in the zillah of that name, under the Presidency of Bombay, do hereby covenant and agree with J. M. Davies, Esq., Collector of the said zillah, to wit:

Whereas the Honourable East India Company's Government of Bombay have permitted me the free use, from the 1st of August 1849 till the 30th April 1850, of the premises known as the Umjud Bagh, situated within the suburbs of the town of Broach (as the same are held and rented by the Collector of Broach from the owner thereof), and also of certain cotton machinery now placed in the aforesaid Umjud Bagh premises, inclusive of certain hand-gins, now lying at Surat, and at the towns of Jumbooseer and Ahmode, respectively, and also of certain implements, and also of certain cattle, the whole of which machinery, implements, and cattle are defined in the accompanying catalogue, bearing severally my own signature and that of the Collector of Broach; I, James Landon, do hereby undertake to maintain in good order and efficiency the whole of the aforesaid machinery, implements, and cattle, entrusted and made over to me, as per accompanying catalogue aforesaid, and to return them to the Collector of the zillah, or to any other officer acting for him, in a similar sound state and condition, at the expiration of the incumbency assigned to me, or at any shorter period, should it be my expressed wish and desire to discontinue the same.

I, James Landon, do hereby further consent and agree that, in the event of defalcation or damage accruing to the aforesaid machinery, implements, or cattle (ordinary wear and tear of machinery, and death or unavoidable injury to cattle excepted), whilst under my charge, otherwise than wherein I may be exempted from such responsibility by the Right Honourable the Governor in Council of Bombay, I will make good the same, according as such defalcation or damage shall be ascertained and assessed by a committee, acting under the orders of the Right Honourable the Governor in Council of Bombay, of which the Collector of Broach, or other officer acting for him, shall be constituted President, and of which committee, I, James Landon, shall be entitled to nominate half the members.

Further, I, James Landon, do hereby agree to furnish security, to be approved of by the Collector of Broach, to the amount of 500 (five hundred) Co.'s rupees for the due performance on my part of the terms herein described; and failing to produce such security, I do hereby consent to deposit the sum of 500 (five hundred) Co.'s rupees in the treasury of the Collector of Broach.

Dated Broach, this day of One thousand Eight hundred and Forty-nine.

(signed) *J. Landon.*

Witnessed by

FORM of SECURITY.

I, A. B., inhabitant of Broach, having perused and made myself acquainted with the foregoing conditions entered into by James Landon, Esq., do hereby bind myself, my heirs, and executors, to the extent of the above specified penalty of 500 (five hundred) rupees to make good the same, in the event of Mr. Landon's failure to do so, or in the event of that gentleman's demise.

Dated at Broach, this day of One thousand Eight hundred and Forty-nine.

Witness my hand

Attested by

(signed) *J. M. Davies,*
Collector.

MINUTE by the Honourable Board.

V. 10,900. THE course suggested by the Revenue Commissioner should, I think, be followed, and the Collector of Broach should put himself in communication with the Honourable Company's solicitor in Bombay, with the view of preparing the necessary instrument.

I scarcely think, however, that there is any necessity to require a quarterly return in the manner proposed in Mr. Shaw's last para., as the term for which it is at present proposed to make over the experiment to Mr. Landon will expire on the 30th April next.

It should be clearly understood that no demand for labour or charge of any kind on account of any additional saw-gins, or machinery of any description, which Mr. Landon may

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 893

may choose to erect during the term of his lease, will be admitted by Government; and that all such additions will become the property of Government on the expiration of his present agreement.

(signed) *Falkland,*
J. P. Willoughby.
D. A. Blane.

16 August 1849.

(No. 5230 of 1849.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,

IN acknowledging the receipt of your letter, No. 1612, dated the 6th instant, with enclosures, I have been directed to inform you that the Right Honourable the Governor in Council authorises the course suggested by you being followed as regards the transfer to Mr. Landon of the use of the buildings, machinery, and cattle attached to the late cotton experimental establishment at Broach, and to state, that the Collector should put himself in communication with the Honourable Company's solicitor in Bombay, with the view of preparing the necessary instrument.

V. 10,901.

2. His Lordship in Council does not think, however, that there is any necessity to require a quarterly return in the manner proposed in your closing para., as the term for which it is at present proposed to make over the experiment to Mr. Landon will expire on the 30th April next.

3. I am also to remark, that it must be clearly understood that no demand for labour, or charge of any kind, on account of any additional saw-gins, or machinery of any description, which Mr. Landon may choose to erect during the term of his lease, will be admitted by Government, and that all such additions will become the property of Government on expiration of the present agreement.

4. Copies of your letter under acknowledgment, of its enclosures, and of this reply, have been communicated to the Honourable Company's Solicitor for his information, with instruction to prepare the requisite lease in communication with the Collector of Broach.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

Bombay Castle,
22 August 1849.

(No. 5231 of 1849.)

From Mr. Chief Secretary *Malet* to *W. Acland*, Esq., Honourable Company's Solicitor.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to transmit for your information the annexed copies of a letter from the Revenue Commissioner, Northern Division, No. 1612, dated the 6th instant, of its enclosures; and of my reply thereto, of this date, No. 5230, and to request that you will, in communication with the Collector of Broach, have the goodness to prepare the requisite deed of transfer of the property alluded to in this correspondence to Mr. Landon, who is to be allowed the free use of it from the 1st instant to the 30th April next.

V. 10,902.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

Bombay Castle,
22 August 1849.

(No. 79 of 1849.)

From the Accountant-General to Mr. Chief Secretary *Malet*.

Sir,

WITH reference to your letter, No. 3649, dated 1st June last, and enclosure, I have the honour, as required by you, to submit, for the information of his Lordship in Council, the accompanying original statement received from the Collector of Broach, showing the whole cost of experiments for the improvement of the growth of cotton in that collectorate from 1840-41 (the date from which the experiments commenced) up to 31st July 1849, the date on which the department was abolished.

V. 11,833.

I have, &c.
(signed) *E. E. Elliot,*
Accountant-General.

Bombay Castle,
Accountant-General's Office,
25 August 1849.

V. 11,834.

STATEMENT showing the whole of EXPERIMENTS for the Improvement of the Growth of COTTON in the *Broach* Collectorate, from 1840-41 (the Date from which the Experiment commenced) up to 31st July 1849, the Date on which the Department abolished by Government Order, dated 1st June 1849, No. 3647, as required by the Accountant-general in his Letter, No. 47, of the 2d idem.

DISBURSEMENTS:							
Salaries to the Superintendent and Establishment, &c.:							
		Rs.	a.	p.	Rs.	a.	p.
1. Superintendent's salary	-	55,873	13	9			
2. American cotton planters' ditto	-	19,193	2	-			
3. Engineer's ditto	-	20,078	4	4			
4. Native establishments' ditto	-	11,692	2	10			
5. Interpreters' ditto	-	1,554	13	4			
6. Rent of the Umjud Bagh premises	-	19,300	-	-	1,27,692	4	3
Deputation Allowance, &c.:							
7. Deputation allowance to the superintendent	915	-	-				
8. Batta and deputation allowance to cotton planters	-	2,324	15	10			
9. Batta to engineer	-	2,145	-	-			
10. Travelling allowance to the superintendent	-	589	12	10			
11. Horse allowance to ditto	-	108	10	10			
12. Extra allowance to the engineer for conducting superintendent's duty	-	677	6	8			
13. Paid compensation to Mr. Hawley, for injury to his kit in route from Coimbatore	-	728	-	-			
14. Reward to Mr. Hall, the engineer	-	400	-	-			
15. Paid to ditto, passage-money from Broach to England	-	1,100	-	-			
16. Paid passage-money or road expense to Mr. W. Laidlaw, the engineer, from Bombay to Broach	-	192	-	-			
17. Batta to native establishment	-	222	14	6			
18. Batta to interpreter	-	3	8	-			
19. Stationery	-	327	15	1	9,735	3	8
Sundry Charges:							
20. Expense for constructing gin-house, and for workmen and materials	-	9,712	14	1			
21. Feeding and keeping, &c. cattle	-	12,367	12	8			
22. Charges extraordinary for workmen and materials	-	1,790	3	8			
23. Annual repairs to the premises of Umjud Bagh	-	329	5	7			
24. Construction of buildings on the cotton farms	-	942	-	6			
25. Making up and supplying different articles of dead stock	-	259	11	8			
26. Workmen and materials for hand-saw gins, small jobs, &c.	-	2,661	6	8			
27. Paid for bills from the General Paymaster and other departments for sundry articles supplied	-	7,936	8	9			
28. Paid commissariat bills	-	1	2	-	36,000	-	9
29. Amount stolen from the treasury chest, charged by Government order	-	-	-	-			36,000 - 9
30. Conveyance and putting hand-gins	-	-	-	-	70	15	6
31. Making one man-power gin	-	-	-	-	20	5	6
32. Repairs to gin-house	-	-	-	-	4	9	-
33. Ditto - ditto, at Surat	-	-	-	-	1	13	3
34. Ditto to hand-gins at Surat	-	-	-	-	1	8	4
35. Cotton culture, workmen, materials, &c., including the rent of the land	-	-	-	-	16,720	-	11
Carried forward							
							1,37,427 7 11
							18,819 4 6
							1,90,381 1 -

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Brought forward	-	-	-	1,90,381	1	-			
Disbursements—continued									
36. Purchase of kuppas or seed cotton	64,451	8	4						
37. Charges for storing ditto	76	-	-						
38. Ditto for cotton cleaning, packing, and shipping	8,264	2	-						
39. Charges incurred by the collector of customs, Bombay, for shipping Broach cotton to Liverpool in 1846-47, here adjusted	543	5	9						
40. Amount expended in ginning cotton for private parties	233	3	8						
41. Road expense for conveying a gin shaft to Bombay	4	-	-						
42. Charges for sending cotton seed barrels to Kaira				73,672	3	9			
43. Charges for supplying churkas and gin to the Dhurwar Collectorate				10	-	-			
44. Charges for sending cotton seeds to the Collector of Belgaum				82	15	6			
				26	11	1			
				2,64,172	15	4			
45. Amount of batta paid by the Collector of Surat to peons who accompanied cotton bales sent to Bombay in May 1848, not exhibited by the superintendent in his disbursements for 1848-49							3	8	-
Deduct RECEIPTS:									
1. Produce of castor oil seeds and other grain, &c. grown on the land of the farm sold, excepting cotton				1,889	1	10			
2. Rent of a piece of ground of Umjud Bagh let out for cultivation to private parties				130	-	-			
3. Amount received on account of the rent of patch of ground in the Umjud Bagh, occupied some trees, recoveries, overpayments on account of construction of gin-house				20	1	10			
4. Value of quantity of wheat exported to England				157	11	-			
5. Produce of cotton and cotton seed sold				18,643	10	10			
6. Proceeds of the sale of horses belonging to experiment				14	8	-			
7. Value of tents belonging to ditto, sent to Bombay				411	7	2			
8. Proceeds from the sale of houses belonging to the experiment				384	4	-			
9. Value of a piece of wood sold				2	8	3			
10. Proceeds from the sale of bullocks				426	-	-			
11. Ditto - ditto of sundry articles				73	2	5			
12. Value of an iron shovel lost, recovered				-	12	-			
13. Received on account of rent of hand-gins given to private parties				157	12	-			
14. Saving effected in the establishment				9	4	-			
15. Credited on account of civil auditor's check				-	2	6			
16. Credited value of cotton forwarded to Bombay				41,568	13	6			
17. Recovered value of cotton pilfered in the shipment to Bombay				50	10	-			
18. Received rent for cleaning cotton of private dealers				3,004	1	8			
19. Credited value of a gin forwarded to Dharwar				323	3	7			
20. Received from Mr. Laidlaw, engineer, the amount which was advanced to him for road expense or passage money				120	-	-			
21. Received amount of cash balance in the hand of the superintendent on the 31st July 1849				21	15	5			
							67,409	2	-
Add,							1,96,767	5	4
Amount of batta due to Mr. Laidlaw, engineer, from 22d to 26th June 1849, being five days, at five rupees per diem, as per bill forwarded for audit through the Revenue Commissioner, Northern Division, under date the 3d July 1849, not returned yet							25	-	-
							*1,96,792	5	4
EXCESS OF DISBURSEMENTS - - Rs.									

(E. E.)

(signed) J. M. Davies, Collector.

Broach, Collector's Office,
18 August 1849.

* Amount brought down - - - Rs. a. p.
1,96,792 5 4

Add,—For the following supplies of Military Stores to the Experimental Department, since ascertained from the Military Board:

1. Bill for supply during the quarter ending 31st October 1848	Rs.	60	13	9		
1. Ditto for ditto, during 31st January 1849		30	3	-		
					91	- 9
	Rs.				1,96,883	6 1

(signed) E. E. Elliot, Accountant-General.

III.
Bombay.

MINUTE by the Honourable Board.

V. 11,835. THE abolition of the Broach cotton experiments, so far as Government is concerned should now be reported to the Honourable Court.

I should wish the Accountant-general to be called on to prepare a similar return of our other cotton experiments in this Presidency; it should embrace every item as far as possible of disbursements and of returns in the shape of profit for each experiment separately, and be accompanied by one general return for the whole Bombay Presidency.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

6 September 1849.

(No. 5619 of 1849.)

From Mr. Chief Secretary *Malet* to the Accountant-general.

V. 11,836.

Sir,

IN acknowledging the receipt of your letter, No. 79, dated the 25th ultimo, submitting a statement showing the whole cost of the experiments for the improvement of the growth of cotton in the Broach Collectorate from their commencement in 1840-41 up to their abolition in July last, I have been directed by the Right Honourable the Governor in Council to request that you will prepare and submit to Government a similar return for each of its other cotton experiments in this Presidency, embracing every item, as far as possible, of disbursements and of returns in the shape of profit. These statements should be accompanied by one general return for the whole Presidency.

Bombay Castle,
14 September 1849.

I have, &c.
(signed) *A. Malet,*
Chief Secretary.

Territorial Department, Revenue, 16 February (No. 20) 1850.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

IN continuation of our despatch No. 129, dated 17th September last, reporting the cessation, as far as Government is concerned, of the cotton experiments in the Broach Collectorate, and the transfer, free of rent, to Mr. Landon, till the 30th April next, of the buildings, &c., attached to those experiments, we do ourselves the honour to transmit, for the information of your Honourable Court, our further proceedings on the subject, as noted in the margin.*

2. Under date the 30th ultimo, Mr. Shaw, the Revenue Commissioner, Northern Division, submitted a communication from Mr. Landon, in which that gentleman requested that at the expiration of his present term he might be allowed to purchase, at a fair valuation, such of the machinery and gins now in his possession as he might require; and that the premises in which, the machinery, &c., stand, and which belong to a Parsee of the name of Merwanjee Hermusjee, and are rented from him at 100 rupees per month for as long as Government may wish to retain them, might be still so held and sublet by Government to him, so as to prevent the proprietor hereafter imposing on him, or raising the amount of the rent after the completion of the works upon which he is now engaged.

3. Both Mr. Shaw and Mr. Davies, the Collector of Broach, recommended that, at the expiration of his present lease, Mr. Landon be allowed to purchase at a "fair valuation" such of the machinery, &c., as he might require; the former

* Letter from the Revenue Commissioner, N. D., dated 31st January, No. 319 of 1850, with enclosures. Minute by the Honourable Board, dated 6th February 1850. Letter to the Revenue Commissioner, N. D., dated 14th February, No. 1047 of 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 897

III
Bombay.

former officer did not state the exact manner in which we were to arrive at that valuation, but the latter suggested that, "the best way would probably be to advertise a sale of the same (the stock), to take place immediately after the expiration of Mr. Landon's present lease, which would afford persons residing at the Presidency an opportunity of attending at Broach if they wished to become purchasers; at the same time, an upset price, to be previously ascertained from the original invoices, might be named for the articles, so as to protect Government from loss by collusion, or by the absence of bidders."

4. From the accompanying copies of correspondence * which has taken place with Messrs. Ritchie, Steuart & Co., of this place, and to which we beg to request the attention of your Honourable Court, it will be observed, that those gentlemen were also desirous of obtaining possession of the machinery. In para. 2 of our secretary's letter, dated 3d December 1849, No. 7156, to their address, they were informed that "his Lordship in Council is very desirous of affording you all due assistance in his power towards any undertaking having for its object that which, if successful, will, of necessity, be attended by advantage to the country."

5. It is, however, to be remarked, that Messrs. Ritchie, Steuart & Co. have not yet commenced, whilst Mr. Landon is already, and for some time past has been, conducting active operations at Broach; he is no doubt a man of energy, and possessing the necessary qualifications, and would appear, from the Revenue Commissioner, Northern Division, to have sufficient funds at his disposal to enable him to carry on the undertaking. It is quite clear we could not deprive him of the machinery he required without crippling his means, and that were failure to attend his endeavours, there is every reason to fear that people would hereafter be deterred from risking their time, health, and money, by undertaking like operations in the interior.

6. Mr. Shaw, who was aware of Messrs. Ritchie, Steuart & Co.'s desire to obtain the machinery, was evidently in favour of its being continued to Mr. Landon, and not being put up to public auction. We concurred in this opinion, and have directed that the machinery, &c., required by Mr. Landon be made over to him at a valuation, to be made by the Revenue Commissioner, Northern Division, himself, after referring to the invoices, and making whatever allowance he might see fit for wear and tear, &c. We have permitted Mr. Shaw to do this without further reference to us, merely reporting the result.

7. We have informed the Revenue Commissioner, that should any of the remaining machinery be of any service to Messrs. Ritchie, Steuart & Co., they might be allowed to purchase it on a valuation to be made by him, or to use it until they obtain their own machinery from England; and that the rest might be sold by auction after he had ascertained that it will be of no use to the engineers or superintendents in the Southern Mahratta Country, Khandeish, or Sattara districts.

8. We have also informed the Revenue Commissioner that there is no objection to Government continuing to rent the premises from Merwanjee Hormusjee, and subletting them for the same rent to Mr. Landon, provided the Collector takes care to make such arrangements with the latter gentleman as will effectually secure Government from trouble or loss on account of demands on the part of the proprietor for ordinary repairs or damage, or on any other account.

9. We trust that the proceeding herein reported will meet with your Honourable Court's approval.

We have, &c.
(signed) *Falkland,*
Willoughby Cotton.
J. P. Willoughby.
D. A. Blane.

Bombay Castle,
16 February 1850.

* Rev. Cons. 1849, 5th December, V. 15,031 to 34; 19th December, V. 15,188 to 90. Rev. Cons. 1850, 4th January, V. 6; 25th January, V. 760 to 62; 23d January, V. 889 at 93.

III.
Bombay.

(No. 319 of 1850.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

Sir,

V. 2012

IN submitting the accompanying correspondence, as noted on the border,* for the information of the Right Honourable the Governor in Council, I have the honour to observe, that in July last, as *vide* Government letter, No. 4537, of 17th of that month, his Lordship in Council was pleased to allow Mr. Landon the use of the saw-gin house and machinery at Broach gratis until the end of April next.

2. In the place of the cattle power used for working the machinery, Mr. Landon, as reported in my letter of the 6th August last, No. 1612, has substituted a steam-engine, and is introducing, at a considerable expense, several improvements; he is naturally, therefore, desirous of securing to himself the use of the building for a term of years, and purposes, at the expiration of his present lease, to purchase, at a fair valuation, such of the machinery and gins now in his possession as he may require.

3. The premises in which the machinery, &c. stand belong to a Parsee, of the name of Merwanjee, and are rented on a lease by him at (Rs. 100) one hundred rupees per month, for as long as Government may wish to retain them. Mr. Landon proposes that they may still so be held as rented to Government, and sub-let to himself, to prevent the proprietor hereafter imposing on him, or raising the amount of his rent, after he has completed the works upon which he is now engaged.

4. Mr. Landon's proposition is reasonable; and as at the same time he seems capable of arranging for the payment of an extensive investment of this description, I am of opinion it might be entertained, and Mr. Davies, the Collector, might be directed to have such of the machinery, &c. as may be required by him valued, and, taking care that the interests of the Government are in every way attended to, make over to him in May next the rest, much of which (including eight 60-saw-gins, never, I believe, worked, and always, I am told, unfit for use, but now rusted and white ant eaten), worth little more than its value as old iron, should be sold off by auction, timely notice and a description of the same being given in the Government Gazette.

Revenue Commissioner's Camp, Broach,
31 January 1850.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, Northern Division.

(No. 14 of 1850.)

To A. N. Shaw, Esq. Revenue Commissioner, Northern Division.

Sir,

V. 2013. †

I HAVE the honour to lay before you copy of a letter received from Mr. Landon, praying that he be permitted to retain possession of the Umjud Bagh premises at Broach, into which he is now engaged in introducing steam machinery beyond the circumscribed limits of his present lease.

2. I am respectfully of opinion, that, looking to the highly desirable nature of the undertaking in which Mr. Landon has, with a spirit characteristic of his country, so heartily embarked, his proposition to relieve Government of the rent (100 rupees monthly), payable to the proprietor, Merwanjee Hormusjee, is well worthy the consideration of Government. There would need, in my opinion, no formal transfer of the Government lease (which secures to Government the premises in question pending its pleasure) to Mr. Landon, so long as that gentleman agrees to pay the amount as it falls due into the Collector's treasury.

3. With regard to the proposition made in the last para. of Mr. Landon's letter, "to purchase at a fair valuation such of the Government gins and machinery as may be of further use" to him in the prosecution of his enterprise, I am also of opinion that it might be advantageously entertained by Government; and, in that event, the best way of arriving at a fair valuation of the stock, would probably be to advertise a sale of the same, to take place immediately after the expiration of Mr. Landon's present lease, which would afford persons residing at the Presidency an opportunity of attending at Broach, if they wished to become purchasers; at the same time, an upset price, to be previously ascertained from the original invoices, might be named for the articles advertised, so as to protect Government from loss by collusion, or by the absence of bidders.

4. It may be as well to mention, that the premises of the Broach Saw-gin Company, which the firm of Messrs. Ritchie, Steuart & Co. have expressed themselves desirous of taking, with views akin to Mr. Landon's enterprise, are quite distinct from those now in the occupation of the last-mentioned gentleman.

Broach, Collector's Camp, Ahmode District,
Pahaj, 5 January 1850.

I have, &c.
(signed) J. M. Davies,
Collector.

* From the Collector of Broach, No. 14, of 5th January 1850, with accompaniment. To the Collector of Broach, No. 114, of 11 January 1850, with accompaniment. From the Collector of Broach, No. 28, of 21st January 1850, with accompaniment.

To *J. M. Davies*, Esq., Collector of Broach.

Sir,

I HAVE the honour to apprise you, for the information of the Right Honourable the Governor in Council, that, in pursuance of the object contemplated in the correspondence noted in the margin,* I am now erecting a steam-engine, new press, and other machinery, for the purpose of ginning and packing cotton upon a large scale, according to the most improved methods.

As the expense of adapting the buildings and erecting gin, steam, and press machinery, is very great, and as it would be very inconvenient and still more expensive to remove the machinery after once erected, I beg the favour of your soliciting the authority of Government either to transfer to me the lease under which it holds the Umjud Bagh premises from Merwanjee, or to allow me to occupy them as long as I wish after the expiration of my present tenure, on conditions of my paying into your treasury, at such times as might be required, the same rent as Government now pays. As my arrangements are for a permanent establishment, I should, if it meets the approbation of Government, prefer the latter course, which would prevent the landlord taking advantage of my position to raise the rent, which is already high in proportion to the value of the premises.

I beg to add further, that at the expiration of my present lease I shall be glad to purchase, at a fair valuation, such of the Government gins and machinery now in my possession as may be of further use to me.

I have, &c.
(signed) *J. Landon*.

Broach, 4 January 1849.

(No. 114 of 1850.)

To *J. M. Davies*, Esq., Collector, Broach.

Sir,

BEFORE submitting to Government your letter of the 5th instant, No. 14, with its accompaniments from Mr. Landon, I have the honour to observe, that Mr. Landon's present agreement with Government will cease in May next, which will be an inconvenient time of the year to expect purchasers to attend at Broach. I beg, therefore, the favour of your calling upon Mr. Landon to say what part of the machinery he is inclined to take at a valuation, and on what terms he proposes repaying Government for the same, and I would then wish to be informed whether there would be any objection to selling by public auction the remainder, or the whole of the machinery (if Mr. Landon's terms are not acquiesced in by Government) as early as possible, leaving the building and machinery, according to agreement, in the hands of Mr. Landon, until the expiration of his agreement, but subject, at the end of that time, to be made over to any party, the Government reserving also to itself the right of sub-letting the premises either to Mr. Landon or the purchaser of the machinery.

Revenue Commissioner's Camp,
Ahmedabad, 11 January 1850.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

To *J. M. Davies*, Esq., Collector of Broach.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement, No. 26, of the 16th instant, transmitting a copy of the Revenue Commissioner's letter, No. 114, of the 11th idem, calling upon me to say what part of the machinery now in my possession, belonging to Government, I am inclined to take at a valuation, at the expiration of my lease, and on what terms I propose paying for the same.

In reply, I beg to state that I shall be willing to purchase all the gins, machinery, implements, &c. that may be fit for further use after the termination of my present lease, and that I will pay cash for the same at the time of purchase.

I have, &c.
(signed) *J. Landon*.

Broach, 18 January 1850.

(No. 28 of 1850.)

True copy transmitted to the Revenue Commissioner, Northern Division, with reference to his letter, No. 114, of the 11th instant.

(signed) *J. M. Davies*,
Collector.

Broach, Collector's Camp, Ahmode,
21 January 1850.

* *J. Landon* to Mr. Secretary Goldsmid, dated 22 March 1848. Government letter, No. 2053, of 7th April 1848. The Secretary to the Honourable Court of Directors to *James Landon*, dated 16th June 1848. *J. Landon* to Chief Secretary to Government, dated 29th June 1849.

MINUTE by the Honourable Board.

MR. SHAW and Mr. Davies recommend that, at the expiration of his present lease, Mr. Landon be allowed to purchase, at a "fair valuation," such of the machinery, &c., as he may require at the end of his present lease: the former gentleman does not state the exact manner in which we are to arrive at that valuation, but the latter suggests that "the best way would probably be to advertise a sale of the same (the stock), to take place immediately after the expiration of Mr. Landon's present lease, which would afford persons residing at the Presidency an opportunity of attending at Broach if they wished to become purchasers; at the same time, an upset price, to be previously ascertained from the original invoices, might be named for the articles advertised, so as to protect Government from loss by collusion or by the absence of bidders."

Para. 2 of letter
dated 3d December
1849, No. 7156.

2. We know that both Messrs. Ritchie, Steuart & Co. and Mr. Landon, are desirous of obtaining possession of the machinery. We have already informed the former party, that "his Lordship in Council is very desirous of affording you all due assistance in his power towards any undertaking having for its object that which, if successful, will of necessity be attended by advantage to the country." And we are of course equally desirous of assisting Mr. Landon.

3. It is, however, to be remembered that Messrs. Ritchie, Steuart & Co. have not yet commenced, whilst Mr. Landon is already, and for some time past has been, conducting active operations at Broach: he is no doubt a man of energy, and possessing the necessary qualifications, and would appear, from Revenue Commissioner, Northern Division, to have sufficient funds at his disposal to enable him to carry on the undertaking. It is quite clear that we could not deprive him of the machinery he requires without crippling his means, and that were failure to attend his endeavours, there is every reason to fear that people would hereafter be deterred from risking their time, health, and money, by undertaking like operations in the interior.

4. Mr. Shaw, who is aware of Messrs. Ritchie, Steuart & Co.'s desire to obtain the machinery, is evidently in favour of its being continued to Mr. Landon, and not being put up to public auction. I concur in this opinion, and would propose that the machinery, &c. required by Mr. Landon be made over to him at a valuation, to be made by the Revenue Commissioner, Northern Division, himself, after referring to the invoices, and making whatever allowance he may see fit for wear and tear, &c. Mr. Shaw may do this without further reference to us, merely reporting the result.

6. If any of the remaining machinery will be of any service to Messrs. Ritchie, Steuart & Co., they will be welcome to its purchase, on a valuation to be made by Mr. Shaw, or to use it until they obtain their own machinery from home; the rest may be sold by auction, if Mr. Shaw first ascertains it will be of no use to the engineers or superintendents in the Southern Mahratta Country, Khandeish or Sattara districts.

7. I have no objection to our continuing to rent the premises from Merwanjee Hormusjee, and sub-letting them for the same sum we pay to Mr. Landon, provided the Collector takes care to make such arrangements with the latter gentleman as will effectually secure us from trouble or loss on account of demands on the part of the proprietor for ordinary repairs or damage, or on any other account.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

6 February 1850.

(No. 1047 of 1850.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division.

Sir,

I HAVE laid before the Right Honourable the Governor in Council your letter, No. 319, dated the 31st ultimo, with its enclosed communications from the Collector of Broach and Mr. Landon.

2. Both you and Mr. Davies recommend that at the expiration of his present lease Mr. Landon be allowed to purchase, at a fair valuation, such of the machinery, &c., at Broach as he may require. You do not state the exact manner in which Government is to arrive at that valuation; but Mr. Davies suggests that "the best way would probably be to advertise a sale of the same (the stock) to take place immediately after the expiration of Mr. Landon's present lease, which would afford persons residing at the Presidency an opportunity of attending at Broach, if they wished to become purchasers; at the same time an upset price, to be previously ascertained from the original invoices, might be named for the articles advertised, so as to protect Government from loss by collusion, or by the absence of bidders."

3. Government is aware that both Messrs. Ritchie, Steuart & Co., of this place, and Mr. Landon are desirous of obtaining possession of the machinery. Government has already informed

informed the former party that "his Lordship in Council is very desirous of affording you all due assistance in his power towards any undertaking having for its object that which, if successful, will of necessity be attended by advantage to the country;"* and Government is of course equally desirous of assisting Mr. Landon.

4. It is, however, to be remembered, that Messrs. Ritchie, Steuart & Co. have not yet commenced, whilst Mr. Landon is already, and for some time past has been, conducting active operations at Broach; he is no doubt a man of energy, and possessing the necessary qualifications, and would appear from you to have sufficient funds at his disposal to enable him to carry on the undertaking. It is quite clear that Government could not deprive him of the machinery he requires without crippling his means, and that were failure to attend his endeavours, there is every reason to fear that people would hereafter be deterred from risking their time, health, and money by undertaking like operations in the interior.

5. You who are aware of Messrs. Ritchie, Steuart & Co.'s desire to obtain the machinery, are evidently in favour of its being continued to Mr. Landon, and not being put up to public auction: his Lordship in Council concurs in this opinion, and has therefore been pleased to direct me to inform you, that the machinery, &c. required by Mr. Landon is to be made over to him at a valuation, to be made by yourself, after referring to the invoices, and making whatever allowance you may see fit for wear and tear, &c. You may do this without further reference to Government, merely reporting the result.

6. If any of the remaining machinery will be of any service to Messrs. Ritchie, Steuart & Co., they will be welcome to its purchase, on a valuation to be made by you, or to use it until they obtain their own machinery from home; the rest may be sold by auction, if you first ascertain it will be of no use to the engineers or superintendents in the Southern Mahratta country, Khandeish, or Sattara districts.

7. His Lordship in Council has no objection to Government continuing to rent the premises from Merwanjee Hormusjee, and sub-letting them, for the same rent, to Mr. Landon, provided the Collector takes care to make such arrangements with the latter gentleman as will effectually secure Government from trouble or loss on account of demands on the part of the proprietor for ordinary repairs or damage, or on any other account.

I have, &c.
(signed) H. E. Goldsmid,
Secretary to Government.

Bombay Castle,
14 February 1850.

EXTRACT of a LETTER from the Court of Directors to the Government of Bombay, dated 6th November (No. 9) 1850.

7. WE approve the arrangements which you made for bringing the experiments in Broach to a close on the 31st July 1849, and for allowing Mr. Landon to have the free use of the buildings, machinery, &c., up to the 30th April last, after which date he was to be permitted to retain such portion as he might require at a reasonable valuation. We observe with satisfaction that Mr. Landon expected to ship on his own account to Manchester upwards of 2,000 bales of cotton during the current year.

8. We observe also that Messrs. Ritchie, Steuart & Co. had it in contemplation to form a similar establishment in Broach to that commenced by Mr. Landon.

9. We trust that these undertakings may meet with success. We are convinced that nothing is so essential to secure the object which we have had in view, viz., the supply from India of an improved quality of cotton suited to the wants of the manufacturers of this country, as the location in the cotton producing districts of persons who will deal directly with the ryots, and act upon their interests, by showing that the price which they will obtain for their commodity will be in proportion to the care and pains bestowed on its cultivation and preparation for the market. It is obvious that nothing is so likely to conduce to this most desirable end as the example of persons who have themselves entered on such an undertaking, and who have found the result to be remunerative.

III.
Bombay.

REVENUE LETTER from the Government of Bombay (No. 93, 1850.)

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

Honourable Sirs,

Cotton Experiments, Khandeish, Proceedings regarding an agency established in, by Messrs. Ritchie, Stuart & Co., with the view of procuring regular supplies of cotton, better cleaned and adapted for the home market than is usually procurable at Bombay.

We have the honour of enclosing a copy of our proceedings* for the purpose assisting Messrs. Ritchie, Stuart & Co., of this city, in the attempt they have made to establish, by means of an agency in Khandeish, a permanent relation between the grower and merchant, and to ensure a better and cleaner description of cotton coming to market than is forwarded through native traders, who find it their interest to add to the weight of the article by adulterating it in various ways.

2. Your Honourable Court will learn from our several minutes that the measures determined on by the majority have not been fully concurred in by the Honourable Mr. Blane.

3. Your Honourable Court will also learn that the Revenue Commissioner, Northern Division, is opposed to our proceedings, in consequence of our not having stipulated that the agency should confine their purchases exclusively to American cotton; but to quote the words used by our Right Honourable President, under date the 15th ultimo:—

“Although it is our earnest desire to ensure the introduction of the New Orleans variety, we also earnestly wish to improve the indigenous cotton, for we consider it of very great importance to trade, and to the welfare of our cultivators, that the indigenous cotton should have fair play from the day the seed is put into the ground up to that of the wool being put on board ship, that it should be carefully picked, freed from seed, honestly packed, and carefully conveyed to the coast.”

Bombay Castle, 17 October 1850.

(signed) *J. P. Willoughby.*
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 5 December 1849.

From Messrs. *Ritchie, Stuart & Co.*, to Mr. Chief Secretary *Mulet* ; dated 19 November 1849.

Sir,

V. 15031.

It having been brought to our knowledge that Government is about to dispose of the whole of the saw-gin machinery at Broach, we take the liberty of addressing you, to request the favour of any information on this point you may be pleased to afford.

It has been our wish and intention for some time past to erect machinery in one of the principal cotton districts, to supply ourselves with cleaner cotton than is now procurable in the market, and we think there might perhaps now be found a favourable opportunity for doing so; and if saw-gins could be had at Broach, with the necessary facilities, &c. from the Government authorities for their erection, we are ready and willing to entertain the subject, and to commence the erection of machinery, so as to begin operations with the new crop in March next.

We may further mention, that we have already got driving gear sufficient for two gins of sixty saws each; so that we apprehend there could be no difficulty in effecting a commencement this season, if Government will afford the other little aids necessary to the success of the undertaking, and which we shall have the opportunity of naming in detail, should this proposal meet with a favourable reply.

Bombay, 19 November 1849.

We have, &c.
(signed) *Ritchie, Stuart & Co.*

* Rev. Cons., 1849; 5th December, V. 15031 to 34; 19th December, V. 15188 to 90. Rev. Cons., 1850: 4th January, V. 6; 23d January, V. 760 to 62; 23d January, V. 889 to 93; 20th March, V. 3502 to 3505; 13th April, V. 5326 and 27; 3d May, V. 5604 to 606; 3d May, V. 6074 to 76; 22d May, V. 7346 to 50; 12th June, V. 8354 to 56; 13th April, V. 4860; 12th June, V. 8236 to 44; 11th September, V. 12243 to 46; 9th October, V. 13856 to 61; 9th October, V. 14462 to 64; 22d May, V. 8142 to 45; 12th June, V. 8935 to 44; 10th July, V. 9070 to 73; 10th July, V. 9344 to 47; 10th July, V. 10513 to 15; 3d May, V. 7039 to 41; 3d May, V. 7213 and 14; 22d May, V. 7578; 22d May, V. 7818 and 19; 12th June, V. 8406 to 9; 10th July, V. 9250 to 52; 11th September, V. 12794 to 97.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 903

III.
Bombay.

MINUTE by the Right Honourable the Governor; dated 26 November 1849,
subscribed to by the Board.

V. 15032.

Messrs. Ritchie, Steuart & Co. to be informed, that on the abolition of the Government cotton experiments at Broach Mr. Landon offered to carry on the business on his own account, if he were allowed the free use of all the machinery, buildings, and cattle, until 30th April 1850, he keeping the machinery and buildings in repair, and feeding the cattle; that we consented to these terms, and the collector was authorised to invite tenders for renting the stock mentioned for a term from the expiry of the above date.

That we are very desirous of affording them all the assistance in our power towards any undertaking having for its object that which will, if successful, of necessity be attended by advantage to the country, and that they are at liberty to place themselves in direct communication with the collectors of the cotton districts and the Revenue Commissioners, Northern and Southern Divisions, who have been requested by us to furnish them, in reply to the references they may receive, with all the information and suggestions that may occur to them.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

26 November 1849.

(No. 7156 of 1849.)

From Mr. Secretary *Goldsmid* to Messrs. *Ritchie, Steuart & Co.*

Gentlemen,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, dated the 19th ultimo, and to inform you, that on the abolition of the Government cotton experiment at Broach, Mr. Landon offered to carry on the business on his own account, if he were allowed the free use of all the machinery, buildings, and cattle, until 30th April 1850, he keeping the machinery and buildings in repair, and feeding the cattle; that Government consented to these terms, and the Collector of that place was authorised to invite tenders for renting the stock mentioned for a term from the expiry of the above date.

V. 15033.

2. His Lordship in Council is very desirous of affording you all due assistance in his power towards any undertaking having for its object that which, if successful, will of necessity be attended by advantage to the country; and he requests, therefore, that you will consider yourselves at liberty to place yourselves in direct communication with the Collectors of the cotton districts and the Revenue Commissioners of the Northern and Southern Divisions, who have been requested to furnish you, in reply to the references they may receive from you, with all the information and suggestions that may occur to them.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 3 December 1849.

(No. 7157, of 1849.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to transmit, for your information and guidance, and for immediate communication to the collectors of the cotton-growing districts of your division, the accompanying copy of a letter from Messrs. *Ritchie, Steuart & Co.*, dated the 19th ultimo, and of the reply returned thereto under this day's date (No. 7156.)

V. 15034.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 3 December 1849.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue,
dated 19 December 1849.

From Messrs. *Ritchie, Steuart & Co.*, to Mr. Secretary *Goldsmid*.

Sir,
WE have the honour to acknowledge the receipt of your letter, No. 7156, of the 3d instant, in reply to ours of the 19th ultimo, and beg to express our satisfaction at the terms of encouragement which are conveyed therein to our plan of erecting saw-gin machinery at Broach,

V. 15188.

III.
Bombay.

Broach, and we have no doubt our views and wishes will meet with full support and assistance from the local executive authorities of the Government.

2. We are very desirous to have the machinery put up and at work in time for the present season's crop, and we believe this can be accomplished if Government will allow us similar liberal terms as have been granted to Mr. Landon.

3. When Mr. Landon, late engineer to the Broach cotton experiments, was here last month, on his way to Dharwar, we had an opportunity of obtaining his opinion as to the driving gear in our possession; and he assured us that it was of a superior description, and could be put up in Broach so as to work a couple of large sixty saw-gins. After due consideration we determined to try what could be done; and our application to Government of the 19th ultimo was resolved on.

4. It appears that, although the Government machinery has been lent to Mr. Landon, there are a number of saw-gins at Broach unemployed, and which he cannot, we should suppose, find work for at present; and perhaps Government could allow us to have for hire or for purchase a couple such as we require.

5. At present, however, it is our intention to take the use of the premises of the "Broach Saw-gin Company," and as there are two large sixty saw-gins belonging to it, and which were made over to it by the late superintendent, Dr. Burn, by order of Government, as per Government Letter, No. 4889, of 18th October 1845 (and which Dr. Burn informs us were in the gin-house of the company when he left Broach), we shall not at present want any other machinery.

6. What we greatly require, however, is an experienced engineer; and we have to request the favour of Government to allow us the services of Mr. Laidlaw. With the premises of the "Broach Saw-gin Company," and the two gins given to it by Government, we could depend on Mr. Laidlaw being able to take our gearing to Broach, erecting it, and having the whole ready for work in time for the crop of this season.

7. If Government can spare us the services of Mr. Laidlaw, we feel very sanguine of establishing efficient machinery at Broach; without him we cannot hope to overcome the numerous little difficulties attendant on the efficient erection of this peculiar kind of machinery; and as his services are not, we have understood, urgently required at Dharwar, and it is the only favour we at present find it necessary to ask, we hope Government will see the necessity of our request, and graciously comply with the same at as early a date as may be possible.

Bombay, 4 December 1849.

We have, &c.
(signed) *Ritchie, Stuart & Co.*

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Board.

V 15189.

MR. LANDON is now, I understand, in Bombay; the Revenue Secretary to place himself in personal communication with him and Messrs. Ritchie, Stuart & Co., and place before us a memorandum descriptive of the arrangements which can be made for meeting the views of both parties.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

5 December 1849.

(No. 7227 of 1849.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Southern District.

Sir,

V. 15190.

WITH reference to the report of the Revenue Commissioner, Northern Division, No. 2107, dated the 16th October last, copy of which, and of a letter from Government, No. 6284, dated 19th October, to Mr. Laidlaw's address, were forwarded to you, with endorsement No. 6286, of 19th idem, relative to the appointment of Mr. Laidlaw to act as assistant to Mr. Channing, the superintendent of the cotton experiments at Belgaum, I have been directed by the Right Honourable the Governor in Council to transmit the accompanying copy of a communication from Messrs. Ritchie, Stuart & Co., dated the 4th instant, and to request that you will be good enough immediately to ascertain and report whether the services of Mr. Laidlaw can be spared from Belgaum.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 6 December 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 905

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue;
dated 4 January 1850.

(No. 4 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Broach.

Sir,

WITH reference to my letter of 3d ultimo, No. 7157, to the address of the Revenue Commissioner, Northern Division, relative to the intention of Messrs. Ritchie, Steuart & Co. to take measures for obtaining cleaner cotton than is now procurable in the market, and of which you must have already received a copy, I have been directed by the Right Honourable the Governor in Council to forward you transcript of a further communication from that firm, and to request that you will immediately furnish to Government all the information you can relative to its 4th and 5th paras.

Bombay Castle, 2 January 1850.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

III.
Bombay.

V. 6.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue;
dated 23 January 1850.

(No. 20 of 1850.)

From the Collector of Broach to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter No. 4 of the 2d instant, forwarding transcript of a further communication received from the firm of Messrs. Ritchie, Steuart & Co., and directing me to furnish immediate information relative to its 4th and 5th paras.

2. In reply, I have respectfully to observe, for the information of Government, that Messrs. Ritchie, Steuart & Co. have been altogether misinformed as to the present position of the Broach Saw-gin Company. It is true that Government did in its letter to the then superintendent, Dr. Burn (No. 4889 of the 18th October 1845), sanction the transfer to the company of two sixty saw-gins on the receipt of 1,200 rupees in payment of the same; but Government having about the same period resolved on retaining the Umjud Bagh premises, the coparceny of the Saw Gins Company was broken up, and its interests became vested, with one or two exceptions, as I am given to understand, in Dr. Burn himself. The proposition for purchasing the gins, it appears, fell to the ground.

3. One sixty saw-gin was, however, put up on the company's premises by Dr. Burn before quitting his incumbency, but it was brought away by his successor, Mr. Mercer, as being Government property. The company, though latterly supplied with the loan of a hand-gin, does not appear to have ever possessed, as its own, a saw-gin of any description.

4. On the subject of the firm's 4th para., I beg to state that, on consulting Mr. Landon, I am informed by that gentleman that he is about to make use of all the serviceable machinery, the property of Government, which has been made over to him for the current season, and that to deprive him of any portion of it would be to cripple his resources.

I have, &c.
(signed) *J. M. Davies*,
Collector.

Broach, Collector's Camp, Ahmode District, Pahaj,
8 January 1850.

MINUTE by the Honourable Board, dated 14 January 1850.

Messrs. Ritchie, Steuart & Co. to be informed that they are in error in supposing that the "Broach Saw-gin Company" have the two 60 saw-gins referred to in para. 5 of their letter of 4th December last, as the company did not avail themselves of the permission of Government to purchase them, and that it appears on reference to collector of Broach, that to deprive Mr. Landon of any of the Government machinery placed at his disposal, would cripple his resources in a manner we are most averse to doing.

296- Sess. 2.

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The

V. 761-

III.
Bombay.

The number of small gins available at Broach as reported by Mr. Shaw in his report on application from the Resident of Sattara to be mentioned to Messrs. Ritchie, Steuart & Co., and they at the same time informed that they are welcome to the use of them until they procure machinery of their own.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

14 January 1850.

(No. 456 of 1850.)

From Mr. Secretary *Goldsmid* to Messrs. *Ritchie, Steuart & Co.*

Gentlemen,

V. 762.

WITH reference to paras. 4 and 5 of your letter dated the 4th ultimo, I have been directed to inform you that you are in error in supposing that the "Broach Saw-gin Company" have the two 60 saw-gins you allude to, for the company did not avail themselves of the permission of Government to purchase them. It also appears, on reference to the collector of Broach, that to deprive Mr. Landon of any of the Government machinery placed at his disposal would cripple his resources in a manner Government are most averse to doing.

Letter, No. 2668,
dated 31st Decem-
ber 1849.

2. The revenue commissioner, Northern Division has, however, reported that there are 1,452 ten-inch gin-saws available at Broach. If any of these will answer your purpose, his Lordship in Council desires me to state that they will be placed at your disposal until you procure machinery of your own.

3. The result of the reference which has been made to the local authority regarding Mr. Laidlaw will be forthwith communicated to you.

I have, &c.
(signed) *H. C. Goldsmid,*
Secretary to Government.

Bombay Castle, 15 January 1850.

V. 889 to 93. EXTRACT from the Proceedings of Government in the Territorial Department, Revenue; dated 23 January 1850.

(No. 116 of 1850.)

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

V. 889.

Transmitted to Government in reply to their letters No. 7227 and 7417, dated the 6th and 19th ultimo respectively.

2. With respect to the collector, Mr. Reeve's proposal to give Mr. Channing another assistant (in the event of Mr. Laidlaw's removal), to enable him to meet the demands which may be made on him for machinery, &c., the Revenue Commissioner is of opinion that sufficient reason is hardly shown for such a measure. Under date the 10th May last (No. 3122), Government authorised the establishment of the gin factory, for both the Belgaum and Dharwar collectorates at Khosigul, and in consequence determined on the return of Corporal Hazells to his military duties, an assistant to Mr. Channing having been considered to be no longer necessary. On a reference also to the accompaniment to the Dharwar collector's letter, submitted to Government by this department, under date the 25th August last; No. 3390, it will be observed that Mr. Blount, the Superintendent, while advocating the discharge of Mr. Vary, was of opinion that "one engineer was quite sufficient to meet all demands for machinery, from both the Dharwar and Belgaum" collectorates.

(signed) *E. H. Townsend,*
Revenue Commissioner, Southern Division.

Rutnageree Districts, Revenue Commissioner's
Camp, "Vauvh," 8 January 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 907

(No. 630 of 1849.)

III,
Bombay.

To *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division, Poona.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement No. 4439, dated the 8th instant, forwarding copy of a Government letter, No. 7227, dated 6th idem, and its accompaniment, and to inform you that the services of Mr. Laidlaw may be placed at the disposal of Messrs. Ritchie, Steuart & Co.

V. 890.

2. At the same time I am respectfully of opinion that an assistant to Mr. Channing is highly requisite; and I therefore solicit that one may be allowed to him, to enable him to meet the demands which may be made on him for machinery by native dealers, as well as to carry out the views of Government in regard to the introduction of a reformed system of cleaning cotton in the Belgaum district.

3. Should Government be pleased to allow another assistant, I would suggest that his selection be left to Mr. Channing, who informs me that he knows of a European whose mechanical qualifications point him out as likely to meet the object in view.

4. I beg to return copy of Messrs. Ritchie, Steuart and Co.'s letter, as requested by you.

I have, &c.

(signed) *H. W. Reeves*,
Collector.

Belgaum Collector's Camp, Bubleshwur,
27 December 1849.

MINUTE by the Right Honourable the Governor, subscribed to by his Excellency the Commander-in-Chief and the Honourable Messrs. *Willoughby* and *Blane*.

MESSRS. Ritchie, Steuart & Co. may be informed of the terms on which Mr. Laidlaw is employed by us, and hold that we have no objection to at once cancel that agreement, and place Mr. Laidlaw's services at their disposal, if they can arrange with him for our so doing.

V. 891.

I do not see sufficient reasons stated for giving Mr. Channing another assistant; if there are such, Mr. Reeves should detail them, and mention the name and present occupation of the person whom it is proposed to employ, and the terms on which it is contemplated to employ him.

(signed) *Falkland*,
W. Cotton,
J. P. Willoughby,
D. A. Blane.

15 January 1850.

(No. 523 of 1850.)

From Mr. Secretary *Goldsmid* to Messrs. *Ritchie, Steuart & Co.*

Gentlemen,

REFERRING to the 6th and 7th paras. of your letter, dated the 4th ultimo, and to para. 3 of mine to your address of the 15th instant, I have been directed to inform you that Mr. Laidlaw receives from Government a salary of 250 rupees a month, which is to be continued to him until the 31st July next, when his engagement ceases. He also receives a rate of five rupees per diem when absent from head-quarters on duty.

V. 892.

2. Government have no objection to meet your wishes by at once placing Mr. Laidlaw's services at your disposal if you can arrange with him, so that he consent to his engagement with Government being cancelled.

I have, &c.

(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 17 January 1850.

III.
Bombay.

(No. 524 of 1850.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Southern Division.

Sir,

V. 893. . With reference to your memorandum No. 116, dated the 8th instant, submitting a letter from the collector of Belgaum, I have been directed to inform you that the Right Honourable the Governor in Council concurs with you that that officer has not stated sufficient reasons for giving Mr. Channing another assistant in the event of Mr. Laidlaw's removal.

2. If Mr. Reeves can show good grounds for the measure recommended by him he should detail them, and mention the name and present occupation of the person whom it is proposed to employ, and the terms on which it is contemplated to employ him.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 17 January 1850.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue ;
dated 20 March 1850.

From Messrs. *Ritchie, Steuart & Co.* to Mr. Secretary *Goldsmid*.

Sir,

V. 3502. We have the honour to acknowledge the receipt of your letters, No 456 of the 15th, and 523 of the 17th January last.

With reference to paragraph No. 2 of the former, we have the honour to state, that as none of the sixty saw-gins now at Broach can be made over to us, we shall be glad to avail ourselves of the 1,452 ten-inch saws which Government are prepared to place at our disposal.

With reference to your letter No. 523, we have the honour to inform you, that, having communicated with Mr. Laidlaw, we find he is not disposed to have his engagement with Government cancelled at present. As, however, it is of great consequence to us that we should have a properly qualified engineer to remove our machinery from Bombay to Broach, as well as to make up the saws above alluded to into gins, perhaps Government will not object to grant our former request that Mr. Laidlaw's services might be temporarily placed at our disposal, and we renew our offer to pay such portion of his salary and allowances as Government shall deem proper.

We would further state, that as the season is so far advanced, we should esteem an early decision in this matter a great favour.

Bombay, 6 March 1850.

We have, &c.
(signed) *Ritchie, Steuart & Co.*

MINUTE by the Honourable Board.

V. 3503. Extracts para. 3, 4, and, with the omission of the Revenue Commissioner's opinion, para. 5 and para. 6 of Government letter of 14 February 1850, No. 1047, to be sent Messrs. *Ritchie, Steuart & Co.*

We may direct Mr. Laidlaw immediately to proceed to Bombay to assist Messrs. *Ritchie, Steuart & Co.* in putting up their machinery at Broach, and making up gins, on condition of their paying Mr. Laidlaw travelling expenses, and such portion of his salary of 250 rupees as we may have to give the person Mr. Channing may employ to supply Mr. Laidlaw's place.

Mr. Laidlaw's engagement with us positively ceases on 31 July next.

We may intimate to Messrs. *Ritchie, Steuart & Co.* that if they prefer going to some place where a private establishment is not already at work, the Collectors of the cotton-producing districts and the revenue commissioners will, as stated in Government letter of 3 December, para. 2, furnish them with the fullest information at their command relative to the best localities as regards climate and extent of cultivation for them to commence operations.

6 March 1850.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 909

(No. 1802 of 1850.)

From Mr. Secretary *Goldsmid* to Messrs. *Ritchie, Steuart & Co.*

Gentlemen,
I HAVE placed before the Right Honourable the Governor in Council your letter of yesterday's date.

2. The accompanying extracts* from instructions sent to the Revenue Commissioner, Northern Division, under date 14th ultimo, are forwarded to you with reference to para. 2 of your letter.

3. In reply to para. 3, I have been directed to inform you that Mr. Laidlaw has been instructed immediately to proceed to Bombay, to assist you in removing your machinery, and putting it up at Broach, and in making up gins.

4. You will have the goodness to pay Mr. Laidlaw his travelling expenses, and to make good to him such portion of his salary as Government may have to pay to the person with whom it may possibly be found necessary to supply Mr. Laidlaw's place at Belgaum.

5. Mr. Laidlaw's engagement with Government will positively cease on the 31st July next.

6. His Lordship in Council has also desired me to intimate to you, that if you prefer going to some place where a private establishment is not already at work, the Collectors of the cotton producing districts and the revenue commissioners will, as stated in para. 2 of my letter to your address of 3d December last, No. 7156, furnish you with the fullest information at their command relative to the best localities as regards climate and extent of cultivation for you to commence operations.

Bombay Castle, 7 March 1850.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

III.
Bombay.

V. 3504.

(No. 1803 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Belgaum; dated 7 March 1850.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to request that you will direct Mr. Laidlaw immediately to proceed to Bombay, to assist Messrs. *Ritchie, Steuart & Co.* in removing their machinery, and putting it up at Broach, and in making up gins.

2. Mr. Laidlaw's engagement with Government positively ceases on the 31st July next, till which date he will receive his salary from Government.

Bombay Castle, 7 March 1850.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

V. 3505.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue; dated 13 April 1850.

(No. 214 of 1850.)

From the Collector of Belgaum to the Secretary to Government.

Sir,

WITH reference to your letter, No. 1803, dated the 7th instant, requesting me to direct Mr. Laidlaw immediately to proceed to Bombay, to assist Messrs. *Ritchie, Steuart & Co.* in removing their machinery and putting it up at Broach, &c., I have the honour to forward for your information copy of a letter received this day from that person.

Belgaum, Collector's Office,
23 March 1850.

I have, &c.
(signed) *H. W. Reeves*, Collector.

V. 5326.

* Extract paras. 3 and 4 from a letter, No. 1047, dated 14th February 1850. Extract from para. 5 of the same letter. Extract para. 6 of ditto.

III.
Bombay.

To *H. W. Reeves*, Esq., Collector of Belgaum.

V. 5327.

Sir,
IN acknowledging the receipt of Government letter, No. 1803, dated 7th March, and your endorsement thereon, on which I beg to state, for the information of his Honour in Council, that in the act of repairing one of the cotton gins, broken on its way up to this station, which will delay me one day, after which I will forthwith proceed, and place my services at the disposal of Messrs. Ritchie, Steuart & Co. as instructed.

I have, &c.

(signed) *W. Laidlaw*, Civil Engineer,
Acting Assistant Superintending Cotton Experiments.

Hoongoond, 17 March 1850.

(True copy.)

(signed) *H. W. Reeves*, Collector.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue; dated 3 May 1850.

From Messrs. *Ritchie, Steuart & Co.* to Mr. Secretary *Goldsmid*.

V. 5604.

Sir,
WITH reference to para. 2 of your letter of the 15th January last, we have the honour to inform you that Mr. Laidlaw having commenced the removal of our machinery to Khandeish, we are now prepared to receive the 10-inch gin-saws, the use of which the Right Honourable the Governor in Council was pleased to offer us. We presume the shafts belonging to these saws, and which we are informed are likewise in the Government stores at Broach, will at the same time be placed at our disposal.

Bombay, 13 April 1850.

We have, &c.
(signed) *Ritchie, Steuart & Co.*

MINUTE by the Honourable Board; dated 15 April 1850.

V. 5605.

MR. DAVIES to be requested immediately to forward these articles to Dhurumgaum, care of Mr. Laidlaw.

15 April 1850.

(signed) *Falkland*,
W. Cotton,
D. A. Blane.

(No. 2036 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Broach.

V. 5606.

Sir,
WITH reference to para. 2 of my letter, No. 456, of 15th January last, to the address of Messrs. Ritchie, Steuart & Co., copy of which was forwarded to you under endorsement on the same date, No. 457, I have been directed by the Right Honourable the Governor in Council to request you will immediately forward to Dhurumgaum, care of Mr. Laidlaw, the articles referred to by Messrs. Ritchie, Steuart & Co. in their letter of 13th instant, of which the annexed is a copy.

Bombay Castle, 15 April 1850.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

EXTRACT

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 911

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 3d May 1850.

(No. 82 of 1850.)

From the Collector of Broach to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter (No 2836) of the 15th instant, and to state that, conformably with the instructions therein conveyed, I have directed (1,000) one thousand of the 10-inch gin-saws, in charge of this department, to be packed up in (3) three boxes, which will be despatched immediately by cart to Mr. Laidlaw's care at Dhurrumgaum. Two iron cylinders, the only ones on hand, have also been packed up.

V. 6974.

2. The residue of the gin-saws, 452 in number, I have taken it upon me to retain for Mr. Landon's requirements, as that gentleman's Europe supplies of implements have not yet reached him. The number transmitted to Khandeish is at the same time ample to commence upon, being more than equal to the whole gin machinery now made up at Broach. Of my proceedings, dictated by the liberal consideration evinced by Government towards Mr. Landon, I trust the Right Honourable the Governor in Council will be pleased to approve.

I have, &c.
(signed) *J. M. Davies*,
Collector.

Broach, Collector's Camp, Mehgaum,
23 April 1850.

MINUTE by the Honourable Board, dated 30 April 1850.

V. 6975.

PARA. 1 to be forwarded for information of Messrs. Ritchie, Steuart & Co.

(signed) *Falkland*,
W. Cotton,
D. A. Blanc.

(No. 3590 of 1850.)

From Mr. Secretary *Goldsmid* to Messrs. *Ritchie, Steuart & Co.*

Gentlemen,

WITH reference to my letter of the 15th instant (No. 2837) I have been directed, by the Right Honourable the Governor in Council, to forward, for your information, the accompanying extract, para. 1, of a letter from the collector of Broach (No. 82), dated the 23d idem.

V. 6976.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle,
26 April 1850

EXTRACT from the Proceedings of Government, in the Territorial Department, Revenue,
dated 22d May 1850.

MEMORANDUM by Mr. Secretary *Goldsmid*.

THE Revenue Secretary has the honour to inform the Honourable Board that Mr. Laidlaw has applied to him for information, as to whether, in event of his taking service under Messrs. Ritchie, Steuart & Co., at the termination of his present engagement with Government (31st July 1850), instead of at once returning to England, he will forfeit his claim to a passage to England, provided for in his covenant.

V. 7316.

The Secretary has the honour to suggest that he be authorised to inform Mr. Laidlaw, that his claim to a passage will not be affected by his remaining in the country.

See subjoined
extract.

Mr. Laidlaw would prefer remaining in Government employ to serving other parties in India; but Government have already determined that his services will not be required by them.

(signed) *H. E. Goldsmid*,
Secretary to Government.

16 April 1850.

III.
Bombay.

(Extract.)

“ And also shall and will, at the expiration of the said period of three years, or at any subsequent period, if the said Walter Laidlaw shall leave the said service with the approbation of the said Company, procure the said Walter Laidlaw a passage from India to England.”

MINUTE by the Right Honourable the Governor, concurred in by his Excellency the Commander-in-Chief.

V. 7347. I CONCUR in the Secretary's view of Mr. Laidlaw's case. (signed) *Falkland.*
20 April 1850. *W. Cotton.*

MINUTE by the Honourable Mr. *Blane*.

V. 7348. I HAVE no objection to the concession in Mr. Laidlaw's case; but think our solicitor might be consulted as to the retention of any claim, according to the terms of Mr. Laidlaw's covenant, in order to guard against the decision in this instance being taken as an interpretation of such covenants, with respect to the title to return passage after any unlimited interval.
23 April 1850. (signed) *D. A. Blane.*

FURTHER MINUTE by the Right Honourable the Governor, concurred in by his Excellency the Commander-in-Chief and the Honourable Mr. *Blane*.

V. 7349. I THINK there can be but little doubt on the subject; but have no objection to our solicitor being consulted, as proposed by my honourable colleague. (signed) *Falkland.*
27 April 1850. *W. Cotton.*
D. A. Blane.

(No. 3750 of 1850.)

From Mr. Secretary *Goldsmid* to the Honourable Company's Solicitor.

V. 7350. Sir,
I HAVE been directed by the Right Honourable the Governor in Council to transmit to you an extract from a covenant entered into by Mr. Laidlaw, an engineer, with Government, and to request that you will state whether, in the event of his taking service under any mercantile firm in Bombay at the termination of his present engagement with Government, 31st July 1850, instead of at once returning to England, he will forfeit his claim to a passage to England, as provided for in his covenant.

2. His Lordship in Council does not object to the concession in this case; but he is desirous of guarding against the retention of any claim, according to the terms of Mr. Laidlaw's covenant, being taken as an interpretation of such covenants, with respect to the title to return passage after any unlimited interval.

Bombay Castle, 6 May 1850. (signed) *I have, &c.*
H. E. Goldsmid,
Secretary to Government.

V. 8354 to 56. EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 12 June 1850.

(No. 179 of 1850.)

From the Honourable Company's Solicitor to Mr. Secretary *Goldsmid*.

V. 8354. Sir,
IN reply to your letter of 6th instant (No. 3750 of 1850), I have the honour to state that I think (and the Advocate General, whom I have spoken with, concurs with me) that the intention of this deed is, that if Mr. Laidlaw prefers remaining in the country to returning to England he forfeits his claim to passage-money; but I think it might properly be suggested that in future covenants of a like nature it should be expressly stated.

Bombay, 10 May 1850. (signed) *I have, &c.*
W. Acland,
Honourable Company's Solicitor.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 913

MINUTE by the Right Honourable the Governor, concurred in by the Honourable Messrs. *Willoughby* and *Blane*.

MR. LAIDLAW to be informed accordingly, but at the same time told, that as he remains for the performance of duties in furtherance of the object for which he was sent to this country, we will not in his case object to furnishing him with a passage to England at an after period.

(signed) *Falkland*
J. P. Willoughby
D. A. Blane.

4 May 1850.

(No. 4302 of 1850.)

From Mr. Secretary *Goldsmid* to the Assistant Superintendent Government Cotton Experiments.

Sir,

WITH reference to your inquiry as to whether, in event of your taking service under Messrs. *Ritchie, Steuart & Co.* at the termination of your present engagement with Government, instead of at once returning to England, you will forfeit your claim to a passage to England provided for in your covenant, I have been directed to acquaint you that the intention of the provision on your covenant is, that if you prefer remaining in the country to returning to England you forfeit your claim to passage money.

2. As, however, you remain for the performance of duties in furtherance of the object for which you were sent to this country, the Right Honourable the Governor in Council will not object to furnishing you with a passage to England at an after period.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle,
25 May 1850.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 13 April 1850.

(No. 2467 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Khandeish.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to request that you will afford the fullest information and all due assistance to Mr. *Constable*, a gentleman who has been deputed to your province, by Messrs. *Ritchie, Steuart & Co.* to make such inquiries as will enable them to determine as to the advisability of their adopting measures for procuring supplies of cotton better cleaned and adapted for the home market than is generally obtainable at Bombay.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle,
2 April 1850.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 12 June 1850.

From Messrs. *Ritchie, Steuart & Co.* to Mr. Secretary *Goldsmid*.

Sir,

WITH a view to ascertain from personal investigation the eligibility of Khandeish as the field of those plans for the procuring of a regular supply of well cleaned cotton, which the Right Honourable the Governor has been pleased to encourage as well calculated to benefit the cotton trade of this Presidency, we despatched Mr. *Constable*, a European assistant in our establishment, to Khandeish about a month ago. The reports he has sent us are perfectly satisfactory so far as regards the capability of Khandeish to supply this market with cotton of a very superior character to that which the native dealers usually bring for sale.

2. Intrinsically the cotton is good, but the ryots, generally, it appears, are so deeply indebted to the shroffs, that they have little interest in the crops, and the usurious profits which the latter are said to make, added to the apathy which characterises natives in such matters, render them indifferent to the quality of the produce. The cotton crop is, therefore, the least valuable which the people cultivate, and being allowed to remain in the fields until other crops are secured, it is injured by the dews and by the opening and crumbling of the parched pods. If parties who had advanced upon cotton crops were to interest themselves in inducing the ryots to give attention to the earlier picking of the cotton, they could afford to give so much higher prices as would place the cultivation of this produce on a par, in point of remuneration, with that of any other crop.

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III.
Bombay.

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V. 8356

V. 4860.

V. 4860.

V. 8236.

III.
Bombay.

3. The introduction of improved machinery for the quicker cleaning of the kuppas, would also indirectly be the means of improving the quality, by allowing the ryot more time to pick his cotton than the slower process of cleaning by the churka at present enables him to devote to that first and important operation.

4. It is to carry out these objects that we have determined upon establishing an agency in Khandeish; but, as mere purchasers from the shroffs, it would be impossible to effect any improvement in the quality of the cotton. To induce the ryot to give that attention which is so indispensable to the picking of the kuppas, we find we must have some control over him and his crop; this can be obtained only by advances, and here arises our chief difficulty. Strangers in the country, and surrounded by shroffs and dealers naturally hostile to our enterprise, the advancing of money to ryots, all more or less indebted to the former parties, would be attended with very great risk. We are induced, therefore, to hope that, looking to the important results which may be derived from such an agency as we propose, if vigorously carried out, the Right Honourable the Governor will be pleased to allow our advances to be made through the collector of the district. With the security which would thus be afforded us, we should enter confidently into the business; but without such security the success of our experiment will, necessarily, be very greatly impeded, if not rendered altogether hopeless, by the combined opposition of the shroffs and Presidency traders.

5. As the advances upon crops require to be made during the months of April and May, we should feel obliged by your bringing this matter before his Lordship the Governor with as little delay as possible.

Bombay, 19 April 1850.

We have, &c.
(signed) *Ritchie, Stuart & Co.*

MINUTE by the Right Honourable the Governor, concurred in by his Excellency the Commander-in-Chief.

W. 8237.

THE presence in Khandeish of an agency of this description, affords the best and most legitimate means which can ever be available for inducing the ryots to pay attention to the picking of their cotton, and for enabling the Bombay merchant to procure cotton carefully cleaned and honestly packed.

2. It is, however, necessary that the agency should advance the ryots the money necessary to enable them to carry on the cultivation of the land and pay the revenue they have to give Government for the fields yielding cotton and produce of other description, of which latter, as much as possible is kept by them for their home consumption, and removed before the cotton crops, to the sale of which they look for funds to enable them to discharge the Government demands on the whole of their holdings.

3. If the agency do not make these advances, it is impossible they could stand towards the ryot in the same position as the traders who do; and their refusal to advance would be attended by all the cotton going into the hands of those who now send it in so bad a state to Bombay.

4. If, again, the agency do make these advances at the discretion of their local manager, who knows nothing of the people, they will most assuredly find themselves defrauded to an extent which will be most prejudicial, if not fatal, to the success of their endeavours, the very first year of their having commenced. They will have to go into court, and there find the crops have been pre-mortgaged, and that they have been in every respect deceived.

5. I therefore think, that for the present two years, the collector may be allowed, at the sowing season, to make tuccavee advances to the ryots who may contract with the agency to supply them with cotton, and, at after periods, until it is picked, to allow revenue demands, including tuccavee, to the extent of not more than three-fourths of the value of the cotton to be furnished, to remain unenforced, the same being, on receipt of the cotton, paid by the agency themselves; in other words, to extend to this agency the Howala system, which still obtains in some of our unsurveyed districts.

6. Should the ryots fail in their engagements to the agency, the collector can still, before the close of the current year, enforce payment as revenue demands, both of tuccavee and the unrealised assessment.

7. The agency to be assisted only for two years in the above manner, and to the extent of, at the utmost, one lac of rupees. At the close of two years it is to be hoped the managers will have obtained sufficient local knowledge to enable them to judge as to who can be trusted, and act independently of Government.

8. As no time is to be lost, if we wish the agency should save the present year, I shall be glad to learn that my colleagues have found it convenient to take up and dispose of the subject at an early date.

23 April 1850.

(signed) *Falkland.
W. Cotton.*

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 915.

III,
Bombay.

V. 8238.

MINUTE by the Honourable Mr. Blane.

THE proposition in the Right Honourable President's Minute, as I understand it, is to advance to the extent of a lac of rupees each year, for two years, in the form of "tuccavee," to ryuts contracting to supply Messrs. Ritchie, Steuart & Co.'s agents with cotton, without imposing any responsibility upon the said firm for the recovery thereof.

2. Adverting to the Honourable Court's orders on the subject of tuccavee advances, I cannot but regard this proposition as in some degree questionable.

3. I fear, also, that such advances on the responsibility of Government could afford but little experience as to the liabilities to be incurred by a private firm in making advances on their own account. By exhibiting a maximum profit, exclusive of risk, which would thus be kept entirely out of sight, the example, on the contrary, must apparently prove delusive, and, as a consequence, tend eventually to discourage, rather than promote the extension of such agencies.

4. We have, moreover, at present, a Government agency in Khandeish, through the medium of which cotton to a considerable amount has been ordered to be purchased for transmission to the Honourable Court; and were the present proposition to be adopted, some provision would be required to guard against the clashing of the two agencies.

5. It is further, I think, deserving of consideration whether if a system of advance on the plan proposed were to be had recourse to, it ought not to be brought to bear on our great cotton-growing country, Goozerat, in preference to Khandeish, where the extent of the cultivation is so much more limited, and the produce generally of an inferior quality.

6. With respect to Messrs. Ritchie, Steuart & Co.'s proposal, in which the advance of public funds for their benefit would not seem to have been contemplated, I am not of opinion that it could be so arranged as to obviate the very weighty objections to Government mixing themselves up with the details of private speculations. To an individual speculator the interference of Government may doubtless for a time be advantageous, but its general tendency is too often, I fear, to stifle, and neutralise the energies which private enterprise would otherwise call into action.

29 April 1850.

(signed) D. A. Blane.

FURTHER MINUTE by the Right Honourable the Governor, concurred in by his Excellency the Commander-in-Chief.

THE Honourable Mr. Blane is mistaken in understanding me to mean that tuccavee advances should be made to the extent of a lac of rupees. I intend that the tuccavee advances and amount of revenue to remain uncollected from the cultivators, and payment by the agency, should not together exceed one lac of rupees. And this should be done by the collector, after making such inquiries and taking such precautions as will secure Government from loss.

V. 8239.

2. With reference to the 3d para. of my honourable colleague's minute, I beg to observe that the letter from Messrs. Ritchie, Steuart & Co., which led to my minute of 23d April, shows that they are sensible of the risk they will have to incur in making the advances, &c. Para. 7 of my minute provides for their being informed that Government will only assist them in the manner I have proposed, for two years, when it is expected "their managers will have obtained sufficient local knowledge to enable them to judge as to who can be trusted, and act independently of Government."

3. In reply to para. 4, I beg to remind the Honourable Mr. Blane that in my minute (in which my honourable colleague concurred) of 10th April, it was determined, and under date 16th idem, the collector was informed, through Revenue Commissioner, Northern Division, that his proposition, "that one lac rupees worth of cotton should be purchased on account of Government during the approaching season, and advances be made to the ryuts who are to supply it, Government considered it necessary to sanction; for Messrs. Ritchie, Steuart & Co., having established an agency for the purchase of cotton, his Lordship in Council is of opinion that the ends in view will be more legitimately obtained by Mr. Elphinston affording them every aid in his power towards the purchase of cleanly picked cotton, and this Mr. Elphinston is authorised to do."

4. The practical and local knowledge the Honourable Mr. Blane has of such matters as that discussed in the 5th para. of his minute, leads me to defer to the opinion he has therein expressed. But I may explain that Messrs. Ritchie, Steuart & Co. sent an agent to Goozerat and Khandeish before determining on establishing their agency in the latter province; and our own returns show us that in that province one and a half lac of beeghas were under cotton cultivation in 1848-49; and it is to be recollected there is already one private agency in Goozerat, and in Khandeish Messrs. Ritchie, Steuart & Co. can derive advantage from the knowledge and experience of the persons who have been engaged there on account of Government.

5. I concur most fully in the opinions expressed by the Honourable Mr. Blane, in para. 6, but consider that a deviation from the general and very just principles therein laid down may,

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may, in the present case, further an object of the greatest importance to the interests of the country in an improved system of cotton picking and cleaning. I would not allow such an arrangement as that I have supported to be acted on for the lengthened period, and at the end of two years would let it cease in the case of Messrs. Ritchie, Steuart & Co.

6. For the reasons mentioned at the close of my last minute, I trust this explanation will induce Mr. Blane to agree to the arrangement I have proposed being made, with the limit and restrictions I have suggested.

30 April 1850.

(signed) *Falkland.*
W. Cotton.

FURTHER MINUTE by the Honourable Mr. Blane.

V. 8240.

THE proviso of the amount of assistance to be afforded, being intended to include revenue left uncollected, as well as advances of Tuccavee, does not materially alter my view of the question. The risk will equally fall upon Government, and the effect, as I conceive, be simply to secure so much gratuitous profit to Messrs. Ritchie, Steuart & Co., without any tendency to afford experience as to the results of making advances on their own account. It would seem, indeed, to supersede all motive to exertion on the part of their agent during the continuance of the protection, and on its termination to leave equal room for the plea of apprehension of risk, as at present.

2. Assistance in this form has not, moreover, been asked of us, nor was it sought by Mr. Landon, a much less wealthy experimentalist in Broach; and as the principle appears to me fallacious, I cannot but regard the example as a step in the wrong direction.

3. The "Huwala" system, I would observe, is purely a security transaction. No advances or conditions of any kind, such as suspension of collections between Government and the ryut are involved on it. The "huwalader" makes his own terms with the ryut, and upon receiving the produce of his field or otherwise, as they may have agreed upon, becomes "huwala" or security to Government, and the ryut is then finally exonerated, and the collection unconditionally made from the "huwaladar."

4. A proposal, by Mr. Elphinston, for an extension of our purchases, was, I believe, negatived, though I have not the papers before me to refer to; but the previous instructions to purchase to a considerable amount for transmission to the Honourable Court, remain, I imagine, in force, or if otherwise, on what is the Government agency in Khandeish now employed?

4 May 1850.

(signed) *D. A. Blane.*

FURTHER MINUTE by the Right Honourable the Governor, concurred in by his Excellency the Commander-in-Chief.

V. 8241.

I REGRET that my honourable colleague still objects to the arrangements I have proposed, the more so, as the question is one which, considering the lateness of the season when I first took it up, even then pressed for immediate decision.

2. The question is, whether the assistance I have proposed is to be furnished, or the prospect of establishing an agency is to be given up altogether; for my honourable colleague is in error in thinking that assistance in the form I have proposed has not been asked for by Messrs. Ritchie, Steuart & Co. It was their intention to ask for this assistance in para. 4 of their letter, and before I made my first minute they had explained to the revenue secretary that such was their meaning; and it will also be seen from the accompanying extract of a note from Mr. Elphinston to the agent in Khandeish, that the collector himself has suggested a very similar arrangement.*

Para. 1 of the Honourable Mr. Blane's Minute, dated 4th May 1850.

3. I cannot agree with the Honourable Mr. Blane in thinking that all motive to exertion on the part of the firm will be superseded, and without any tendency to afford experience as to the results of making advances on their own account," for Messrs. Ritchie, Steuart & Co., knowing the arrangement is to hold good for but two years, will have every incentive to obtain the "local knowledge necessary to enable them to judge as to who can be trusted and act independently of Government."

Para. 7 of my Minute, dated 23d April, and Para. 4 of my Minute of 30th April 1850.

Para. 1 of my Minute, dated 30th April 1850.

4. As regards risk, I have already stated that the collector should make "such inquiries, and take such precautions, as will secure Government from loss" That some risk may be incurred I am prepared to admit, and also that on general principles the arrangement is open to objection; but this I am of opinion, ought to be viewed entirely as an exceptional case, on which the chance of establishing a permanent relation between the grower and merchant

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* Extract of a letter from Mr. Elphinston to Mr. Constable, under date Dhoolia, 1st May 1850:— "You should get an order from Government to make your advances to the ryut, through the collector's department, to facilitate recovery of the money, or of the crop, as may be bargained for. Formerly the Company's commercial agent at Broach, for the purchase of cotton for the East India Company, distributed his advances through the agency of the district officers, and for the first year or two it would make your advances more secure."

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 917

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is in every point of view so very desirable, as far to outweigh any possible risk of loss to Government from the assistance afforded.

5. The great object is to establish such an agency as Messrs. Ritchie, Steuart & Co. are anxious to form, and thus hold out a prospect of ensuring a better description of cotton coming to market than is provided through native agents, who now find it to their interest to add to the weight of cotton by adulterating it in various ways. I conceive that Messrs. Ritchie, Steuart & Co.'s offer holds out a prospect of attaining this object, and I am therefore anxious to afford them every assistance necessary, although beyond what could be defended on general principles if carried beyond an exceptional case.

6. The Honourable Mr. Blane will learn from the proceedings which the Secretary should forward to him with the minute, that it was intended that if the agency be established, the endeavours which would otherwise be made by Mr. Elphinston to procure cotton for the honourable Court are to be made to assist Messrs. Ritchie, Steuart & Co. The Honourable Mr. Blane will also see that the American cotton planters were not in the first instance sent out to this country merely to prepare consignments of cotton, nor that it is now intended by the Honourable Court that they should form the more important portion of their duties. However, it may be safely left to the collector to purchase for the Honourable Court, and assist Messrs. Ritchie, Steuart & Co. in a manner so as to avert the chance of any "clashing." The purchase of cotton for the Honourable Court forms but a small portion of the duties connected with the cotton experiments in the Southern Maratha country, and so it ought in Khandeish.

Para. 4 of the Honourable Mr. Blane's Minute, dated 29th April 1850.

7. The Huwala system does, if I am correctly informed, involve a temporary "suspension of collections," but it can answer no purpose. entering into a discussion on this question. The system itself is objectionable, and Government have enjoined its discontinuance, at any rate in revised districts. It is only in a special case such as the present that I advocate giving our sanction to it as a temporary arrangement and in a modified form.

Para. 3 of the Honourable Mr. Blane's Minute, dated 3d May 1850.

8. The question before us being one requiring immediate disposal, I am content to let it be determined according to the majority of the opinion of the Civil Members of Government. If the Honourable Mr. Willoughby, who will see these papers on his return to Bombay, concurs with the Honourable Mr. Blane, the matter may be disposed of according to their views, if he concurs with me according to mine. This will avert the necessity of the papers being again sent to me before Messrs. Ritchie, Steuart & Co. get their answer.

11 May 1850.

(signed) *Falkland.*
W. Cotton.

MINUTE by the Honourable Mr. Willoughby.

THESE proceedings have only this day reached me; I have perused them with much attention, and although fully admitting the weight of the Honourable Mr. Blane's objections, and the soundness of the principles he advocates, I am on the whole disposed to concur in the arrangement proposed by the Right Honourable the Governor, with one reservation.

V. 8242.

I do not myself see why the risk of unrecovered Tuccavee advances should not be borne by the merchant rather than by the Government; that is to say, after Government has exerted itself to recover the tuccavee in the same manner as its own tuccavee advances, any loss which may accrue from the death, insolvency, or absconding of the parties to whom the advance is made should fall on Messrs. Ritchie, Steuart & Co., I should like to know whether our making a stipulation to this effect would be fatal to the scheme.

I am induced to give my concurrence to the Right Honourable the Governor's suggestions, limited as they are in time and amount of pecuniary assistance, because I conceive Messrs. Ritchie, Steuart & Co. are meditating a move in the right direction; and that it is eminently desirable to encourage the establishment of agencies by substantial parties in the cotton-growing districts, whose personal interests will induce them to see that the best kinds of cotton are produced, and to secure that it is clean picked, and packed in an unadulterated state.

By this means we may hope to enlist private enterprise in our objects, so as to enable Government ultimately to withdraw from the costly experiments it has undertaken for a great national purpose.

(signed) *J. P. Willoughby.*

13 May 1850.

FURTHER MINUTE by the Honourable Mr. Blane.

I HAVE nothing further to add to the dissent already expressed.

V. 8243.

(signed) *D. A. Blane.*

14 May 1850.

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Bombay.

(No. 4245 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Khandeish.

Sir,

V. 8244. IN your letters to the address of the Revenue Commissioner, Northern Division, dated 15th March and 3d April, Nos. 561 and 651, you proposed that one lac of rupees worth of cotton should be purchased on account of Government during the approaching season, and advances to the amount of about 18,000 rupees should be made on good security to the cultivators who may be willing to enter into engagements to furnish 1,800 candies of cotton. In the 8th para. of my letter of 16th April, No. 3012, the Revenue Commissioner was informed that Government considered it unnecessary to sanction this proposition, as "Messrs. Ritchie, Steuart & Co. having established an agency for the purchase of cotton, his Lordship in Council is of opinion that the ends in view will be more legitimately obtained by Mr. Elphinston affording them every aid in his power towards the purchasing of cleanly picked cotton, and this Mr. Elphinston is authorised to do."

2. I have now been directed to forward you copy of a letter, dated 19th April 1850, from Messrs. Ritchie, Steuart & Co., and to inform you that in the opinion of the Right Honourable the Governor in Council, the presence in Khandeish of an agency of this description affords the best and most legitimate means which can ever be available for inducing the ryuts to pay attention to the picking of their cotton, and for enabling the Bombay merchant to procure cotton carefully and honestly picked.

3. It is, however, necessary that the agency should advance the ryuts the money necessary to enable them to carry on the cultivation of the land, and pay the revenue they have to give Government for the fields yielding cotton and produce of other description, of which latter as much as possible is kept by them for their home consumption, they looking to the sale of the cotton crops for funds to enable them to discharge a large portion of the Government demands on the whole of their holdings.

4. If the agency do not make these advances it is impossible they could stand towards the ryut in the same position as the traders who do, and their refusal to advance would be attended by all the cotton going into the hands of those who now send it in so bad a state to Bombay.

5. If again the agency do make these advances at the discretion of their local manager, who knows nothing of the people, they will, his Lordship in Council apprehends, find themselves defrauded to an extent which will be most prejudicial if not fatal to the success of the r endeavours the very first year of their having commenced. They will have to go into court, and there find the crops have been pre-mortgaged, and they have been in every respect deceived.

6. His Lordship in Council has therefore resolved to allow you for the first two years to make at the sowing season tuccavee advances, not exceeding the sum mentioned by you, 18,000 rupees, to the ryuts, who may contract with the agency to supply them with cotton, and at after periods until it is picked to allow revenue demands, including tuccavee to the extent of not more than three-fourths of the value of the cotton to be furnished, to remain unenforced, the same (tuccavee and land revenue allowed to lie over) being on the receipt of the cotton paid by the agency themselves. The authority for your doing so is, however, accompanied by the proviso that you make such previous inquiries and take such precautions as will secure Government from loss.

7. It is expected that, should the ryuts fail in their engagements to the agency, you will still be able, before the close of the current year, to enforce payment as revenue demands, both of tuccavee and the unrealised assessment, and to require Messrs. Ritchie, Steuart & Co. to enter into a formal agreement that they make good to Government any of the tuccavee advanced, which you may be unable to recover from ryuts who have failed in their agreements to furnish the stipulated quantity of cotton.

8. The agency to be assisted only for at farthest two years in the above manner, and to the extent of at the utmost one lac rupees (tuccavee and outstanding revenue inclusive). At the close of the two years it is to be hoped the managers will have obtained sufficient local knowledge to enable them to judge as to who can be trusted, and act independently of Government, and at the close of the first year you are to report whether Messrs. Ritchie, Steuart & Co. are proceeding in a manner to ensure the attainment of the objects set forth in para. 2, as, if they do not, the assistance of Government will at once cease.

9. You will take care that the assistance you afford to Messrs. Ritchie, Steuart & Co. does not clash with the arrangements you have to make for the purchase of cotton for the Honourable Court.

I have, &c.

(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 23 May 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 919.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue,
dated 11 September 1850.—V. 12,243 to 46.

(No. 2020 of 1850.)

From the Revenue Commissioner N. D., to Mr. Secretary Goldsmid.

Sir,

WITH reference to your letter, No. 4245, of the 23d of May last, to the collector of Khandeish, I do myself the honour to submit a draft of an agreement which Mr. Elphinston desires Government should execute in conjunction with Messrs. Ritchie, Stuart & Co.

V. 12,243.

2. My objections to this procedure I have detailed to Mr. Elphinston in my letter appended, of the 26th June last, No. 1680, but as they do not appear satisfactory to him, I have now in compliance with his further wishes forwarded the correspondence for the instructions of the Right Honourable the Governor in Council.

3. All that the collector has in my opinion to do, is to carry out the wishes of Government, which I consider to be simply these:

1st. To encourage the growth by every legitimate means in his power of the New Orleans cotton, and its proper preparation for the market; and,

2d. To execute a simple but concise agreement, binding Messrs. Ritchie, Stuart & Co. to repay all advances of tuccavee made by Government; and to secure the realisation of the revenue allowed by the collector to remain outstanding, at their request, at the close of the current year.

4. As this includes everything I conceive Government intended, and as much as I could recommend, I do not consider it would be desirable to enter into such an agreement as Mr. Elphinston has proposed, which would only be binding on Government, and in no way calculated, that I can observe, to promote the interests of the country.

5. I have added copy of a letter of this date, addressed to Mr. Elphinston, and submit a draft of an agreement which I propose, if approved, should be turned into legal language, and be executed between Government and Messrs. Ritchie, Stuart & Co., at the Presidency.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

Revenue Commissioner's Office, Poona,
6 August 1850.

PROPOSED Draft of Agreement.*

THE Right Honourable the Governor in Council *having in view the improvement of the agriculture of India*, has for the purpose of encouraging the culture of the New Orleans in the zillah of Khandeish, and its better preparation for the market, permitted the collector to make to Messrs. Ritchie, Stuart & Co., *certain advances of (tuccavee) sums of money to assist ryots in cultivating*, not exceeding rupees (18,000), eighteen thousand, and also to allow the rent of other lands (not exceeding one lac of rupees, inclusive of the tuccavee) to remain outstanding until the close of the current year. We (names) being the partners in the firm of Messrs. Ritchie, Stuart & Co., do bind ourselves to make good to Government at the end of the official year all such advances as have been made at our request, or on our behalf, by the collector to ryots.

V. 12,244.

(signed) A. N. Shaw,
Revenue Commissioner, N. D.

PROPOSED Draft of Agreement as altered by the Hon. Mr. Willoughby.

THE Right Honourable the Governor in Council has, for the purpose of encouraging purchase of cleanly picked cotton in the zillah of Khandeish, and its better preparation for the market, permitted the Collector to make those ryots who may contract to provide Messrs. Ritchie, Stuart & Co. with cotton, tuccavee advances, to be repaid through that firm, not exceeding in the aggregate rupees (18,000) eighteen thousand, and also to allow revenue demands not exceeding 82,000 rupees, and including tuccavee, and not exceeding three-fourths of the estimated value of the cotton to be furnished, one lac of rupees, inclusive of tuccavee, to remain outstanding until the close of the season for picking the cotton crops of the current year. We (names) being the partners in the firm of Messrs. Ritchie, Stuart & Co.,

* The proposed draft was modified by Mr. Willoughby, altered as regards the portion printed in *Italics*; the draft, as modified, immediately follows.

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& Co., do bind ourselves to make good to Government at the end of July 1851, any portion of the 18,000 rupees advanced as tuccavee, which the collector may be unable to recover direct from the ryots, who have failed to repay those advances through Messrs. Ritchie, Steuart & Co., by the non-fulfilment of their agreement to furnish their agent with the stipulated quality of cotton.

(No. 1148 of 1850.)

To *A. N. Shaw*, Esq., Revenue Commissioner, N. D.

Sir,

WITH reference to the 7th para. of the Government's letter to my address, No. 4245, dated the 23rd ultimo, copy of which has, I presume, been forwarded by Government to you, I do myself the honour to submit the draft of an agreement bond to be entered into by Messrs. Ritchie, Steuart & Co., with Government, regarding their agency in Khandeish, for the purchase of cotton, to secure their entire responsibility for advances made on their behalf by this department from the Honourable Company's treasuries, and request, that after being submitted to the Honourable Company's solicitor for correction of any informalities and illegalities of expression therein, it may be returned to me with the signatures of the firm, which the collector of Bombay may procure.

I have, &c.
(signed) *A. Elphinstone*,
Collector.

Khandeish, Collector's Office,
Camp Chutter Singhee, 4 June 1850.

DRAFT of an Agreement to be executed by Messrs. *Ritchie, Steuart & Co.*, Bombay, Merchants, to the Honourable East India Company.

KNOW all men by these presents, that we, Messrs. *Ritchie, Steuart & Co.*, of Bombay, British merchants, trading and carrying on business at Bombay aforesaid, in co-partnership together, under the name and firm of Messrs. *Ritchie, Steuart & Co.*, are jointly and severally held and firmly bound unto the Honourable East India Company for the due and faithful performance of the different articles hereunder stipulated.

Whereas we, the above bounden Messrs. *Ritchie, Steuart & Co.*, being desirous to engage in the purchase of cotton, through our assistant and agent, Mr. *Constable*, a British subject, in the district of Khandeish, under the Bombay Presidency, for purchase and consignment on our account to Bombay aforesaid, applied to and requested the Government of Bombay to be allowed to make our pecuniary advances to the growers of cotton in Khandeish, through the Collector of the district, owing to our being utter strangers to the province and its people; and whereas Government has, in reply to our application, been pleased to grant to us certain aids, conditional on our duly fulfilling the provisos thereunto attached; to wit, we agree and bind ourselves by these presents, well and truly to fulfil the following stipulations:

I. Whereas Government has been pleased to allow the Collector of Khandeish, for the first two years of our establishment in Khandeish, to make, at or before the sowing season, viz., in each of the two years, on our behalf pecuniary tuccavee advances, not exceeding the aggregate sum of (18,000) eighteen thousand rupees, to such ryots as may contract with our agent, the aforesaid Mr. *A. G. Constable*, to supply us with cotton, we hereby agree and stipulate that, in applying through our aforesaid agent to the different European and native revenue officers, including the different mamludars and mahulcurries for tuccavee advances, to be given on our behalf to the ryots, we shall be responsible that the above-mentioned aggregate amount of (18,000) eighteen thousand rupees be not exceeded, with the proviso that any sum that may be advanced on our agent's application on our behalf, over and above the above-mentioned eighteen thousand rupees, shall be strictly laid to our account, and be recoverable from us.

II. Whereas it is also ordered by Government that after the sowing season is over the revenue demands of Government on the land, including the aforesaid tuccavee, to the extent of not more than three-fourths of the value of the cotton to be furnished to our agent aforesaid by the recipients of the tuccavee advances, may be allowed to remain unenforced until our receipt of the cotton, we hereby promise, agree, and by these presents bind ourselves, that our agents, on our behalf and responsibility, shall take care that this restricted amount be not exceeded on pain of our being strictly responsible to the extent of the above-mentioned sanctioned amount of tuccavee advances, and rents of land to be allowed to lie over outstanding as above specified, as well as any excess in expenditure beyond it; and whereas we hereby agree that in applying to the mamludars and other revenue officers for advances to be given to the ryots, our agent aforesaid shall on our behalf and responsibility acquaint them with the quantity of cotton which each ryot may agree to supply, the price fixed to be paid for it, as well as the amount of tuccavee to be advanced on our behalf to each person, we hereby promise, agree, and hold ourselves responsible to Government that the aggregate amount of the tuccavee advances, and of

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 921

the Government's rental of the land occupied by the ryots who receive the tuccavee, do not exceed one lac of rupees per annum.

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III. Whereas it is necessary that we should secure ourselves against loss, we shall, through our agent aforesaid, take from those ryots to whom advances are to be made securities binding them down to supply to us only all the cotton agreed to be furnished to us.

IV. On the receipt, by our agent aforesaid, of the cotton furnished by the different ryots, to whom tuccavee advances may have been made, and from whom the rental due to Government on their holdings has not been previously enforced, we are responsible for, and through our agent shall pay, the price of the cotton into the mamlutdar's treasuries, and not direct to the ryots, that the mamlutdars and other revenue officers may deduct therefrom the amount of the Government demand on account of rental and tuccavee, and pay them only the remainder.

V. And whereas it is decided that for the purpose of securing Government against loss, satisfactory securities shall be taken by the Government officers from the ryots to whom tuccavee advances are made, none that cannot furnish satisfactory security shall get advances; those ryots only who satisfy our agent as to security shall get advances on the assurance of our agent to that effect to the mamlutdars or revenue officers.

VI. As the tuccavee advances, and the rental of the land due to Government are to be recovered within the year, due intimation will be given to the mamlutdars and other revenue officers by our agent within the close of the current year, as to the individuals who may have failed to supply cotton according to their agreement, so that efforts may be made to recover the Government dues in times from them; and we bind ourselves to make good to Government, immediately on the close of the season, any of the tuccavee advances which Government may be unable to recover from the ryots who may fail to furnish to us the stipulated quantity of cotton. We further hold and bind ourselves jointly and severally, each of our respective heirs, executors and administrators, by these presents, sealed with our seals, and signed under our hands, well and truly to make good, and pay or cause to be paid to the said East India Company, their successors or assigns, all and every such sum of money due by the recipients of tuccavee advances through our agent, which the said East India Company may be unable to recover from them. The condition of the above presents is such, that, on our entirely and fully fulfilling the intent of all and every the stipulations herein above contained, this agreement shall be considered null and void; and, until then, it shall be in force.

Signed, sealed, and delivered by _____

Signed, sealed, and delivered by A. G. Constable, before
(signed) A. Elphinston, Collector.

(No. 1680 of 1850.)

To A. Elphinston, Esq., Collector, Khandeish.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1148 of the 4th instant, transmitting copy of a draft agreement which you propose to be entered into by Government with Messrs. Ritchie, Steuart & Co., and having carefully perused the instructions you have received from the Right Honourable the Governor in Council, I am induced to conclude that it was not the intention of Government to enter into an agreement of this description, and consequently am unable to recommend the adoption of the proposed draft forwarded by you.

2. It is the earnest desire of his Lordship in Council to give every assistance to Messrs. Ritchie, Steuart & Co., and to promote the cotton experiments of India by all legitimate means; but I cannot observe that there is anything in the instructions you have received to warrant your advancing, as tuccavee, a sum beyond eighteen thousand rupees (Rs. 18,000) to Messrs. Ritchie, Steuart & Co. on their own responsibility.

3. I do not think it was the intention of Government to allow you, through your native officers, to pay to ryots the difference between the price of the cotton furnished to Messrs. Ritchie, Steuart & Co. the amount of the revenue demands and advances, or that you would be authorised in inserting in an agreement any intimation that could be interpreted as requiring mamlutdars, or other Government officers in the districts, to keep private accounts, or to place our native district servants under the direction or control of Messrs. Ritchie, Steuart & Co.'s agent.

4. In fact, there is much in the proposed draft of agreement which, if enforced, would have the effect of doing away with the necessity of Messrs. Ritchie, Steuart & Co.'s agent obtaining the experience as to the manner in which to proceed to carry on the operation (after the expiration of the two years) altogether independently of Government.

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5. The justness of these remarks will, I am of opinion, occur to you; you will, I am assured, render to Messrs. Ritchie & Co. every assistance in your power, and do everything to promote the interests of the district in advancing this great national undertaking now in progress under your superintendence, but at the same time, as representative of Government you must bear in mind you may be called on to decide upon various differences which might possibly arise between ryots and Messrs. Ritchie, Steuart & Co.'s agents; all that seems to me necessary for you to do, is to give Messrs. Ritchie, Steuart & Co. every aid consistent with the rules of Government, to take steps to secure the repayment of the advances made, and the realisation, before the close of the current year, of the revenue allowed to remain outstanding.

Revenue Commissioner's Office,
Poona, 26 June 1850.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, Northern Division.

(No. 1494 of 1850.)

To the Revenue Commissioner, Northern Division.

Sir,

I REGRET to observe, from your letter No. 1680, dated the 26th ultimo, that you are not disposed to recommend the adoption of the form of agreement proposed to be entered into with Messrs. Ritchie, Steuart & Co., submitted with despatch of the 4th idem, No. 1148, to your address.

2. In framing the draft agreement in question I was, I beg to state, guided by the instructions of the Right Honourable the Governor in Council, as communicated to me in the Revenue Secretary's letter, No. 4245, dated the 23d May last; in the sixth paragraph of which his Lordship instructs me to "make, at the sowing season, tuccavee advances not exceeding the sum of 18,000 rupees, to the ryots who may contract with the agency to supply them with cotton, and at after periods, until it is picked, to allow revenue demands, including tuccavee, to the extent of not more than three-fourths of the value of the cotton to be furnished to remain unenforced, the same (tuccavee and land revenue allowed to be over) being on the receipt of the cotton paid by the agency themselves."

This authority is accompanied by the proviso that I "make such previous inquiries, and take such precautions as will secure Government from loss."

And in the seventh paragraph of the same letter Government directs me "to require Messrs. Ritchie, Steuart & Co. to enter into a formal agreement that they make good to Government any of the tuccavee advanced which I may be unable to recover from ryots who have failed in their agreements to furnish the stipulated quality of cotton."

And, in the eighth paragraph, Government directs that the agency should be assisted to the extent of one lac rupees, tuccavee and outstanding revenue inclusive.

3. I considered, and still consider, that to carry out the afore-quoted instructions of Government, makes such a bond as I submitted to you a draft of indispensably necessary, without which the interest of the State would be at great stake.

4. Referring to your second paragraph, I beg to assure that I had placed the same construction as you have on the instructions of Government in respect to the tuccavee to be advanced to the ryots.

5. My object in having arranged for the payment to the ryots through the mamludars of the difference between the price of cotton and the amount of advances and revenue demands was to facilitate the adjustment of the pecuniary dealings between the agents and the ryots, by allowing the former to pay to the Government officers the whole of the latter's due, instead of only the amount of advance made and rental previously unenforced, and leaving it for the mamludars to deduct these two items, and also with the individual's consent any other demands of Government against him in reference to his other holding, from the money paid by the agent, and to pay the remainder to the ryot. The only parts of this process which are not specifically authorised in the Government letter above alluded to, are the agents' liability to pay the whole price of cotton to the Government officers, and the authority of these officers to deduct the Government due from it, and to pay the residue to the ryot. This arrangement I conceive will not involve the necessity of the district officers keeping any private account, any more than they would have to keep without it, though it might call for some additional remarks in the account, which they must, under any circumstance keep, so long as Government received its rental and the repayment of the tuccavee through the agent of the firm. But I confess I do not see how any part of my arrangement is likely "to place our native district servants under the direction or control of Messrs. Ritchie, Steuart & Co.'s agent;" nor can I conceive that it will in any manner affect my position as the representative of Government, in deciding upon any differences between the agent and the ryots, as I believe that in fact it will only tend to prevent any such occurring.

6. Having with deference submitted my views of the subject to you, I await the favour of your further early instructions for my guidance, and shall feel obliged by your striking off
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TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 923

from the draft of any redundances or objectionable stipulations, and after improving it and removing its imperfections in such manner as may seem to you proper, I request after ascertaining that it is a legal instrument, that you will have the goodness to procure the signatures of the firm, and afterwards return it to me as soon as possible, as the season is advancing.

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Bombay.

Khandeish, Collector's Office,
Dhoolia, 31 July 1850.

I have, &c.
(signed) A. Elphinston,
Collector.

(No. 2024 of 1850.)

To A. Elphinston, Esq., Collector, Khandeish.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1494 of the 31st ultimo, pressing the submission to Government of the draft agreement which accompanied your communication of the 4th of June, and in reply I beg to say, having already stated to you my reasons for not thinking this course in the first instance necessary, I shall now in compliance with your wishes lay the correspondence before the Right Honourable the Governor in Council.

2. Permit me in this place to observe, the object of granting these privileges and advantages to Messrs. Ritchie, Steuart & Co., was, I apprehend, to encourage the growth and culture of the New Orleans cotton, and that in the whole of your proposed agreement you never once made mention of that culture, or insert any clause to prevent Messrs. Ritchie, Steuart & Co., if they thought fit, to employ the full advantages of the Government machinery, saw-gins, the advances of tuccavee, and the temporary remission of the ryot's rent, to the sole purchase of the native cotton.

3. You are yourself, I believe, of opinion that there is no prospect of the native cotton ever competing in the European markets with the produce of the United States; you must also be aware, that a mercantile house purchases on commission, and that it is much the same thing to that firm whether they execute orders for native or New Orleans cotton; the difference, however, to the interests of the country is very great, and I can hardly suppose that Government intended to proffer the advantages, given exclusively to Messrs. Ritchie, Steuart & Co., except upon an understanding that they were expected to encourage the New Orleans culture.

4. A few days ago I had a visit from a native gentleman who described himself as a merchant, who was anxious to obtain the use of saw-gins, &c. in Khandeish, and privileges somewhat similar to those allowed to Messrs. Ritchie, Steuart & Co.; I referred him to you, but in the course of conversation he informed me that Messrs. Ritchie, Steuart & Co. were not making advances on New Orleans, but on ordinary native cotton. Perhaps you may now think it expedient to mention this subject to Messrs. Ritchie, Steuart & Co.'s agent, and be good enough to inquire what portion of the advances allowed by Government have been expended to promote the culture of the New Orleans and native cottons.

Revenue Commissioner's Office,
Poona, 6 August 1850.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner,
Northern Division.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Mr. Willoughby.

I APPROVE of the tenor of Mr. Shaw's letter dated 26th June, No. 1650, to the address of Mr. Elphinston; but there are mistakes in the draft agreement now submitted, as it does not properly exhibit the arrangements authorised, as contemplated by Government. I have made in red ink* alterations which appear to me to be necessary, and annexed a fair draft; Mr. Elphinston may be informed that we wish that he should afford Messrs. Ritchie, Steuart and Co. all due assistance; Mr. Elphinstone may be referred to para. 8 of our letter, dated 16th April, No. 3012, to Revenue Commissioner Northern Division, quoted in para. 1 of our letter to Mr. Elphinston of 23d May 1850, No. 4245, but that our native subordinates cannot be placed under the orders of their agent in the manner which the agreement he has drafted would render necessary.

V. 12,245.

17 August 1850.

(signed) Falkland,
J. P. Willoughby.

* See the draft agreement as originally prepared, and as modified, page 919.

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MINUTE by the Honourable Mr. *Blane*, subscribed to by the Right Honourable the Governor and the Honourable Mr. Willoughby.

V. 12,245 A.

I BEG to refer to my former minutes, dissenting altogether, from this measure.

(signed) *Falkland.*
D. A. Blane.
J. P. Willoughby.

21 August 1850.

(No. 6291 of 1850.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner N. D.

V. 12,246.

Sir,
I HAVE been directed to acknowledge the receipt of your letter, No. 2020, dated the 6th instant, with enclosures, and to inform you that the Right Honourable the Governor in Council approves of the tenor of your letter of 26th June last, No. 1680, to the address of the Collector of Khandeish.

2. There are, however, mistakes in the draft agreement submitted by you, as it does not properly exhibit the arrangement authorised or contemplated by Government, and his Lordship in Council has therefore authorised certain alterations which appear to him necessary, which are introduced in the annexed fair draft.

3. You will be pleased to inform Mr. Elphinston that Government wish that he should afford Messrs. Ritchie, Steuart & Co. all due assistance; he should be referred to para. 8 of the Government letter dated 16th April last, No. 3012, to your address, and quoted in para. 1 of Mr. Secretary Goldsmid's letter to that officer of 23d May, No. 4245, but informed that our native subordinates cannot be placed under the orders of Messrs. Ritchie, Steuart and Co.'s agent, in the manner which the agreement he has drafted would render necessary.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

Bombay Castle, 26 August 1850.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 9 October 1850—V. 13,856 to 61.

(No. 2335 of 1850.)

From the Revenue Commissioner Northern Division, to Mr. Secretary *Goldsmid*.

V. 13,856.

Sir,
MR. ELPHINSTON, the Collector of Khandeish, being desirous that copies of the accompanying correspondence should be laid before Government, I have the honour, for that purpose, to submit the letters noted in the margin.*

2. Mr. Elphinston's letter is a reply to mine, No. 2024, of the 6th ultimo, copy of which was forwarded to Government by me, on the same date, with my letter, No. 2020, addressed to Mr. Secretary Goldsmid, transmitting a draft of an agreement which the Collector of Khandeish proposed Government should execute, in conjunction with Messrs. Ritchie, Steuart & Co.

3. In reply to Mr. Elphinston, I have not deemed it necessary to discuss his reasoning, or to re-open the subject of the draft of agreement proposed by him, as the terms of the very liberal assistance proffered by Government to Messrs. Ritchie, Steuart & Co., have been fully explained to him.

4. I have also appended copy of my reply to Mr. Elphinston's present communication, which I trust may be approved by Government.

I have, &c.
(signed) *A. N. Shaw,*
Revenue Commissioner Northern Division.

Revenue Commissioner's Office, Poona,
11 September 1850.

* One letter from Collector to Rev. Commissioner, No. 1638, of 29 August 1850.
Two letters to Collector from Mr. Constable, No. 8, of 23 August 1850.
Three letters from Collector to Mr. Constable, No. 1615, of 23 August 1850.
Four letters to Collector from Rev. Commissioner, No. 2263, of 3 September 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 925

(No. 1638 of 1850.)

III.
Bombay.

To *A. N. Shaw*, Esq., Revenue Commissioner Northern Division.

Sir.

I HAVE the honour to acknowledge the receipt of your letter, No. 2024, dated 6th instant, and with reference to the query at its conclusion, viz., directing me to inquire of the agent of Messrs. Ritchie, Steuart & Co., in Khandeish, what portion of the advances allowed him by Government had been expended in the promotion of the culture of new Orleans and native cotton, I beg herewith to transmit that gentleman's reply, on sending him a copy of your letter under acknowledgment, for such explanation as he might have to offer on the subject.

V. 13,857.

2. I beg to offer the following explanations with reference to the remark contained in the second paragraph of your letter, enumerating the advantages you consider Government has granted to the firm of Messrs. Ritchie, Steuart & Co., which you appear to think undeserved by a party whom you suppose deals only in the purchase of indigenous, and not exclusively in American cotton.

3. During these few years it has been in the power of any person to buy or to hire (as Messrs. Ritchie, Steuart & Co. have done) the American cotton gins made up for the use of the public in this zillah; every endeavour has been made by the Collector, and the Cotton Superintendent's Department, to induce purchasers or hirers of the gins to come forward, but with only slow and partial success. I consider, therefore, that Messrs. Ritchie, Steuart & Co., by the hiring and purchase of so many cotton gins, must have given, or will give, a great impetus to the native public, to render them desirous to provide themselves with these cotton gins (which are constantly made up and offered for sale in Khandeish), and so soon as the natives find that the spirited example set to them has been productive of advantage to Messrs. Ritchie, Steuart & Co., they are likely to imitate it. I do not therefore consider that in hiring out or selling ginning machinery to Messrs. Ritchie, Steuart & Co. that they have enjoyed any special advantages not previously available to the meanest ryot in this zillah, or elsewhere.

4. With reference to your opinion that you apprehend the advantages enjoyed by Messrs. Ritchie, Steuart & Co. were granted to them with the view of encouraging the culture of the New Orleans cotton, I beg to observe this does not seem to be the sole condition on which the Government's support has been given to the undertaking in which the firm above-mentioned has risked its capital in Khandeish, for it is stated in the 8th paragraph of Mr. Secretary Goldsmid's letter to your address, No. 3012, dated 16th April last, that the promotion of the ends in view by Government, with respect to the improvement of the cotton trade of this Presidency, may, in the opinion of Government, be best attained by the collector affording "every aid in his power towards the purchasing of cleanly picked cotton," which I was "authorised to do." Previously, I had been ordered by Government, in Mr. Secretary Goldsmid's letter to my address, No. 2467, dated 2d April last, "to afford ***** all due assistance to Mr. Constable, a gentleman **** deputed by Messrs. Ritchie, Steuart & Co. to make such inquiries as will enable them to determine as to the advisability of their adapting measures for procuring supplies of cotton better cleaned and adapted for the home market than is generally obtainable at Bombay."

5. Hitherto the cotton raised in Khandeish from American seed has been so small in quantity that I never could obtain a sufficient quantity of it to complete the consignment of cotton required to be sent to the Court of Directors, and therefore it would not suffice to furnish the large investments required for exportation by the firm of Messrs. Ritchie, Steuart & Co.; and therefore, though I am convinced they are willing to purchase all the American cotton they can procure in Khandeish, if offered at moderate prices, they must also largely purchase country cotton, or their agency here would have nothing to do.

6. As they are merchants and not cultivators, it is not to be expected that the firm will themselves turn producers of cotton, though their own interest will necessarily prompt them to hold out encouragements to the ryots to grow American cotton for them, on account of its superior value to the country variety; and the presence of an agency in Candeish which the ryots are aware is ready to buy, and pays higher for, the cotton from American seed must naturally stimulate its increased production; for it is known that formerly the uncertainty of the ryot as to his obtaining a market for his cotton, if the price of cotton fell in America and reduced the demand for East Indian cotton, was one of the reasons why it was not more generally cultivated. This must be obviated by the presence of a cotton-buying agency on the spot in Khandeish, which will give the ryots confidence to sow cotton seed more largely, as they will be sure of finding a ready purchaser for their cotton.

7. If, as I assume, it be correct that the establishment of an European agency in Khandeish for the prompt purchase of a cotton superior to what is to be found in Bombay, will stimulate the production of a larger supply of cotton, and particularly of the best kind (such as cotton from American seed,) no fears need be entertained that when this cotton is produced it will not be eagerly purchased, as, however difficult it has hitherto been to induce the ryots to run the risk of sowing unacclimatized American cotton seed, there never has been any difficulty in finding purchasers of the cotton from American seed, even among the native cotton dealers

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dealers in the province, who have preferentially sought it out, bought it, and sent it down for sale to Bombay. If it had not been for this competition, a larger quantity of this cotton would have been sent to the Court of Directors in the last Government consignment from Khandeish.

8. In the 3rd paragraph of your letter under reply, you do me the honour to refer to my opinion respecting the native cotton being unable to compete in the European market with the produce of the United States, and I believe such to be the case if both are offered for sale at the same price; but the country cotton is generally offered for sale at a less price. I am fully sensible of the superior estimation in which the cotton from a healthy crop of American seed, though grown in India, is held, compared with the native Indian cotton, and no effort is now being spared by the Court of Directors and Government to disseminate the American seed, and I entertain sanguine hopes that it will rapidly supplant the indigenous; and as so large a quantity of American cotton seed as has been sown this year in Khandeish was never sown here before, if its cultivation, when it reaches maturity, be only as healthy and promising as it has remained up to the present moment, no fear need be entertained that it will not be established in the Province.

9. I believe you are under a wrong impression in supposing that Messrs. Ritchie, Steuart & Co. are only commission agents, and therefore indifferent to the quality of the cotton purchased and sent home to other merchants. I am informed they purchase and export cotton to sell in England on their own account, and of course the more valuable the quality of the cotton they can send home, the larger will be the price they will derive therefrom; and therefore they have a direct interest in only sending home good clean cotton. I have always understood you have advocated the establishment, by the Bombay mercantile firms, of such agencies in the Mofussil, to procure good clean cotton, as Messrs. Ritchie, Steuart & Co. have, with the promise of fostering protection from Government, established in Khandeish; while the mere agency houses at the Presidency have declined the experiment, because they have not sufficient motive to undertake its expense, as they equally receive their commission on clean good cotton as when they buy and ship what is the reverse. In like manner, so long as the Liverpool merchants can buy American cotton at reasonable prices in their own market, and the manufacturers can obtain it from the merchants who import it, they are content to allow Khandeish to languish without an European local agency; and there are no parties to carry out the measures which I have always understood you considered to be essential to the procuring of good clean cotton in India, and which the natives left to themselves do not supply; the simple fact being, that the amount of commission received on the purchase of cotton in Bombay will not permit of any extra expense being incurred to procure a better quality of cotton than what is brought to their doors by native capitalists; Messrs. Ritchie, Steuart & Co., one of the few firms who, purchasing cotton on their own account, have it in their power, being willing to engage their capital in such an enterprise. Therefore the fostering encouragement which it behoves Government, for so important a public object, to afford to Messrs. Ritchie, Steuart & Co., may be expected to be productive of benefit to the country as well as to the projectors of the agency. This opinion of Government has been expressed in the second paragraph of Mr. Secretary Goldsmid's letter to my address, No 4245, dated 23rd May last, wherein I am told Government views the agency in question as affording "the best and most legitimate means which can ever be available for inducing the ryots to pay attention to the picking of their cotton, and for enabling the Bombay merchant to procure cotton carefully and honestly picked."

10. In reply to my application, No. 561, dated 15th March last, to purchase cotton for Government to the extent of one lac of rupees (Rs. 1,00,000), partly for the consignment to the Court of Directors, and the rest to be sold in Bombay to the merchants, a part of which sum, viz., rupees eighteen thousand (Rs. 18,000), was to be previously advanced to ryots as tucavee, to enable them to furnish a good crop of cotton, to be secured to Government by this advance; I was informed in the 6th paragraph of Mr. Secretary Goldsmid's letter (adverted to in the forgoing paragraph) that it was determined by Government that the eighteen thousand rupees (Rs. 18,000) I had applied for as a tucavee advance was to be allowed to the agent of Messrs. Ritchie, Steuart & Co., and that gentleman having disbursed that sum, appears in his letter now forwarded to you, to consider according to the 8th paragraph of Mr. Secretary Goldsmid's letter, above adverted to, that the pecuniary aid I am ordered to give to the firm, is "to the extent of, at the utmost, one lac of rupees (Rs. 1,00,000), tucavee and outstanding revenue inclusive," for the purpose of making advances to the ryots, for the sowing, weeding, clean picking, and securing of cotton, such as it is the wish of Government to encourage the production of; but as I interpret my instructions they warrant my disbursing to Mr. Constable, the agent of Messrs. Ritchie, Steuart & Co., only eighteen thousand rupees (Rs. 18,000) as tucavee, and the balance eighty-two thousand rupees (Rs. 82,000) Government Revenue demands from the cultivators to be left uncollected till after the sellers of the cotton have delivered their respective quotas of it to the agency. Under this view of my instructions I have declined furnishing Mr. Constable with funds beyond the eighteen thousand rupees (Rs. 18,000) already paid him, but request the favour of your furnishing me with Government's instructions on the subject, and of laying before Government his letter herewith submitted; a copy of my reply to Mr. Constable is also forwarded for your information.

11. Mr.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 927

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11. Mr. Constable has stated that if the Government's aid is stinted to the said eighteen thousand rupees (*Rs.* 18,000), he requests that I will receive his drafts on Messrs. Ritchie, Steuart & Co., Bombay, and furnish him with corresponding sums on the district treasuries, to enable him to make advances to the ryots who may agree to furnish him with their cotton, that the ryots may be enabled in the meantime to do ample justice to their fields; this, if Government approves, would be conducive to the careful cultivation of cotton in the province, and as the season for giving advances, to enable cultivators to weed their fields, is fast passing away, I request I may be favoured with an early reply on this point.

12. The great advantage which Government have conceded to this European agency is the security conferred for the recovery of the advances (given to the ryots) made through the Revenue Department; without this assistance the recovery of capital advanced by Europeans unused to deal with natives of the Mofussil, would have been jeopardised. The mamlutdars collected the ryots near their own stations and introduced them to the agent, who told them he was willing to engage to purchase at an enhanced price all the clean good cotton they brought to him, and to those ryots who demanded an advance, it (to the aggregate extent of 18,000 rupees) was paid in the presence of the mamlutdars, with a view to its eventual recovery, which, as well as the Government's revenue demand, were to be deducted from the value obtained for the ryot's crop, when he transferred it to the agent; but this did not involve much trouble to the mamlutdar, or risk to Government, as by the bond (of which I submitted a copy for your kind correction), Messrs. Ritchie, Steuart & Co. are security for the payment of the eighteen thousand rupees (*Rs.* 18,000) advances. This does not place the mamlutdars under Mr. Constable's control in any respect, as they only make note of the persons to whom Mr. Constable advances, that they may refrain from pressing those ryots for the assessment of the lands of which they have delivered the cotton to Mr. Constable, as from the circumstance of Messrs. Ritchie, Steuart & Co., being pledged as security to Government for the repayment of the advances furnished to the ryot from the Government Treasury (to the aggregate amount of *Rs.* 18,000), the ryot will be allowed to deliver over his cotton crop to Mr. Constable, who will repay to the Treasury the advance drawn from it, on account of the individual, and after deducting from the sum for which the cotton was sold, the amount of the Government assessment on the land that yielded the cotton, the balance will be reserved by the ryot.

13. If Government should sanction Mr. Constable's proposition of permitting him to advance (in the above-mentioned manner, through the Revenue Department) the funds of Messrs. Ritchie, Steuart & Co. to the ryots of this zillah, to secure the purchase of their cotton, Messrs. Ritchie, Steuart & Co. will thereby enjoy the security of being able to recover the greater part of their money; whereas, if the money were independently advanced, the risk of recovering it would be greatly increased. At the same time, by bringing Mr. Constable acquainted with the ryots, and they with him, their future mercantile intercourse would be facilitated, and Mr. Constable, during the period of two years, to which term Government has limited this protective indulgence, would acquire the experience to enable him hereafter to conduct his agency with less direct assistance from Government.

Khandeish Collectorate Office, Dhoolia,
29 August 1850.

I have, &c.
(signed) *A. Elphinston*, Collector.

No. 8 of 1850.

To *Alexander Elphinston*, Esq., Collector, Khandeish.

Sir,

I HAVE the honour to acknowledge receipt of your letter, No. 1563, of yesterday's date, handing me copy of letter, No. 2024, from the Revenue Commissioner, Northern Division.

2. In reply to the query contained in the last para. of the Revenue Commissioner's letter, I beg to state that I am not prepared to say to what extent advances have been made by me for the exclusive cultivation of the New Orleans cotton.

3. I beg respectfully to observe, that the Revenue Commissioner appears to misapprehend not only the nature and objects of this agency, but also the nature of the assistance we have been led to expect, and which to some extent you have kindly afforded, by paying 18,000 rupees. I am not aware that I or my principals were ever pledged to make use of the tuccavee advances for the benefit of such ryots only as may have sown New Orleans cotton seeds; so far, indeed, from such pledge having been either given or implied, I cannot discover any allusion to this particular culture, either in the letter of application from Messrs. Ritchie, Steuart & Co., dated Bombay, 19th April 1850, to the Secretary to Government in the Revenue Department, or in that officer's letter of instructions to the Collector of Khandeish, dated Bombay, 23d May 1850.

4. The introduction of New Orleans cotton into this province is as yet experimental, and it is not to be conceived that Messrs. Ritchie, Steuart & Co. have established this expensive agency only, to foster and nurse this experiment. In the month of March last, I was despatched into this province to report on the practicability, or otherwise, of obtaining cotton

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so carefully picked and cleaned as would enable the purchaser of the produce of Khandeish to compete in the Bombay market with purchasers of the best produce of Broach, Dhollera, and Coompta. My reports, which, as stated by Messrs. Ritchie, Steuart & Co., in the letter above referred to, determined them upon establishing this agency, had no reference whatever to the introduction or culture of the New Orleans cotton. In stating this, I must not be understood as meaning to cast any doubts on the eventual benefit all parties will derive from the introduction of this superior variety. All I mean to say is, that while I am convinced more careful picking and cleaning will greatly enhance the value of the indigenous cotton, which has stood the test of ages, I am not at all prepared to say that the New Orleans has so thriven in this province as to render its exclusive nurture and cultivation a safe or wise mercantile undertaking.

5. In giving tuccavee advances I have not made any difference, or given any preference to those ryots who have sown the New Orleans seed; all that I have insisted upon is, that the money received from me should be applied to the careful weeding and still more careful picking of the crop. I may remark, that in two districts, Nusserabad and Chopra, where the largest quantity of New Orleans cotton seed has been distributed, the ryots declined entering into agreements with me for the sale of their crop, because they were already pledged to Government, who would give them 10 rupees per candy beyond the bazar price of the indigenous. The superintendent of the Government cotton experiments having reported that the so-called New Orleans seed is more than one-half indigenous, it will be entirely out of my power to promise a higher price for the produce of this mixture than I give for the purely indigenous, unless indeed the ryots can be induced to pick the pods from the two varieties in the same field at different times; as I am quite prepared to give a premium of four or even five rupees per candy for really well cleaned indigenous cotton, it is not to be supposed that I would be at all backward in offering somewhat more for equally clean New Orleans cotton; but knowing as I do the real state of the case, I do not think it would be for the future interests of this agency to hold forth hopes or promises of an enhanced price for a mixed article.

6. I have now the honour to report that I have distributed the 18,000 rupees sanctioned by Government, but this sum is wholly inadequate to secure to us a supply of cotton, profits on the sale of which would in any degree compensate the expenses attendant on this agency. At a rough calculation about 13,500 beegahs of land have been put under cultivation for us, 16 beegahs producing one candy of clean cotton; we have only made advances for 850 candies.

7. Having the impression that the aid to be afforded by you under the instructions of Government would be neither tardy nor stinted, I recommended that large and expensive machinery should be erected at Bodwar, and that all the available gins and sheds throughout the province should be hired; now if Government aid in making advances is to cease when I have only succeeded in securing sufficient kuppas to keep the machines at work for six weeks, having engaged them for six months, a heavy loss must accrue.

8. There appears to be some misapprehension as to the proportion 18,000 rupees, as tuccavee, bears to 82,000 rupees Government assessment. The average Government assessment in this province is $1\frac{1}{10}$ rupees, say $1\frac{1}{2}$ rupees, taking the assessment of the 13,500 beegahs under cultivation for us at this average, the amount of revenue demands against the ryots is only 20,250 rupees: 82,000 rupees being the average assessment of 54,666 beegahs.

9. As many ryots have sown cotton under the impression that at the time of picking or weeding, on furnishing security, they would be able to obtain advances from this agency, you will probably agree with me in thinking that it would be highly injurious not only to this agency, but to the interests of the province at large, as regards future cotton cultivation, that expectations so raised should be disappointed, perhaps to the total ruin of the ryot's crop; and as I consider it not alone desirable, but absolutely necessary, that any more advances should be made through the same channel as the 18,000 rupees, I have the honour to request that you will obtain the sanction of Government to the payment by your district officers of such further sums as I may deem necessary for the proper carrying out of this agency. If Government be unwilling to advance further from your treasury, I shall be prepared to place in your hands drafts on Bombay to cover the amounts required by me in the districts. I cannot, however, believe that it is the intention of Government to restrict the promised aid of one lac to the sum of 18,000 rupees actually paid, and 20,250 rupees, the assessment claims permitted to lie over.

10. I am under the impression that the crops of any ryot may be removed so soon as security is given to the mamlutdar for the due payment of the claims of Government.

11. The Revenue Commissioner, in his letter under notice, lays much stress on the privileges we have obtained by the use of Government machinery and the American saw-gins. I am not aware what machinery is here alluded to, unless the 1,000 circular saws received from Broach; the expensive machinery now erecting at Bodwar, was purchased by Messrs. Ritchie, Steuart & Co. some time ago, at a cost exceeding, I believe, 12,000 rupees. As to the saw-gins hired to us, I am not aware that we enjoy any advantage or privilege that has not been, or is not now, patent to every grower or dealer in Khandeish, who have always had the opportunity of paying one rupee per diem for the use of a twenty-saw gin. Under the impression

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impression that I should be able, by advancing to ryots through Government officers, to secure a very large quantity of kuppas, I made an offer to rent all the available gins throughout the districts; in accepting which offer I conceive you did no more for this agency than you were willing to do for any native dealer or merchant of the province, as the rent I offered was liberal in the extreme. When gins are hired by the day, Government have to keep a regular establishment to look after them, viz., a carkoon, at 8 or 10 rupees; a weigher, at 5 rupees; a peon, at 4 rupees: this establishment will be maintained by us, and Government will receive a clear 12 rupees per month for each gin.

12. The Revenue Commissioner refers to a native gentleman who is anxious to obtain privileges somewhat similar to those allowed to Messrs. Ritchie, Steuart & Co.; it will be an interesting inquiry when this party applies to ascertain to what extent he has availed himself of the opportunities he has hitherto enjoyed of purchasing or hiring the gins scattered throughout the province. I hail this native gentleman's application as the first fruits of our enterprise; so soon as our example shall have stirred up native capitalists to a sense of the true interests of their country and themselves, so soon as cotton is properly picked and cleaned, packed and carted, the objects of our agency are accomplished, and we shall be well pleased to leave the growth and management of the crops to these liberal-minded natives. To render the produce of this large and fertile province equally valuable with cotton at present more highly prized, will be, I believe, the certain effect of our agency here, upon the success of which, Messrs. Ritchie, Steuart & Co. have staked their capital and reputation for commercial sagacity, and I, my health, character, and prospects.

I have, &c.
(signed) A. G. Constable.
Agent to Messrs. Ritchie, Steuart & Co.
(signed) A. Elphinston, Collector.

Dhoolia, 23 August 1850.

No. 1615 of 1850.

To A. G. Constable, Esq., Agent to Messrs. Ritchie, Steuart & Co.

Sir,
In acknowledging the receipt of your letter, No. 8, dated 23d instant, I regret I consider myself precluded by the instructions I have received from Government from advancing to you any further sum beyond the (Rs. 18,000) eighteen thousand rupees already advanced to you, as tucavee, for cotton culture; but I have solicited instructions as to your request that your drafts on Messrs. Ritchie, Steuart & Co. may be accepted, and a corresponding amount given to you from the district treasuries for the same, to enable you to give the ryots the advances you require for the supply of good cotton to you. Your letter has been submitted to the Revenue Commissioner to be laid before Government for its decision on its contents.

I have, &c.
(signed) A. Elphinston, Collector.

C. C. Office, Dhoolia,
28 August 1850.

(True copy.)
(signed) A. Elphinston, Collector.

No. 2263 of 1850.

To A. Elphinston, Esq., Collector, Khandeish.

Sir,
I HAVE the honour to acknowledge the receipt of your letter, No. 1638, of the 29th ultimo, with enclosures, being a correspondence noted on the margin,* and in reply beg to refer you to the instructions contained in the Government letter, No. 6291, of the 26th ultimo, forwarded to you by this Department on the 2d instant, by which you will observe, that eighteen thousand rupees, (Rs. 18,000), is the sum sanctioned by Government, as tucavee advances to ryots on account of Messrs. Ritchie, Steuart & Co., and eighty-two thousand rupees (Rs. 82,000), the amount of revenue permitted to lay over for adjustment, according to the instructions transmitted to you.

2. Mr. Constable's application for further advances on the part of Government I am unable to recommend, but at the same time, you can intimate to him, if Messrs. Ritchie, Steuart & Co. are desirous of making remittances through the Government Treasury, that I have no doubt if they apply to Government for its permission to lodge in the treasury at the Presidency

* 1 Letter from Mr. Constable, No. 8, of 23d August 1850. 1 Letter from Mr. Constable, No. 1615, of 28 August 1850.

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Presidency any sums required for the purchase of cotton in Khandeish, Government will readily grant on your orders for the payment of the same.

3. I am not aware that there is anything in the correspondence now submitted by you requiring the attention of Government, but as you express the desire, I will forward it.

4. Messrs. Ritchie, Steuart & Co. appear to think (in which sentiments you seem to coincide), that they are pledged to nothing but to purchase the cotton best suited to their own interests; that if the produce of Khandeish is able to compete with Broach, Dhollera, and Compta, all that has been desired is attained. Permit me, however, to observe, that the object of Government is something beyond this, and that attempts are now being made to introduce the culture of the New Orleans cotton into those districts, to promote which in Khandeish is, I apprehend, a consideration with Government.

5. I will here beg to call your attention to the 5th para. of Mr. Constable's letter to your address, wherein he states, "I may remark, that in two districts, Nusserabad and Chopra, where the largest quantity of New Orleans cotton-seed has been distributed, the ryuts declined entering into agreement with me for the sale of their crop, because they were already pledged to Government, who would give them rupees (10) ten per candy beyond the bazar price of the indigenou. The Superintendent of the Government cotton experiments having reported that the so-called New Orleans seed is more than one-half indigenou, it will be entirely out of my power to promise a higher price for the produce of this mixture than I give for the purely indigenou, unless indeed the ryuts can be induced to pick the pods from the two varieties in the same field, at different times, as I am quite prepared to give a premium of four, or even five rupees per candy for really well cleaned indigenou cotton; it is not to be supposed that I would be at all backward in offering somewhat more for equally clean New Orleans cotton, but, knowing as I do the real state of the case, I do not think it would be for the future interests of this agency to hold forth hopes or promises of an enhanced price for a mixed article."

6. Now let me add two extracts from your own letter, which accompanied Mr. Constable's; you say in para. 7, "and particularly of the best kind (such as cotton from American seed), no fears need be entertained that when this cotton is produced it will not be eagerly purchased, as, however difficult it has hitherto been to induce the ryuts to run the risk of sowing unacclimatized American cotton seed, there never has been any difficulty in finding purchasers of the cotton from American seed, even among the native cotton dealers in the province, who have preferentially sought it out, bought it, and sent it down for sale to Bombay. If it had not been for this competition, a larger quantity of this cotton would have been sent to the Court of Directors in the last Government consignment from Khandeish." And again in para. 8, "and Government to disseminate the American cotton seed, and I entertain sanguine hopes that it will rapidly supplant the indigenou; and as so large a quantity of American cotton seed as has been sown this year in Khandeish was never sown here before, if its cultivation, when it reaches maturity, be only as healthy and promising as it has remained up to the present moment, no fear need be entertained that it will not be established in the province."

7. You are sensible that Mr. Simpson has reported the New Orleans seed to have been adulterated in Khandeish for the two last years, as *vide* your letter of the 5th ultimo, No. 1535, to my address. You will see what Mr. Constable now says of the growing crop. You have made considerable objections (with some reason perhaps) to remunerating ryuts, to induce them to uproot their indigenou plants from the New Orleans fields, proposing to separate the seed of the different cottons when they are cleaned. I need hardly observe, that the cotton so cleaned will be an article, if sold as New Orleans, prejudicial to its character, and if the process you propose is feasible that it should have been adopted before the cotton was planted, now reported to be adulterated for the third season; the work also to be performed by you will be tenfold larger than it would have been had you taken steps before the crops were sown; neither do I clearly understand why the ryuts if remunerated, should object to the eradication of the indigenou plants from the New Orleans fields, or how you are to control the assortment of the seed after the cotton is picked, and probably sold to native dealers.

8. In the extracts from your letter before me, you have shown there is not the slightest difficulty in disposing of New Orleans produce, that it is sought after by native dealers, and that "no fear need be entertained that it (the New Orleans) will not be established in the province." You hold, therefore, in your hands, the destiny of a great national undertaking, which I trust may not be marred by the continuance of such practices as those alluded to by Mr. Constable in the extract from his letter above quoted; or, now, that success seems certain, from the want of energetic measures to secure its permanence.

I have, &c.

(signed) A. N. Shaw,
Revenue Commissioner, N. D.

Revenue Commissioner's Office, Poonah,
3 September 1850.

(True copy.)

(signed) A. N. Shaw,
Revenue Commissioner, N. D.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 931

III
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V. 13858.

MINUTE by the Right Honourable the Governor, concurred in by the Honourable Mr. Willoughby.

MR. ELPHINSTON'S letter of 29 August 1850, No. 1638, is a very sensible one; and he shows that he clearly understands the views of Government in the matter.

We have informed Mr. Shaw that Government approve of the tenor of his letter, No. 1680, dated 26th June last, to the address of the Collector of Khandeish; but I do not approve of his letter of 6th August, No. 2024; the Revenue Commissioner ought to have seen from the correspondence that had been forwarded to him, that it was not stipulated by Government, either in direct terms or by implication, that Messrs. Ritchie, Steuart & Co. should confine their purchases to New Orleans cotton; Mr. Elphinston has clearly understood and rightly expressed our object; it was, that the ryots should be induced to pay attention to the picking of their cotton, and the Bombay merchant be enabled to procure cotton carefully cleaned and honestly packed.

2. The draft agreement sent to the Revenue Commissioner, Northern Division, with our letter of 26th August, No. 6291, prescribes the nature and extent of the direct assistance we, from the first, intended should be afforded Messrs. Ritchie, Steuart & Co. by Government; the Collector should, however, do his utmost, consistent with his duties towards the people and Government, to promote the interests of the undertaking; and if Messrs. Ritchie, Steuart & Co. will specify to us the amount which they are willing to authorise their agent to draw from the Collector of Khandeish, Mr. Elphinston may, I think, be authorised to cash bills drawn up to that amount by the agent on Messrs. Ritchie, Steuart & Co. at three days' sight. As Khandeish is a remitting district this will be no inconvenience to us.

3. Mr. Constable, in his letter of 23d August, appears to have lost sight of the fact that the 82,000 rupees assessment on lands producing cotton and other crops are to be allowed to remain uncollected from ryots contracting with the firm. Mr. Constable supposes the case of a ryot who grows only cotton. I believe, however, instances in which the land of ryots is under cotton only, with no portion under grain or other crops, will be but rarely if ever met with.

4. As no time is to be lost in settling the points at issue between the Collector and Revenue Commissioner, I beg that orders may be issued as soon as the present papers are disposed of by my honourable colleagues, and as Mr. Constable has been shown Mr. Shaw's letter by the Collector, I would furnish Messrs. Ritchie, Steuart & Co. with copy of our reply to the Revenue Commissioner's letter, drafted, if concurred in by the majority, from the present Minute.

22 September 1850.

(signed) Falkland.
J. P. Willoughby.

MINUTE by the Honourable Mr. Blane.

I BEG to refer to my former Minutes on this question.

24 September 1850.

(signed) D. A. Blane.

No. 7060 of 1850.

From Mr. Chief Secretary Malet to the Revenue Commissioner, N. D.

Sir,

I HAVE been directed to acknowledge the receipt of your letter, No. 2335, dated the 11th instant, submitting a correspondence which has passed between you and the Collector of Khandeish on certain points connected with the agency established there by Messrs. Ritchie, Steuart & Co., with a view to the improvement in the growth and packing of cotton.

2. In reply I have been directed by the Right Honourable the Governor in Council to inform you that Mr. Elphinston's letter of the 29th August last, No. 1638, is a very sensible one, and shows that he clearly understands the views of Government in the matter.

3. You have already been informed in my letter, No. 6291, dated the 26th ultimo, that Government approve of the tenor of your letter, No. 1680, dated the 26th June last, to the address of the Collector of Khandeish, but Government do not approve of your letter of the 6th August, No. 2024. The correspondence that had been forwarded to you shows that it was not stipulated by Government, either in direct terms or by implication, that Messrs. Ritchie, Steuart & Co. should confine their purchases to New Orleans cotton. Mr. Elphinston has clearly understood and rightly expressed the object of Government; it was, that the ryots should be induced to pay attention to the picking of their cotton, and the Bombay merchant be enabled to procure cotton carefully cleaned and honestly packed.

4. The draft agreement sent to you with my letter, No. 6291, dated the 26th ultimo, prescribes the nature and extent of the direct assistance Government from the first intended should be afforded by them to Messrs. Ritchie, Steuart & Co.; the Collector, however, should do his utmost, consistently with his duties towards the people and Government, to promote

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V. 13860.

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promote the interests of the undertaking, and as soon as Government have learned from Messrs. Ritchie, Steuart & Co. (who have this day been addressed on the subject) the amount which they are willing to authorise their agent to draw from the Khandeish Treasury, the Collector will be authorised to cash bills drawn up to that amount by the agent on his principals at three days' sight. As Khandeish is a remitting district there will be no inconvenience to Government.

5. Mr. Constable, in his letter to the Collector of the 23d ultimo, submitted with yours under reply, appears to have lost sight of the fact, that the 82,000 rupees as assessment on lands producing cotton and other crops are to be allowed to remain uncollected from ryots contracting with the firm. Mr. Constable supposes the case of a ryot who grows only cotton. His Lordship in Council believes, however, that instances in which the land of ryots is under cotton only with no portion under grain or other crops will be but rarely if ever met with.

6. A copy of this letter has been furnished to Messrs. Ritchie, Steuart & Co.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Govt.

Bombay Castle, 25 September 1850.

No. 7061 of 1850.

V. 13861.

From Mr. Chief Secretary *Malet* to Messrs. *Ritchie, Steuart & Co.*, Bombay.

Gentlemen,

ADVERTING to your letter, dated the 19th April last, I have been directed by the Right honourable the Governor in Council to transmit, for your information, the annexed copy of one which I have this day addressed to the Revenue Commissioner, Northern Division; and with reference to the 4th para., to request that you will state the amount which you are willing to authorise your agent in Khandeish to draw from the Collector's treasury, in order that the necessary instructions may be issued for giving effect to your wishes.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Govt.

Bombay Castle, 25 September 1850.

EXTRACT from the Proceedings of Government in the Territorial Department,
Revenue; dated 1850.—V. 14462 to 64.

V. 14462.

From Messrs. *Ritchie, Steuart & Co.*, to Mr. Chief Secretary *Malet*.

Sir,

We have the honour to acknowledge the receipt of your letter of the 25th instant, in the Territorial Department, Revenue, No. 7061 of 1850, accompanied by copy of your letter of the same date, No. 7060, to the address of the Revenue Commissioner, Northern Division, and relating to our agency in Khandeish.

In reply, we beg to express, through you, to the Right Honourable the Governor in Council, our best thanks for the interest manifested in, and the encouragement afforded to, our undertaking, and especially for the willingness shown to supply our agents with the funds necessary in Khandeish, by authorising the Collector there to cash his drafts upon us at three days' sight. We are not prepared, as yet, to state precisely what amount Mr. Constable may require to pay for the cotton which he has already secured, or may secure, by contracts with the ryots; but we expect that in the course of the season he will have to draw for not less than one lac of rupees.

We have, &c.
(signed) *Ritchie, Steuart & Co.*

Bombay, 27 September 1850.

MINUTE by the Honourable Mr. *Willoughby*, subscribed to by the Honourable
Mr. *Blane*.

V. 14463.

The Collector to be advised with reference to para. 4 of Government letter of 25th September 1850, No. 7060.

The Accountant-general to be furnished with copy of that para. and of the present letter.

(signed) *J. P. Willoughby*,
D. A. Blane.

7 October 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 933

No. 7379 of 1850.

From Mr. Secretary *Goldsmid* to the Collector of Khandeish.

Sir,

WITH reference to the 4th para. of Mr. Chief Secretary Malet's letter, No. 7060, dated the 25th ultimo, to the address of the Revenue Commissioner, Northern Division (an extract of which is herewith sent), I have been directed by the Right Honourable the Governor in Council, to transmit for your information the accompanying copy of a communication from Messrs. Ritchie, Steuart & Co., and to authorise you to cash bills from your treasury, drawn up to the amount of one lac of rupees by Mr. Constable, on his principals, at the Presidency, at three days' sight.

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Bombay.

V. 14404.

Dated 27 Sept. 1850.

I have, &c.
(signed) *H. E. Goldsmid*,

Secretary to Government.

Bombay Castle, 8 October 1850.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue; dated 22d May 1850.—V. 8142 to 45.

No. 1121 of 1850.

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

V. 8142.

Sir,

In submitting the accompanying correspondence as noted in the margin, from the Collector of Khandeish, on the subject of cotton affairs, for the information of the Right Honourable the Governor in Council, I have the honour to observe, that having received several communications from Mr. Elphinston on this matter, I returned them to him, requesting him to await Mr. Simpson's arrival, to consult him and submit his report as to the manner he would propose to employ that gentleman, in one communication, which he has now done.

No. 928, 2d instant,
with accompani-
ments.

2. I had suggested to the Collector, that Mr. Price, although subordinate to Mr. Simpson, should be placed in charge of the superintendence of one or two talooks, for the purpose of giving his whole attention to the encouragement of the New Orleans cultivation. I still think, from Mr. Price's knowledge of the language and the people of the country, that this plan should be adhered to; Mr. Simpson might superintend his proceedings; all correspondence to the Collector would also proceed from Mr. Price through Mr. Simpson, who would also have any assistance he might be able to afford him. As this arrangement appears to be one that would leave open to Mr. Price a field to distinguish himself, and lessen Mr. Simpson's duties, I consider it advisable to recommend it.

3. I will now proceed to examine the correspondence laid before Government; Mr. Simpson proposes several suggestions, in which Mr. Elphinston concurs:—

1st. "To let Mr. Constable have, on hire, the use of the 19 gins now on hand (with the single exception of the two at Dhurrungaum), and to let him have 21 more, to be constructed by the present establishment before the 1st November next."

"To this I object; to let the gins in this manner to Mr. Constable would, in my opinion, be to establish a monopoly, and as Mr. Elphinston remarks in the concluding part of the second suggestion, recommending Government to build other gins in the place of those to be let, as otherwise the improved "ginning machinery in the province would be insufficient to answer the demands of the ryots."

4. The first consideration of Government should be the ryots, and the object of the experiment is to introduce the culture of the New Orleans, and the use of the saw-gins in the country, and then to leave the whole operation in the hands of the people.

5. I would, therefore, give every fair encouragement to Messrs. Ritchie & Co., and allow Mr. Constable to purchase any or all the Government saw-gins, and rent at a moderate rate any of the Government buildings used for ginning. I would give him every assistance, but have no joint concern, as Government could not possibly have any control over his movements; he might, if it suited his convenience, turn the whole of his attention to native cotton, while it is the desire of Government to introduce an improved culture.

2d. "To retain an extra establishment of artificers at an aggregate expenditure of rupees (738) seven hundred and thirty-eight, for six months, for the construction of 19 additional gins for the use of Government, and the public who may wish to buy or hire them, to get their cotton separated from the seed, as otherwise the improved ginning machinery in the province would be insufficient to answer the demands of the ryots."

I would recommend Government to sell all or any number of their saw-gins or machinery at present in hand, and without reference to inconvenience, to make up others for their own use; but to let out on hire 19 gins, and to make up 21 more for Mr. Constable to hire, to be returned at any moment on the hands of Government, I disapprove; let Mr. Constable purchase the 19, and Government make up for him 21 more, he paying all the expenses; but the transaction should rest on his responsibility, and not on Government. I do not think a private merchant could reasonably expect more than this from any Government.

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3d. "To

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Bombay.

3d. "To purchase, on account of Government, 500 candies of New Orleans cotton, at an expenditure, including carriage and other incidental charges, of rupees (27,500) twenty-seven thousand and five hundred."

I see no objection to this; it would land the cotton at the Presidency at 55 rupees per candy, which would probably there realise 110 rupees.

4th. "To superintend the culture of 200 beegahs to be sown with New Orleans cotton seed, already sanctioned in Government letter of 16 April 1850."

This proposition is disposed of: I recommend, that one farm should be under the management of Mr. Price.

5th. "To endeavour to extend the cultivation, by the ryots, of American varieties of cotton; and, as an encouragement, to give a premium of five rupees per cent. for this cotton over the country cotton."

This proposition might be allowed for a period. I do not anticipate that there would be any necessity for the collector acting on the sanction; he must not, however, be unmindful in letting the gins to private individuals, which should only be to those who engage to purchase and clean the New Orleans cotton.

6th. "To build a workshop, as per plan, and estimate accompanying, at an outlay of rupees (475) four hundred and seventy-five, and an office-room, at an estimated cost rupees (175) one hundred and seventy-five. Hitherto the artificers have, with much inconvenience, used the open verandah of the ginning-room, but subjected to exposure to the weather and interruption of work."

This I recommend.

6. The desire of Government is not to make a profit by the experiment, and the operations of the Collector should steadily tend to encourage the cultivation of the New Orleans and introduce the use of the saw-gins; and in doing this, he must bear in mind that the ruin of our experiments in this country has often been from Government doing everything; the object, therefore, should be to show the ryots and the country that the speculation is profitable, and that Government is quite willing to offer to any individual, European or native, every assistance; but the responsibility beyond this must rest upon themselves, and the amount of profit to be derived depend on their own energy and exertions; with this view, I would recommend that any portion of the machinery should be sold to private speculators, albeit, it may put Government to a temporary inconvenience; that ryots should be encouraged to plant New Orleans, and guaranteed to the extent of their rent against failure of crops, and the purchase of their crops for a limited number of years should also be secured; but I would not have Government in any way encourage a monopoly, or engage in a joint concern, which I consider would be the case, letting a number of gins to Mr. Constable, with the temporary use of the Government establishment. I would let him purchase the gins, and hire on lease the buildings, and if he requires any part of the native establishment, now employed by Government, let him engage them by a private arrangement.

7. As the correspondence now forwarded explains how Mr. Simpson, the Superintendent, will be employed, I trust your letter, No. 2376, dated 30th March last, calling for a report on this subject, will be considered as replied to.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, Northern Division.

Revenue Commissioner's Camp,
Khandalla, 9 May 1850.

PLAN and ESTIMATE (No. 118 of 1840) of a single-tiled Workshop for the Artificers of the Cotton Experimental Department, Khandeish.

ESTIMATE.

Construction.

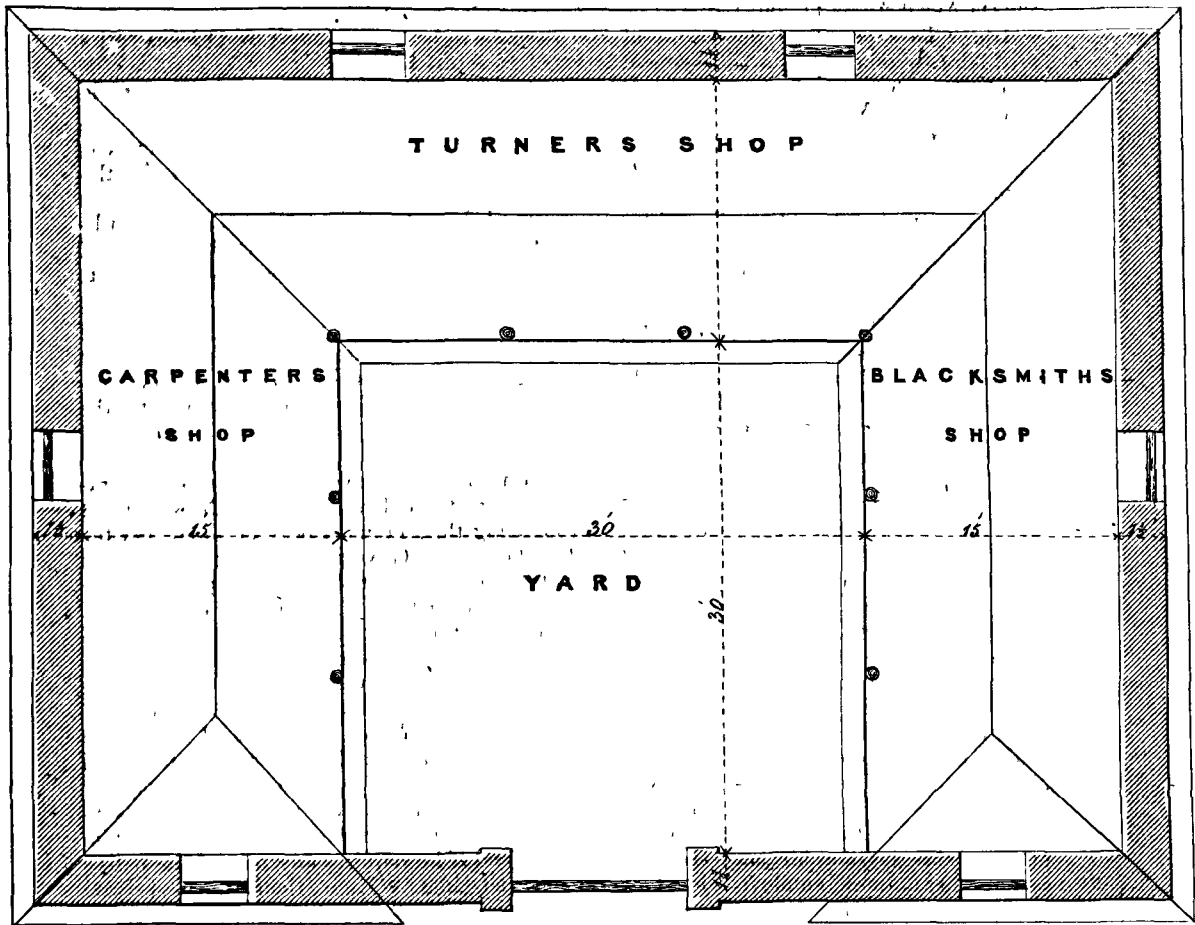
THE walls of the buildings to be of brick and mud, pointed with choonam both inside and outside, with a single tiled roof, supported on common teak trusses, with rafters and battens, eaves and ridges laid in with choonam; the buildings to have six windows and a gate leading into the yard.

Estimate:

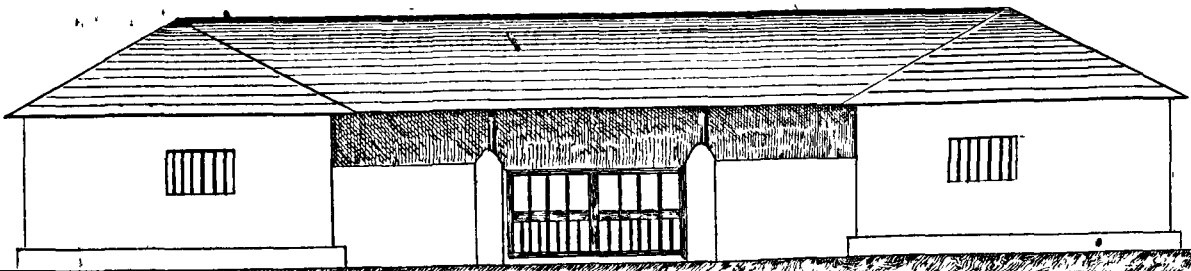
310' × 2' × 1' = 620 cubic feet.	Excavating foundation at 8 ins, 100 cubic feet	3	1	7
310' × 2' × 1' = 620 ditto.	Filling ditto at 2 rupees ditto	-	12	6 5
310' × 2' × 1' = 620 ditto.	Plinth, at 3 rupees ditto	-	18	9 7
200' × 1½' × 9 = 2,700 ditto.	Wall, at 5 rupees ditto	-	135	- -
120' × 15 × 1 = 1,800 ditto.	Moorum flooring at 8 annas ditto	-	9	- -
120' × 24 = 2,880 square feet.	Single tiling, at 4 rupees 100 square feet	-	115	3 2

Rs. 293 4 9

To face page 934



GROUND PLAN



FRONT ELEVATION



TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 935

III
Bombay.

	<i>Woodwork.</i>	<i>Rs. a. p.</i>
10 Posts, at 1 rupee each - - - - -		10 - -
10 Post-plates, at 1 rupee each - - - - -		10 - -
10 Wall-plates, at 1 rupee each - - - - -		10 - -
2 Large trusses, 20 feet span, at 4 rupees each - - - - -		8 - -
9 Small trusses, at 3 rupees each - - - - -		27 - -
10 Ridge pieces, at 1 rupee each - - - - -		10 - -
700 Rafters, at 6 rupees 100 - - - - -		42 - -
600 Bamboos, at 1½ rupees 100 - - - - -		9 - -
10 Seers large nails, at 2 seers 1 rupee - - - - -		5 - -
21 Seers small nails, at 1½ seers 1 rupee - - - - -		14 - -
6 Windows, at 4 rupees each - - - - -		24 - -
1 Gate complete - - - - -		12 11 3
		181 11 3
	TOTAL - - -	Rs. 475 - -

Superintendent's Office, Dhurrungaum,
19 July 1849.

(signed) *Alex. Elphinston*, Collector.
T. Price, Assist. Supt. Cotton
Experiments in charge.

(No. 928 of 1850.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

V. 8143.

Sir,

WITH reference to your letter, No. 953, dated the 15th ultimo, directing me to resubmit to you, to be laid before Government, the plan of future operations in the department of cotton experiments in this zillah, which you directed might be resubmitted to you as a whole in a single letter, I accordingly instructed the superintendent in like terms, and now do myself the honour to forward his letter, No. 109, dated the 29th ultimo, containing certain propositions, influenced by the altered circumstances consequent on the establishment of an agency in Khandeish by Messrs. Ritchie, Steuart & Co., on whose part Mr. Constable has made an application for the use of saw-gins, &c., on hire. Copy of this communication is also submitted.

2. The propositions of Mr. Simpson, in which I concur, are as follows:—

1st. To let Mr. Constable have on hire the use of the 19 gins now on hand (with the single exception of the two at Dhurrungaum), and to let him have 21 more, to be constructed by the present establishment, before the 1st of November next.

2d. To retain an extra establishment of artificers, at an aggregate expenditure of seven hundred and thirty-eight rupees (*Rs. 738*), for six months, for the construction of 19 additional gins for the use of Government, and the public who may wish to buy or hire them, to get their cotton separated from the seed, as otherwise the improved ginning machinery in the province would be insufficient to answer the demands of the ryots.

3d. To purchase on account of Government 500 candies of New Orleans cotton, at an expenditure, including carriage and other incidental charges, of twenty-seven thousand five hundred rupees (*Rs. 27,500*).

4th. To superintend the culture of 200 beegahs, to be sown with New Orleans cotton seed, already sanctioned in Government letter of the 16th April 1850.

5th. To endeavour to extend the cultivation, by the ryots, of American varieties of cotton, and as an encouragement, to give a premium of five rupees per cent. for this cotton over the country cotton.

6th. To build a workshop, as per plan and estimate accompanying, at an outlay of four hundred and seventy-five rupees (*Rs. 475*), and an office-room, at an estimated cost of one hundred and seventy-five rupees (*Rs. 175*). Hitherto the artificers have, with much inconvenience, used the open verandah of the ginning-room, but subjected to exposure to the weather, and interruption of work.

3. I beg to recommend these plans may receive the early sanction of Government for their adoption. I would further beg to recommend that the premium of five rupees per cent. for American over the price of country cotton, proposed by Mr. Simpson, should range from five to ten rupees, as the superior quality of this cotton will repay the enhancement of its price.

4. To avoid delay at this advanced period of the season, I have, in anticipation of the permission of Government, on my own responsibility, ordered the immediate cutting of timber in the Government jungles, of the size and quality mentioned in Mr. Simpson's 6th paragraph.

296— Sess. 2.

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Bombay.

paragraph. I hope to be able to get it in the Sathpoora Hills, or in the Nundoorbar or Sathpoor Talooka, the last resource being the Dang. This does not require any further sanction, as the sum of one thousand two hundred rupees (Rs. 1,200) has already been sanctioned by Government in its letter, No. 379, dated the 14th January last, for the construction of 40 saw-gins.

5. The requirements of your memorandum, No. 935, dated the 13th ultimo, returning for further explanation Mr. Price's plan of operations, which have now been superseded, have been met in this letter; I have not therefore considered it necessary to return the correspondence received with your memorandum above alluded to.

6. As Mr. Constable is anxious for an early reply to his letter to me, dated 15th ultimo, now forwarded to you, and I feel myself precluded from giving a decisive reply to him till it is sanctioned by you, I herewith transmit my reply* to that gentleman, and if approved of by you, request it may be forwarded. From the accompanying letter from Mr. Price, you will see his sentiments on the subject are quite in unison with Mr. Simpson.

* No. 9/27.

1.

Khandeish Collector's Office,
Dhoolia, 2 May 1850.

I have, &c.
(signed) Alex. Elphinston,
Collector.

(No. 109 of 1850.)

To A. Elphinston, Esq., Collector, Khandeish, Dhoolia.

Sir,

ACTING upon your verbal instructions, I have the honour to submit herewith a plan of operations to be carried out by this department during the ensuing agricultural year of 1850-51, and first to remark, that as Government, under the altered circumstances of the case, considers it unnecessary to sanction the purchase of one lac of rupees worth of cotton on public account (see letter quoted in the margin*), inasmuch as Messrs. Ritchie, Steuart & Co. are about establishing an agency in this zillah for the purchasing of cotton on a large scale; in sketching my plan I shall endeavour to keep in view both the object of the Honourable Court of Directors † and that of the local Government, and hope it will meet with your approval, and the early sanction of the Right Honourable the Governor in Council.

2. In a recent application made by Mr. Constable, the agent of Messrs. Ritchie, Steuart & Co., that gentleman proposes to hire the whole of the Government saw-gins and cotton sheds at present on hand, including those that may be completed by the 1st November next, which, if approved of by Government, as I have no doubt it will be, in that case Government and also the native merchants will be precluded the use of any of the gins; and from the nature of the experiments, connected as they are with the introduction of the New Orleans cotton in this zillah, and the desire on the part of Government to prevent a monopoly in the use of these machines, I would therefore prefer, as a middle course, the following propositions:—

1st. To let Mr. Constable have, on behalf of the house of Messrs. Ritchie, Steuart & Co., the number of gins which he proposes to work, viz., all those now on hand, except those to be employed at the Dhurrungaum factory, as well as those the present establishment will be able to manufacture by the 1st November.

2d. For the use of Government, and also the native merchants, I propose to manufacture 19 gins, in addition to those alluded to in the 1st proposition, by employing an extra establishment, which is to be abolished as soon as the object in view is attained.

3d. To superintend on Government account the cultivation of 200 beegahs of land in New Orleans cotton, as already sanctioned in the 5th para. of Government letter, dated the 16th April 1850.

4th. To induce the ryots to undertake the culture of New Orleans cotton on their own account, and to distribute for that purpose the seed shortly expected to arrive from Dharwar, in addition to those obtained from the crop grown in Khandeish the past season.

3. Reverting to the 1st proposition of letting the agent of Messrs. Ritchie, Steuart & Co. have the use of all the gins that can be got ready by the 1st November next, it occurs to me, in reviewing the object for which the experiments are established in Khandeish, that the proposition of Mr. Constable cannot, I think, but be favourably entertained by Government, as it will in a great measure relieve Government from the necessity of keeping at work the whole of the gins this department has already on hand, and is now making up, and as was originally intended, with a view to their being eventually sold to private native dealers; therefore, in justice to this class of persons, the original intention should not be wholly lost sight of; and also, to provide for the requirements of Government for ginning the

* Vide the 8th para. of Mr. Secretary Goldsmid's letter, No. 3012, of the 16th instant.

† See their despatch, No. 20, of 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 937

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the crop of New Orleans cotton which will be cultivated by the ryots the ensuing season, and which I propose Government should purchase on the terms stated in 7th ^{clause} of this letter, an extra establishment of artificers for the purpose alluded to in my 2d proposition should be entertained. I may here remark, that as the native churka does not answer for separating the seed of New Orleans cotton from the fibre, therefore, as the culture of this kind of cotton extends over the districts, the manufacture or supply of saw-gins will have to be increased in equal proportion.

4. I find in letter number 97, of the 20th instant, that Mr. Price has made arrangements for the distribution of 70,000 lbs. of fresh acclimated Khandeish New Orleans cotton seed obtained from last season's crop in the districts; and that upwards of 30,000 lbs. are shortly expected to arrive from Dharwar, which are also to be given to the ryots to be sown this year, making upwards of 100,000 lbs. of New Orleans seed; and reckoning 10 lbs. per beegah, 10,000 beegahs of land will therefore be brought under cultivation with this species of cotton; and if the yield be taken at the lowest average of two maunds per beegah, the ryots in Khandeish will next year have to seek the disposal (to their advantage) of 1,000 candies of New Orleans seed cotton. This Mr. Price seems to have had in view when he submitted his estimate of annual operations, (*vide* his letter, No. 76, of the 27th March last); and assuming that it is necessary on the part of Government to be prepared to purchase at least one-half of this quantity, I have in the following estimate provided for the purchase and ginning of 500 candies, the expenses of which are as follows:—

	Rs.
500 candies of New Orleans cotton, at 40 rupees per candy	- - 20,000
Ginning, at 3 rupees per candy	- - - - - 1,500
Bags, at 2 ditto	- - - - - 1,000
Packing, at 2 ditto	- - - - - 1,000
Carting, at 6 ditto	- - - - - 3,000,

Temporary establishment to supervise ginning depôts for six months.

10 carkoons, at 8 rupees each	- - - - - 480
10 weighers, at 5 ditto	- - - - - 300
Adapting either the chowries or durrumsallahs for working gins, or if procurable, to hire houses for the season	- - 220 1,000

TOTAL Rupees - - - 27,500

5. The number of gins that will be required to clean the above quantity, so as to despatch it in a marketable state to Bombay before the rains, and also to provide for the demand of private individuals, will be about 19, or to complete the 40 gins recently sanctioned by Government, of which 21 are to be made over to Mr. Constable, and 19 to be retained for the operations of this department; and as the former number, it is expected, will be made up by the artificers now employed at this department, the extra establishment to complete the remainder before the arrival of the next ginning season is as follows:—

	Rs.
Five carpenters, from 1st June to 30th November, at 12 rupees each	- - 360
Three blacksmiths ditto ditto	- - 216
Three hammer-men ditto at 6 rupees each	- - 108
Three bellows-boys ditto at 3 rupees each	- - 54

TOTAL Rupees - - - 738

6. It now remains for me to notice the necessity there will exist, in the event of Government sanctioning the adoption of the above measures, in early providing this department with well-seasoned teak wood for making up these machines; and as Mr. Price tells me that he has of late experienced great difficulty in obtaining wood of the kind required, I beg to suggest that the timber specified in the margin* be obtained from Bombay before the rains, if not procurable in Khandeish, as the above arrangements cannot be effected unless the supplies are obtained within the time proposed; saws and iron exist in the stores of this department sufficient to make up the whole of the gins estimated for; and with the assistance of the extra establishment and the wood in question, this number of gins might easily be manufactured in time to meet the objects in view.

7. The 3d and 4th propositions contain the desire on the part of this department to extend the cultivation of the New Orleans cotton as much as possible, and on that account has already made arrangements for the disposal of all the available seed obtained from last season's crop, which, with the quantity early expected to arrive from Dharwar, will put about 10,000 beegahs under cultivation by ryots on their own account, besides 200 beegahs on Government account, under my general personal superintendence. As it does not

* Pieces.	Length.	Breadth.	Depth.
60	of 5 feet	by 24 inches	by 1½ inches.
80	of 6 feet	by 12 inches	by 1½ inches.
40	of 2 feet	by 12 inches	by 2 inches.
200	of 9 feet	by 6 inches	by 6 inches.

not appear to me that the time has yet arrived to withdraw the encouragement Government has hitherto held out to the ryots to stimulate the production of this species of cotton; though the improvement is partially spread over the province, the arrangements proposed in this letter seem to me to be the more desirable; and I fully agree with the Revenue Commissioner in his opinion, as expressed in the 4th para. of his letter, No. 759, of the 25th March last, that a small premium of five rupees should be given for New Orleans cotton above the ruling price of the indigenous kind, as if no distinction is to be observed, it is much to be feared that the New Orleans cotton, though now being cultivated to some extent in this zillah, will inevitably fall off. I would, therefore, solicit the early sanction of the measures proposed in this letter, so that, in my tour into the districts, I may be able to make proposals with the ryots for the purchase of their New Orleans cotton in person.

8. I would also beg, in conclusion, to recommend that as the press at Dhurrungaum is now and will continue to be made use of in the baling of cotton, and cannot, therefore, be converted into a workshop, as suggested by the late Revenue Commissioner, the early sanction of Government be obtained for erecting one, according to the plan submitted by Mr. Price, with his letter, No. 117, of the 19th July last, and which I request you will forward to Government, along with this recommendation. A small addition to the plan, however, seems to me to be necessary for an office-room, as from the nature of the extended operations proposed to be carried out in the ensuing season, and the necessity in consequence of affording more shelter to the artificers and the office establishment, it is urgently required. The addition of an office, erected on an upper floor, to overlook the inmates of the workshop, and adjoining it in front, will increase the amount of the estimated outlay from Rs. 475 to Rs. 650, for the expenditure of which sum I beg you will obtain the early sanction of Government, in order to afford sufficient time to enable me to prepare the materials necessary for this work before the arrival of the monsoon.

9. The correspondence which accompanied your endorsement, No. 836, of the 20th instant, is herewith returned.

I have, &c.,

(signed) *S. Simpson,*
Superintendent Cotton Experiments.

Superintendent's Office, Dhurrungaum,
29 April 1850.

(signed) *Alex. Elphinston,*
Collector.

To *Alexander Elphinston, Esq.,* Collector of Khandeish.

Sir,

I HAVE the honour to inform you, that having been commissioned by the firm of Ritchie, Steuart & Co., merchants in Bombay, to examine into the capabilities of your collectorate for a continued supply of good clean cotton to the Bombay market, I arrived within your district about a month ago, and have since been engaged on the object of my mission.

2. Acting on the information I have been able to furnish, the firm which I represent have determined to embark some portion of their capital in attempting, on an extensive scale, to induce the native cultivators to benefit by past experiences, and by a personal intercourse with upright Europeans. To carry out these views, I shall become a permanent resident in your collectorate; and, with the assistance of a very able engineer, shall strive to introduce a better system of picking and cleaning the kuppas than is at present practised by the ryots in Khandeish.

3 For the better carrying out plans, it is very desirable that we should have all the gins that are now, or may shortly hereafter become, available in the Government factory, made over to us; and I have, therefore, the honour to request that you will have the goodness to entertain the following proposal:—

4. All the gins and sheds that are at present erected, or that may be erected before the 1st November next, I offer to hire from Government, from the 15th October 1850 to the 15th May 1851, at a fixed rate of twelve rupees (Rs. 12) per month for each gin erected under cover, and ten rupees (Rs. 10) for such as are still unprovided with sheds.

5. I would also request that at stations where gins are erected, and are under charge of carkoons or peons, these men be allowed to be retained by us, if not elsewhere required, for the service of Government.

6. In the event of our obtaining the gins on hire, and hereafter finding that they were not unprofitable, it is presumed that Government would permit us to purchase them, deducting from the price the amount we had already paid for the hire.

7. Although it is not to be expected that the two gins now worked by Mr. Price will be made over to us, yet I hope you will issue such instructions to the parties in charge as will enable

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 937.

enable us to use the press attached, whenever it is not required for the cotton purchased by Government.

8. I propose to keep the gins in repair for the amounts abovementioned.

I have, &c.
(signed) A. G. Constable.

(True copy.)

(signed) Alex. Elphinston,
Collector.
Dhoolia, 15 April 1850.

(No. 98 of 1850.)

To A. Elphinston, Esq., Collector, Khandeish, Dhoolia.

Sir,

IN reply to your endorsement, No. 779, of the 15th instant, requiring of me to state whether the terms proposed by Mr. Constable, in his letter of the same date, are remunerative to Government of all expenses, and if not, what terms would be so in selling or hiring to that gentleman the machinery and gin shed required by him, and also to state what charge ought to be made if the services of the peons or carkoons are granted; I would beg to state that the offer to take up all the Government gins that are now, or may become available before the 1st of November next, at 12 rupees for each gin, erected under cover, and 10 rupees for such as are unprovided with sheds, seems to me to be such as requires to be encouraged, while the rates of hire at which the machines and sheds are asked will remunerate Government by a return of nearly 30 per cent., exclusive of the Superintendent's pay.

2. With respect to the people employed in the supervision of the operations at the district stations, the carkoons and weighers are entertained by me for the season, and could be transferred for employment by Mr. Constable, if required, in their present pay, viz., eight and five rupees respectively; but the peons being temporarily provided from the mamludars' establishments, I am not aware whether their services can, without your approval, be obtained.

3. I have nothing to urge against the proposition of Mr. Constable in his 6th para. to be permitted to purchase the gins, in the event of their being hereafter approved of by him, for the cost price of them, minus the amount of hire which he will have paid on their account; on the contrary, I think it but just that such a deduction ought to be allowed; more so, as that gentleman proposes to defray the expenses of keeping in repair the machines, and also to maintain the necessary establishment to supervise the working of them during the time they will be hired by him.

4. If the proposal made by Mr. Constable of hiring the whole of the Government gins belonging to the establishment, excepting the two worked at Dhurrumgaum, is to be entertained by you, the advantage to Government of that gentleman being allowed the use of the press when unemployed is obvious; and to avoid future reference, the rate per day at which he proposes to avail himself of the use of it, is necessarily required to be stated.

I beg, &c.
(signed) T. Price,
Assist. Supt. Cotton Experiments in charge.

Superintendent's Office, Dhurrumgaum,
22 April 1850.

(Concurred.)

(signed) S. Simpson,
Superintendent Cotton Experiments.

P.S.—Mr. Constable's letter is herewith returned.

(signed) Alex. Elphinston,
Collector.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. Willoughby and Blane.

V. 8144.

MR. SIMPSON'S and Mr. Price's suggestions are supported by Mr. Elphinston; they appear to me to be judicious, and should, in my opinion, be approved of by us, notwithstanding the objections taken by the Revenue Commissioner, Northern Division. The establishment of an agency of the description contemplated is greatly to be desired, as being calculated to ensure the attainment of the objects the Honourable Court and ourselves have in view when taking active measures for ensuring a better and cleaner description of cotton coming to market than now reaches it.

III.
Bemby.

2. Mr. Landon, at Broach, was allowed the use of the machinery and buildings, free of rent, from 1st August 1849 to 30th April 1850, and then to select what articles he pleased, and purchase them at a moderate valuation; it is now proposed by the authorities in Khandeish, that from 15th October 1850 to 1851, Messrs. Ritchie, Steuart & Co. be allowed to hire sheds, and a number of the gins already constructed, or to be constructed, provision being made for the requirements of Government and the people of the province. The rates of hire offered by Messrs. Ritchie, Steuart & Co. appear from para. 1 of Mr. Price's letter, No. 98, dated the 22d April 1850, to be fully as high as could be desired by Government.

3. Mr. Shaw opposes the letting of the gins, but does not object to their being sold. It is, however, unreasonable to expect that any Europeans or natives would incur a large outlay for ginning machinery until they have had some opportunity of learning what prospect there is of the operations on which they are about to engage being attended by success; and to afford them this opportunity, the proposal of letting out the gins for a year seems judicious. Towards the termination of that period, the Collector should furnish us with such detailed information as will enable us to determine as to the propriety of requiring Messrs. Ritchie, Steuart & Co. to purchase the machinery, &c., or give them up.

4. Mr. Constable, on the part of Messrs. Ritchie, Steuart & Co., requests the use of the press at Dhurrungaum when not required by Government, and this permission may be accorded, a fee being required for its use.

5. The Revenue Commissioner appears (para. 6) to interpret, wrongly Messrs. Ritchie, Steuart & Co.'s wish to have the use of the Government establishment; what they appear to me to wish, and all of course which we can allow, is, that they may be permitted to retain such of the establishment as may not be required by Government, paying them, of course, by a private arrangement, as proposed by Mr. Shaw.

6. I should wish to learn from Mr. Simpson and the Collector how the arrangement relative to Mr. Price's employment in the manner suggested in Mr. Shaw's 2d para. would conduce towards or militate against the general arrangements which may have been planned for the improvement of the culture and preparation for market of cotton. We should, I think, intimate to the Revenue Commissioner, that although it is our earnest desire to ensure the introduction of the New Orleans variety, we also earnestly wish to improve the indigenous cotton, for we consider it of very great importance to trade, and to the welfare of our cultivators, that the indigenous cotton should have fair play from the day the seed is put into the ground up to that of the wool being put on board ship, that it should be carefully picked, freed from seed, honestly packed, and carefully conveyed to the coast.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

15 May 1850.

(No. 4194 of 1850.)

V. 8145.

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 1121, dated the 9th instant, with accompaniments from the Collector of Khandeish, and Messrs. Simpson and Price, containing suggestions regarding the conduct of the cotton experiments in that province.

2. Mr. Simpson's and Mr. Price's suggestions are supported by Mr. Elphinston; they appear to his Lordship in Council to be judicious, and he has therefore been pleased to approve of them after fully taking into consideration the objections which were advanced by you. The establishment of an agency, of the description contemplated, is greatly to be desired, as being calculated to ensure the attainment of the objects the Honourable Court and Government have in view when taking active measures for ensuring a better and cleaner description of cotton coming to market than now reaches it.

3. Mr. Landon, at Broach, was allowed the use of the machinery and buildings, free of rent, from 1st August 1849 to 30th April 1850, and then to select what articles he pleased, and purchase them at a moderate valuation. It is now proposed by the Collector and Mr. Simpson, that from the 15th October 1850 to 1851, Messrs. Ritchie, Steuart & Co. be allowed to hire sheds and a number of the gins already constructed, or to be constructed, provision being made for the requirements of Government and the people of the province. The rates of hire offered by Messrs. Ritchie, Steuart & Co. appear from para. 1 of Mr. Price's letter, No. 98, dated the 22d April 1850, to be fully as high as could be desired by Government.

4. You are opposed to the letting of the gins, but do not object to their being sold. In the opinion, however, of the Governor in Council, it is not to be expected that any Europeans or natives would incur a large outlay for ginning machinery until they have had some opportunity of learning what prospect there is of the operations on which they are about to engage being attended by success, and to afford them this opportunity, the proposal of letting out the gins for a year seems to his Lordship in Council judicious. Towards the termination of that period, the Collector should furnish Government with such
detailed

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detailed information as will enable them to determine as to the propriety of requiring Messrs. Ritchie, Steuart & Co. either to purchase the machinery, &c.; or to give them up.

5. Mr. Constable, on the part of Messrs. Ritchie, Steuart & Co., requests the use of the press at Dhurrungaum when not required by Government, and this permission his Lordship in Council authorises being accorded, a fee being required for its use.

6. You appear (para. 6) to interpret wrongly Messrs. Ritchie, Steuart & Co.'s wish to have the use of the Government establishment; what they appear to his Lordship to wish, and all of course which Government can allow, is, that they may be permitted to retain such of the establishment as may not be required by Government, paying them of course by a private arrangement, as proposed by you.

7. The Governor in Council wishes to learn from Mr. Simpson and the Collector how the arrangement relative to Mr. Price's employment in the manner suggested in your 2d para. would conduce towards, or militate against, the general arrangements which may have been planned for the improvement of the culture and preparation for market of cotton. I have been instructed to intimate to you, that although it is the earnest desire of Government to ensure the introduction of the New Orleans variety, Government also earnestly wish to improve the indigenous cotton, for they consider it of very great importance to trade, and to the welfare of their cultivators, that the indigenous cotton should have fair play from the day the seed is put into the ground up to that of the wool being put on board ship, that it should be carefully picked, freed from seed, honestly packed, and carefully conveyed to the coast.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 22 May 1850.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 12 June 1850. *Vide* 8935 to 44.

(No. 1068 of 1850.)

From the Collector of Khandeish to Mr. Secretary *Goldsmid*.

V. 8935.

Sir,

WITH reference to the letter of the Revenue Commissioner, Northern Division, to Government, No. 1121, dated the 9th instant, I beg leave to forward herewith the accompanying copy of a letter, No. 1067, of this day's date, which I have written to the Revenue Commissioner on this subject, to communicate for the decision of Government my reasons for the difference of opinion I entertain on the points mooted by him.

I have, &c.
(signed) *Alexander Elphinston,*
Collector
Khandeish Collector's Camp, Chutter Singhee,
25 May 1850.

(No. 1067 of 1850.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

V. 8936.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1133, dated the 10th instant, forwarding for my information copy of your communication to Government, No. 1121, dated the 9th idem, from which I regret to perceive that there are two points in my letter to your address, No. 928, of the 2d idem, that have not met with your concurrence.

2. I regret it should be my misfortune to differ from you in opinion on the points alluded to, and I herewith submit my reasons for the propositions contained in my letter to your address, No. 928, dated the 2d instant, begging the favour of your laying them before the Right Honourable the Governor in Council, that they may be taken into consideration while deciding the question now before his Lordship in Council.

3. In Khandeish saw-gins have been available to the public on hire (as well as for sale) since they were set up in the districts; I therefore do not see why there should be an unfavourable distinction with reference to Mr. Constable's application to hire a large number of gins, when they are let on hire to native merchants. Considering either the hire or the sale of gins (whichever is most convenient to the individual) to be a measure conducive to the prosperity of the cotton trade, I should have at once placed the gins he requested on hire at Mr. Constable's disposal, if he had applied for only one or two; but as he applied for many, I felt a hesitation in complying with his request without your concurrence, which I regret to find my proposal has not obtained. The employment of so many gins as he required is an advantage to the commerce of the country, in the dissemination of a knowledge of the superiority of this machinery (over the country churka) among the natives, who are slowly beginning to appreciate it, and to whom the spur of this example ought

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ought to prove efficacious. To persons of limited means, who are not possessed of sufficient capital to buy gins at the outset, the being able to hire them is a great accommodation, as it sets free capital, which may be employed in the purchase of a larger quantity of cotton; while the hiring of the gins is more advantageous to Government than the selling of them, as in about two years the price is covered by the amount of hire paid. Government has sanctioned the construction of 40 gins for the use of the public, independent of Mr. Constable's application, and as those that are proposed to be made up for him will be but a portion of the above 40 gins, their manufacture involves no Government responsibility that would not otherwise attach to them. Nor do I see in what we are likely to have a joint concern with Mr. Constable; although, in establishing an agency for the purchase of a large quantity of Indian cotton for exportation, we must be interested in the success of a concern, which, if successful, must exercise a beneficial influence on the prosperity of this country, and therefore this agency establishment is entitled to our aid, and the favourable consideration of Government. If the gins were eventually returned to Government, and they were not sold at all, the rate of hire is so remunerative, that in the course of two years Government would be fully reimbursed for their cost, and the greater the number of gins in operation in the zillah, the wider will the knowledge of their superiority spread.

4. For these reasons I am humbly of opinion that Mr. Constable's application should be acquiesced in, as his agency promises to do much good to the cotton trade.

5. The other point in which you differ from me is that of the mode of employing Mr. Price, who, you are of opinion, should be placed "in charge of the superintendence of one or two talookas;" this I have reconsidered since the despatch of my letter to your address, No. 718, of 8th ultimo, and I fear it will tend to breed dissension and discord between Mr. Simpson, the superintendent, and his assistant, Mr. Price, if the latter is allowed to hold an independent charge within the range of the superintendent's authority, the assistant remaining in other respects subordinate to his superior.

6. Mr. Price, with all his zeal and intelligence, has only learnt a few years under Mr. Simpson; deprived of the advice and superintendence of Mr. Simpson, a professional cotton planter all his life, I consider that Mr. Price's farm charge, or the pattern of cotton cultivation given to the ryots, could not be so beneficial to Government nor so instructive to the ryots as if the concern was under the master hand; and also it would seem to conflict with the views of the Honourable Court of Directors, who sent American cotton planters to this country to teach us, and improve the culture of cotton.

7. As the subject of this letter is probably at this moment under the consideration of Government, to save time I have transmitted copy of it direct to Government, that my reasons for recommending the measures I have advocated may be more fully known to Government ere it passes its decision on the subject.

I have, &c.
(signed) A. Elphinston,

Khandaish Collector's Camp, Chutter Singhee,
25 May 1850. Collector.

(True copy.)
(signed) A. Elphinston,
Collector.

MINUTE by the Honourable Board.

V. 8937. I BEG to refer to my minute of this day's date on Revenue Commissioner's letter, No. 1289.

The main question here discussed, that is, whether the gins are to be let on hire to Messrs. Ritchie, Steuart & Co. was disposed of by Government letter of 22d May, No. 4197, of which Mr. Elphinston must have received a copy shortly after he dispatched the above. The only observation which it appears to me necessary to make is, that although the rates of hire which have been offered by the firm for the use of the gins is fully as high as could be desired, it is evident from the calculation at close of 1st para. of Mr. Price's letter, dated 22d April, No. 98, that Mr. Elphinston is wrong in stating that in the course of two years Government would be "fully reimbursed for their cost."

The question relative to Mr. Price's employment to be disposed of when we receive a reply to para. 7 of our Secretary's letter of 22d May 1850, No. 4194.

(signed) Falkland.
J. P. Willoughby.
D. A. Blane.

4 June 1850.

(No. 1289 of 1850.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary Goldsmid.

Sir,

V. 8938. I HAVE the honour to acknowledge the receipt of your letter, No. 4194, of the 22d instant, relative to the arrangements proposed by the Collector of Khandaish, in regard to letting the use of the saw gins, the property of Government, to Messrs. Ritchie & Steuart, and

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 943

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and respectfully beg to observe that there is, in my opinion, a very considerable difference between the condition of Broach at the time the Right Honourable the Governor in Council was pleased to allow Mr. Landon the use of the saw gins in that collectorate and Khandeish at this moment.

2. In Broach, although greater exertions than elsewhere have been made to introduce the use of the saw-gin, all attempts failed; there was a prejudice against them, and why or wherefore I am unable to determine; they were unpopular. If they had not been used by Landon they would have remained idle, while in Khandeish the collector reports that the Government builds other gins in the place of those he recommends to be let to Messrs. Ritchie & Co., the ryots will not be able to gin their experimental cotton.

3. In Broach there was no New Orleans cotton grown at all, while at Khandeish it is extensively cultivated; so should it happen that there are not gins sufficient to clean the ryot's cotton, the experiment will be placed at the mercy of Messrs. Ritchie & Co., who might possibly turn their whole attention to native cotton, or the purchase of New Orleans on their own terms.

4. I have no wish to disturb the settlement Government has proposed of letting the saw gins to Messrs. Ritchie & Co.; but I really think that some arrangement should be made for the purchase of the New Orleans cotton, or binding Messrs. Ritchie & Co. to take it on the terms proposed by Government from the ryots.

5. Regarding the encouragement to be extended to indigenous cotton, as pointed out in the 7th para. of your letter under reply, it is of course my duty, and that of all Collectors, to promote the views of Government; but I confess, the more I have reflected on this important subject, the more impressed I have become with the idea that the difficulty of improving the native cotton, and the old system of cleaning it, is many times greater than the obstacles in the way of altogether introducing a new cotton, and different mode of preparing it for the market.

6. The calyx of the indigenous cotton is so delicate, that it will be only by frequent and careful pickings, prevented, when ripe, breaking and mixing with the cotton; hence one inherent cause of its dirtiness. But as these, and all other points of the merits and demerits of these cultivations have been so frequently discussed, it is unnecessary to say more than I am respectfully of opinion that it would be desirable to consult the merchants of Manchester on the subject, as to whether the whole objects of our experiments in this country should be concentrated to introduce the New Orleans cotton where it is proved it will thrive; or whether our exertions should be divided between that staple and the country cotton; for I am led to suppose, from what I saw at Manchester, and since have heard, that there is an idea in England that the consumption of native cotton, on account of its short fibre, cannot be increased in our manufactories, while there is an unlimited demand for the New Orleans produce.

Rev. Comm.'s Camp, Khandalla,
25th May 1850.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

MINUTE by the Honourable Board.

It appears from the former proceedings before us, that as regards gins, the requirements of our own cultivators and native traders would be provided for, notwithstanding the assistance afforded Messrs. Ritchie, Stuart & Co. The collector to be informed, however, that we expect him to arrange so that there are sufficient gins for all parties requiring them; this indeed was one of the provisoes quoted in para. 3 of our Secretary's letter of 22d May 1850, No. 4194.

V. 8939.

2. It was stated by Mr. Simpson, in his letter of 29th April, that nineteen would be sufficient, in addition to those reserved for our own factory; if, however, more are required, more should be made up before the ginning season.

3. The shortness of the fibre of the indigenous cotton is no doubt in part occasioned by the manner in which it has to be treated to free it from the leaves and dirt mixed up with it, consequent upon the careless manner in which it is picked. The correctness of the supposition at close of Mr. Shaw's letter may perhaps, however, be ascertained by reference to the Chamber of Commerce, that body merely being informed that it has been urged on Government, without being told by whom.

4. Since the above observations were drafted, the Secretary has placed before me Mr. Elphinston's letter of 25th May 1850, No. 1068, and accompaniment, the latter of which is to some extent confirmatory of the opinions I have here expressed. The Secretary has also placed before me the Revenue Commissioner's letter of 28th May, No. 1308, my Minute on which will dispose of that part of the present communication which I have alluded to above in paras. 1 and 2.

4th June 1850.

(signed) Falkland.
J. P. Willoughby.
D. A. Blanc.

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(No. 1303 of 1850.)

From the Revenue Commissioner, Northern District, to Mr. Secretary *Goldsmid*.

Sir,

V. 8940.

WITH reference to your letter, No. 4329, of 27th instant, regarding the disposal of the New Orleans cotton seed, expected by the Collector of Khandeish from Dharwar, I have the honour to submit, for the information of the Right Honourable the Governor in Council, a transcript of my letter to Mr. Elphinston, No. 1308, of this date.

I have, &c.
(signed) *A. N. Shaw*,
Rev. Comr. N. D.

Revenue Commissioner's Camp,
Khandeish, 28 May 1850.

(No. 1308 of 1850.)

To *A. Elphinston*, Esq, Collector, Khandeish.

Sir,

V. 8941.

WITH reference to your letter, No. 1032, of the 22d instant, addressed to Mr. Secretary *Goldsmid*, intimating that it is not impossible you may have about 20,000 lbs. of New Orleans seed in excess of the quantity you require for your collectorate, and requesting you may be permitted to make over a portion of this surplus to the Nassick sub-collectorate, which might there be distributed in small quantities amongst the ryots, I have the honour to inform you that I have been directed by Government, under date the 27th instant, to send you the necessary instructions should any portion of this seed be required for the districts of this division.

2. It would be very desirable to commence planting New Orleans cotton in Nassick, but in doing so you must bear in mind that most of your saw-gins have been promised to Messrs. *Ritchie & Co.*, and that it is even doubtful whether you will have the means of cleaning the cotton of that description grown in your own collectorate.

3. The New Orleans cotton can only be separated from its seed in saw-gins, and if you extend its cultivation into Nassick, or beyond the means of cleaning it, what provision do you intend proposing for preparing it for the market? If you can provide the means of cleaning this cotton, I should say certainly extend its cultivation, concentrating your experiments as much as possible; but if otherwise, inducing ryots to plant one or two acres of this culture, and then expecting that they are to carry this mere handful of produce many miles to get it cleaned or dispose of it, would, in my opinion, be very inadvisable; the only instructions I therefore can give you is to extend and concentrate your experiments as every opportunity offers; but taking at the same time particular care that ryots are not disgusted in being unable to get rid of their produce, or unnecessarily troubled in having to carry it to great distances either to be cleaned or disposed of.

4. I beg to observe, copy of your letter to Government, although dated as being forwarded to me on the 22d instant, only arrived this morning, by which post I received also Mr. *Goldsmid's* letter of the 27th idem.

I have, &c.
(signed) *A. N. Shaw*,
Rev. Comr. N. D.

Revenue Commissioner's Camp,
Khandalla, 28 May 1850.

(True copy.)
(signed) *A. N. Shaw*,
Rev. Comr. N. D.

MINUTE by the Honourable Board.

V. 8942.

MR. SHAW assumes—

1. That Messrs. *Ritchie, Steuart & Co.* purpose purchasing only indigenous cotton.
2. That the renting to them a portion of the machinery will probably deprive the Collector of the power of affording the cultivators the means of cleaning the New Orleans cotton.

The first assumption is incorrect. Messrs. *Ritchie, Steuart & Co.* are desirous of obtaining the New Orleans cotton, so much so that they have frequently applied to the Revenue Secretary for seed under the impression that a sufficient quantity of it would not be obtained by the Collector of Khandeish, and they have sent to an English house in America for seed, and what they consider to be an improved description of machine to clean the American cotton.

The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 945

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The Revenue Commissioner has not stated the grounds on which he bases his second assumption; but, judging from paras. 4 and 5 of Mr. Simpson's letter of 29th April 1850, and para. 2 of the Collector's letter of 2d May 1850, No. 928, it is incorrect; he should be referred to those paras. and to para. 3 of our Secretary's letter of 22d May 1850, No. 4194, in which the arrangements proposed are quoted as being, that "Messrs. Ritchie, Steuart & Co. be allowed to hire sheds and a number of the gins already constructed or to be constructed, provision being made for the requirements of Government and the people of the province;" and he should also be told that there were spare cottage-gins at Dharwar, some of which can be made available for Khandeish, if the manufactory in the latter province really will not have the means of supplying the requirements of the New Orleans cotton growers.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

4 June 1850.

(No. 4586 of 1850.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,

THE following papers relative to cotton cultivation in Khandeish have been placed before the Right Honourable the Governor in Council:—

V. 8943.

1. Letter from the Collector of Khandeish, dated 25 May 1850 (No. 1068,) enclosing copy of one bearing same date (No. 1067,) to the address of the Revenue Commissioner, Northern Division.
2. Letter from the Revenue Commissioner, Northern Division, dated 25 May 1850, No. 1289.
3. Letter from the Revenue Commissioner, Northern Division, dated 28 May 1850, and its accompanying copy of one written on the same day, No. 1308, to the Collector.
2. The main question discussed in the first of these set of papers, that is, whether the gins are to be let on hire to Messrs. Ritchie, Steuart & Co., was disposed of by Mr. Secretary Goldsmid's letter of 22d May, No. 4194, of which Mr. Elphinston must have received a copy shortly after he despatched to you his letter of 25 idem, No. 1067; the only additional observations which it appears to the Governor in Council necessary to make is, that although the rates of hire which have been offered by the firm for the use of the gins is fully as high as could be desired, it is evident, from the calculation at close of 1st para. of Mr. Price's letter, dated 22d April, No. 98, that Mr. Elphinston is wrong in stating, that "in the course of two years Government would be fully reimbursed for the cost."
3. The question relative to the manner in which Mr. Price is to be employed will be disposed of when Government receive a reply to para. 7 of Mr. Secretary Goldsmid's letter of 22d May 1850, No. 4194.
4. As regards the 2d and 3d of the set of papers under acknowledgment, I am desired to state, that you appear to think—
 - 1st. That "Messrs. Ritchie, Steuart & Co. purpose purchasing only indigenous cotton."
 - 2nd. That the renting to them a portion of the machinery will probably deprive the Collector of the power of affording the cultivators the means of cleaning the New Orleans cotton produced in Khandeish.
5. Should you entertain the former of these two opinions, you are in error, for Messrs. Ritchie, Steuart & Co. are desirous of obtaining the New Orleans cotton; they have frequently applied at the Secretary's office for assistance to procure seed of that variety, under the impression that a sufficient quantity of it would not be obtained by the Collector of Khandeish, and they have, his Lordship in Council is informed, sent to an English house in America for seed, and also for what they consider to be an improved description of machine to clean the American cotton.
6. You have not stated the grounds on which you base the latter of the two assumptions, and his Lordship in Council therefore directs me to request your attention to paras. 4 and 5 of Mr. Simpson's letter of 29th April 1850, para. 2 of the Collector's letter of 2d May 1850, No. 928, as also to para. 3 of the Government letter of 22d May 1850, No. 4194, in which the arrangements proposed are quoted as being that "Messrs. Ritchie, Steuart & Co. be allowed to hire sheds and a number of the gins already constructed, or to be constructed, provision being made for the requirements of Government and the people of the province." I am also desired to inform you that there were spare cottage gins at Dharwar (gins of a somewhat different form being made up there) and that some of these spare gins can be made available for Khandeish, if the manufactory in the latter province really will not have the means of supplying the requirements of the New Orleans cotton growers.
7. In consequence, however, of the observations made in your letter of the 28th May, No. 1308,

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No. 1308, the Collector will be again informed that Government expect him to arrange so that there are sufficient gins for all parties requiring them for the New Orleans cotton.

8. It seems to the Governor in Council, that the correctness of the supposition at close of your letter of 25 May 1850, No. 1289, may be ascertained by a reference, which will be accordingly this day made, to the Chamber of Commerce at Bombay.

Bombay Castle, 10 June 1850.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

(No. 4588 of 1850.)

From Mr. Chief Secretary *Malet* to the Secretary to the Chamber of Commerce.

V. 8944.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to request that the Chamber of Commerce will favour him with their opinion as to the correctness or otherwise of the supposition at close of the annexed extract of a letter from an officer of Government.

Bombay Castle, 10 June 1850.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue ; dated 10 July 1850. V. 9070 to 73.

(No. 1147 of 1850.)

From the Collector of Khandeish to the Secretary to Government.

V. 9070.

THE Collector of Khandeish, in submitting to Government a copy of the foregoing letter to the address of the Revenue Commissioner, Northern Division, solicits the early instructions of his Lordship in Council for his guidance.

Khandeish Collector's Office,
Camp Chutter Singhee, 4 June 1850.

(signed) *A. Elphinston*,
Collector.

(No. 1146 of 1850.)

To the Revenue Commissioner, Northern Division.

V. 9071.

Sir,

WITH reference to the correspondence noted in the margin,* on the subject of the conduct of the cotton experiments in Khandeish, I have the honour to request that I may be informed whether my proposition, for the construction of a workshop and an office room at Dhurrungaum, both at a cost of six hundred and fifty rupees (*Rs. 650*), has met with the sanction of Government, as no specific mention of these works is made in the Government letter, No. 4194, though in the 2d para. thereof a general approval of the suggestions submitted in my letter, No. 928, of the 2d May, to your address, is communicated.

2. As the rainy season has almost commenced, I have to avoid delay, resolved on sending a copy of this letter direct to Government for its instructions, trusting that my having done so may be approved of,

Khandeish Collector's Office,
Camp Chutter Singhee, 4 June 1850.

(signed) *A. Elphinston*,
Collector.

V. 9072.

MINUTE by the Honourable Mr. *Willoughby*, subscribed to by the Honourable Mr. *Blane*.

IN para. 2 of Government letter, No. 4194, herein referred to, all the suggestions of Messrs. Simpson and Price, supported by Mr. Elphinston, were approved of, and that herein alluded to was one of them. Mr. Elphinston may be informed accordingly.

12 June 1850.

(signed) *J. P. Willoughby*,
D. A. Blane.

* Collector to Revenue Commissioner, No. 928, of 2d May 1850. Revenue Commissioner to Government, No. 1121, of 9th May 1850. Government to Revenue Commissioner, No. 4194, of 22d May 1850. Government to Collector, No. 4246, of 23d May 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 947

(No. 4656 of 1850.)

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From Mr. Chief Secretary *Malet* to the Collector of Khandeish.

Sir,

WITH reference to your memorandum, No. 1147, dated the 4th instant, at the foot of a letter to the address of the Revenue Commissioner, Northern Division, No. 1146, dated 4th idem, I have been directed by the Right Honourable the Governor in Council to inform you, that in para. 2 of Government letter, No. 4194, all the suggestions of Messrs. Simpson and Price, supported by yourself, on the subject of the conduct of the cotton experiments in Khandeish, were approved of; and that alluded to in your letter to the Revenue Commissioner, above referred to, was one of them.

V. 9073-

Bombay Castle, 13 June 1850.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue;
dated 10 July 1850. V. 9344 to 47.

(No. 1353 of 1850.)

From the Revenue Commission, N. D. to the Secretary to Government.

Sir,

IN laying the accompanying correspondence before the Right Honourable the Governor in Council, being letters from Mr. Elphinston, No. 1103 and 1104, of the 28th ultimo, and a communication from Mr. Simpson, superintendent of cotton experiments in Khandeish, No. 132 of the 14th idem, I have the honour to remark, that Mr. Elphinston disapproves of the arrangements I have proposed in my letter to Government, noted in the margin, and thinks,

V. 9344-

No. 1121 of 9 May
1850.

First. That giving Mr. Price a separate charge of a talook specially to encourage New Orleans cotton would be a measure offensive to Mr. Simpson's feelings, and

Second. That 19 saw gins now constructed and 21 to be constructed should be at once made over to Mr. Constable, the agent for purchasing cotton in Khandeish for Messrs. Ritchie, Steuart & Co.

2. With reference to Mr. Elphinston's first argument, I can see nothing in it to induce me to alter the opinion I have already given, or can I observe anything in the present condition of Broach, where no exotic was introduced, and the cotton of the district has beyond doubt deteriorated, and the saw gins become unpopular, during the superintendence of the experiments under the American planters, to consider that it would be advisable to depart from a system of extreme caution in protecting the interests of the country.

3. I beg also to observe, that Mr. Simpson was I believe some years in Khandeish previously to his proceeding home, and during that time no New Orleans was cultivated by him in that zillah.

4. Regarding Mr. Elphinston's second proposition, I have already stated my objections to it; it will be observed that the Collector himself intimates in the correspondence before Government, that by the adoption of the plan he has suggested there will be no gins to clean any cotton otherwise than that purchased by Mr. Constable.

5. Mr. Constable is an agent and buys cotton I presume on commission, and I apprehend it would be as profitable to him to purchase native as New Orleans staple; I have no doubt that he has the interests of Government and the country at heart; but without questioning the intentions of either of these gentlemen, I have no hesitation in saying, were I in the place of Mr. Simpson, I do not think I should be very much concerned or grieved to see that our experiments in this country to improve or introduce exotic cotton failed; and I should not, if situated as Mr. Constable is, I am afraid, look so much to the improvement of the district as my own commission and temporary interests.

6. These conclusions are matters of opinion, and as the adviser of Government, it is my duty to discuss the bearings of a question before me; personally I know nothing of the parties concerned, and can therefore have no kind of individual feeling one way or the other; and if his Lordship in Council thinks I have taken a wrong or crude view of the subject, I would respectfully suggest that Mr. Elphinston's recommendations should be adopted for one year, as Government will at the end of that time be better in a position to determine whether the results of the experiments have produced the improvements anticipated.

7. There is nothing in Mr. Simpson's communication, No. 132, requiring or calling for explanation, excepting that considering the short time he has been in the country, his department seems to have been indefatigable in letter writing, and that it would be very desirable to reduce the enormous quantity of correspondence which takes place in some Collectorates between the Collector and his subordinates.

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8. I have not deemed it expedient to transmit a copy of this letter to Mr. Elphinston, and before doing so, shall await the instructions of Government.

Rev. Commr.'s Camp, Khandalla, 3 June 1850. I have, &c.,
(signed) A. N. Shaw,
Revenue Commr., N. D.

(No. 1,103 of 1850.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern Division.

V. 9345.

Sir,
AGREEABLY to the 7th paragraph of Mr. Secretary Goldsmid's letter to your address, No. 4194, of date the 22d instant (copy of which I have just received direct from Government), calling for further information whether "Mr. Price's employment in the manner suggested in your 2d paragraph (No. 1121, dated 9 May 1850), would conduce towards, or militate against, the general arrangements which may have been planned, &c." With deference to your opinion, I would beg to submit in reply to Government's question, that from a knowledge of the sentiments of the Superintendent, Mr. Simpson, I am humbly of opinion it would be subversive of the harmony now existing in his department, and be galling to that gentleman, if his assistant, Mr. Price, was "placed in charge of the superintendence of one or two talookas," as it would constitute him so far independent of Mr. Simpson, whilst in other respects Mr. Price continued under Mr. Simpson in a subordinate capacity. To imply distrust of Mr. Simpson, or if the services of Mr. Price are considered to be of equal value to Mr. Simpson's, and therefore to wage the subordinate against his superior, might produce a hostile rivalry between them, but is not likely to encourage the zeal of the superintendent in the cause in which he is engaged. I therefore think the interests of Government would be best served by permitting Mr. Price to remain as hitherto in every respect under the authority of Mr. Simpson. This opinion I previously submitted in the 5th paragraph of my letter, No. 1067, of the 28th instant to your address, and I shall feel obliged by your submitting these sentiments to Government on the present occasion.

If I do not hear from you to the contrary, according to the views expressed in the four paragraphs of Mr. Secretary Goldsmid's letter to your address, No. 4194, dated 22d instant, I shall acquaint Mr. Constable that the 19 gins now on hand, and the 21 more to be constructed by the establishment by the 1st November next, in all 40 gins, will be transferred to Mr. Constable for hire at the beginning of the cotton season next year, or earlier if he likes. That he will have the use of the screw press at Dhurrumgaum on payment of a fee, and that the services of subordinate carcoons and experienced peons will be transferred to Mr. Constable to aid him in setting his establishment agoing, substitutes being employed in their room by Government during the absence of the persons lent, whose wages are to be paid by Mr. Constable.

Khandeish Collector's Camp, Chutter Singhee, 28 May 1850. I have, &c.,
(signed) A. Elphinston,
Collector.

LETTER from Superintendent of Cotton Experiments, No. 132, of 14th May 1850, with Enclosure regarding Cottage Saw Gins.

(No. 1104 of 1850.)

SUBMITTED to the Revenue Commissioner, Northern Division, in reply to his endorsement, No. 1051, dated the 1st instant, as the explanation offered by the Superintendent of cotton experiment seems reasonable and correct.

2. The collector begs to draw the Revenue Commissioner's attention to the 4th para. of Mr. Simpson's letter, wherein that officer says there is no necessity for a further supply of cottage saw gins for immediate use, as the cotton crop of the past season (1849-50) has been entirely ginned some time ago.

3. The collector begs to recommend Mr. Simpson's proposition in his 8th paragraph, to admit 16 apprentices, and initiate them six months in the art of gin-making, paying each the wages of an ordinary carpenter, say eight rupees (Rs. 8), per mensem, by which method, not only will the progress of construction in the department be accelerated, but the knowledge of the art of gin manufacture will be disseminated, and the natives will be encouraged to buy gins when they know there are private workmen in the province available to them to repair their gins when they get out of order, as the fear of having no one to repair their gins, if Government withdraw the factory artificers, or refuse to let them repair gins, has a great effect in deterring persons from coming forward to buy American saw gins, of which the machinery is strange to the natives of India, and which they say, if it got out of order and could not be repaired, would become perfectly useless to them.

Khandeish Collector's Camp, Chutter Singhee, 28 May 1850. (signed) A. Elphinston,
Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 949

(No. 132 of 1850.)

To *A. Elphinston*, Esq., Collector of Khandeish.

Sir,

I HAVE the honour to acknowledge the receipt of the papers noted in the margin,* with your endorsement, No. 971 of the 8th instant, and to state, in reply, with reference to the 3d para. of the Government letter, No. 3592, of the 26th ultimo, that the object Mr. Price had in view when he recommended, in his letter, No. 74, of the 25th March last, to your address, the distribution of "three cottage saw gins," as therein set forth, was to encourage the growth of New Orleans cotton on a larger scale by individuals than is usually undertaken, and this too for a period of three years, would give it the appearance of permanence, and beget confidence in the minds of the cultivators generally; for these efforts it was thought a mark of Government's approbation, manifested in the manner recommended, would have had a salutary effect.

2. The measure is not, however, regarded as of great moment, and was merely brought forward as one of the minor measures which it is frequently found advisable to adopt for the due encouragement of our enterprize. It is, in fact, in itself an experiment.

3. Mr. Price's original memorandum, herewith enclosed, will more fully exhibit his views of the case; and, as he brought forward the measure, I think it a better plan to allow him to speak for himself.

4. The cotton crop of 1849-50, in this province, is nearly, or quite, all by this time ginned; therefore a further supply of cottage saw gins is not required for immediate use.

5. With reference to the 4th para. of Mr. Secretary Goldsmid's letter, above quoted, from what is therein stated it would seem that it is proposed to reward the native artisan who may copy a saw gin, in which view Government does not coincide, but advises, as a better plan, that such persons should be paid "a fair price for the machine they may make up." I am not informed of the exact causes that have called forth these remarks, and those to whom they allude; but, so far as I can at present understand the matter, I concur in the views of Government, as above expressed.

6. I admit that the village artisans may be able to make a creditable imitation of a saw gin, still it would, in all probability, be very defective in the more essential working parts of its structure, and therefore the labour and expense of its manufacture would all be to no purpose. I am open to admit that some of the native workmen are clever imitators in things where great nicety and exactness in the adjustment of the parts are not required, but as is the case with the saw gin, I may be allowed to say that this is a knowledge that does not come by instinct (so to speak), but must be acquired by tuition from those who can impart it in a practicable form.

7. It would, therefore, to my mind, seem to be a pity to encourage, by offering a reward to a native to attempt, in some lonely village, the construction of a saw gin under every disadvantage and want of information, where there is a Government establishment at hand, where in six months' time, more knowledge could be gained than would be the case, perhaps, in as many years if left alone to learn himself.

8. The saw gin is a machine rather intricate and difficult of a proper arrangement of its parts, as the whole of our experience goes to prove. Therefore, in arranging for their manufacture we must, in my humble opinion, assume higher grounds for a supply than the mere chance of an occasional imitation by a native artisan. I would, therefore, beg to propose that no encouragement be held out by Government to induce native workmen to attempt the manufacture of such machines unless they have previously served six months or more at some one of the Government factories, and for that purpose I would solicit through you, the sanction of Government to be permitted to entertain at this establishment, at a carpenter's usual rate of pay, any native who may desire to be instructed in the manufacture of saw gins, one from each talooka in Khandeish, these to be replaced by others every six months, should it be found, at the end of this period, that they are sufficiently advanced in this handicraft as to be considered competent to undertake the structure of saw gins in their respective villages, and when executed, the same to be inspected by a Government officer of this department, and if found satisfactory, a fair price allowed the builder by Government if no one else offered to take it; but if the machine proves to be very defective, the workman should be remanded to the Government factory, there to serve six months more, and failing in this, he should not be allowed to make more gins, only at his own risk.

Camp Chopra, 14 May 1850.

I have, &c.
(signed) *S. Simpson*,
Superintendent Cotton Experiments.

P.S.—The documents noted in the margin are herewith returned.

* Mr. Secretary Goldsmid's Letter, No. 3592, dated 26th April 1850. Belguam Collector's Letter, No. 240, of the 29th March 1850. Sittara Commissioner's Letter, No. 83, of the 3d April 1850. Mr. Secretary Goldsmid's Letter, No. 2587, of the 6th April 1850. Messrs. Channing and Vary's Letter, Nos. 44 and 9, of the 26th March and 1st April 1850 respectively. Revenue Commissioner's Endorsement, No. 1051, of the 1st May 1850.

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Bombay.

MEMORANDUM submitted with Letter No. 132 of 1850, to the Address of the
Collector of Khandeish.

BEING required to explain, with reference to the 3d para. of Government letter, No. 3592, of the 26th ultimo, my object for soliciting the gratuitous distributions of "three cottage saw gins" to such ryots as will voluntarily undertake the cultivation of 25 beegahs of land with New Orleans cotton for three successive years, I would beg to state, that having observed the cultivation of this species of cotton hitherto undertaken individually by ryots during the last two years to be on so small a scale as entirely to exclude the chance of their arriving at a fair knowledge of the profit that will accrue to them by a more extensive cultivation of this plant, and consequently so long as this prevails, it occurs to me that none will be induced to undertake the trial of it on a larger scale, though it is an object very desirable to attain, as by it only can the question of the capability of Khandeish to produce New Orleans cotton with profit to the undertaker of its cultivation be practically solved. I have, therefore, with the view to encourage individual exertion in the coming and subsequent two seasons, solicited in my letter, No. 74 of the 25th March last, the bestowal, as a mark of Government approval of their efforts, of three cottage saw gins to the successful competitors for the prizes, and as I am disposed to believe that the adoption of this measure will lead to favourable results, I would respectfully beg to solicit a favourable reconsideration of the subject under notice.

Dhurrungaum,
14 May 1850.

(signed) T. Price,
Assistant Superintendent Cotton Experiments.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. Willoughby and Blane.

V. 9346.

THE question as to whether or no Messrs. Ritchie, Steuart & Co. are to have gins let to them on hire has been set at rest; there has been a proviso that the requirements of Government and the growers of New Orleans cotton are to be cared for. I think we should ask the Revenue Commissioner, Northern Division, to point out to us, and also to Mr. Elphinston, for his explanation, the part of that gentleman's letter in which he intimates, "that by the adoption of the plan he has suggested, there will be no gins to clean any cotton otherwise than that purchased by Mr. Constable." I do not read Mr. Elphinston's letter as meaning this.

2. In justice to Mr. Simpson, we should give him an opportunity of affording explanation on the points noticed by Mr. Shaw in para. 3 of his present letter, and Mr. Shaw should be requested to do so in the manner he may deem best calculated to elicit facts to show whether or no Mr. Simpson took measures to encourage the cultivation of New Orleans cotton when last in Khandeish. Mr. Shaw may also be furnished with copy of Mr. Elphinston's letter of 20th April 1848, No. 509, and its accompaniments.

3. As regards Mr. Price, I am of opinion that if he is to be placed in charge of separate districts, he should be considered as subordinate to the Collector, and altogether removed from under Mr. Simpson's control. I have no objection to his being entrusted with the superintendence of the cotton operations in a separate portion of the extensive province of Khandeish, and Mr. Shaw may be authorised to arrange accordingly. Considering, however, the lateness of the season, and the early period at which the cotton is sown in Khandeish, as compared with some other provinces, and that plans may have already been arranged for the coming season, it would perhaps be as well were the proposed separation not to take place until after the next ginning season. On this point, however, Mr. Shaw's opinion may be requested.

4. The Revenue Commissioner may also be referred to Government letter of 10th instant, No. 4586, relative to the desire of Messrs. Ritchie, Steuart & Co. to obtain New Orleans cotton, as well as to obtain a better description of country cotton than now reaches the Bombay market; and he may be informed that we consider the attainment of both objects is of great importance to the country, and more likely to be ensured by the establishment of private agency, than by any other measures that have as yet been suggested to us.

5. In para. 7 of his present letter, Mr. Shaw notices excessive writing on the part of Mr. Simpson. Our desire that there should be no unnecessary writing on cotton matters was expressed in para. 2 of our Acting Secretary's letter of 18th April 1849, to address of Revenue Commissioner, Southern Division. The Revenue Commissioner, Northern Division, may be referred to that passage, as showing that we wish there to be as little controversy as possible, and no more writing than is necessary; he may at the same time be told that we do not consider Mr. Simpson's letter of 14th May 1850, No. 132, as superfluous; his opinion was required on propositions made by Mr. Price and Mr. Shaw, and consequently given by him. His remarks appear to be sensible, and the Revenue Commissioner should be requested to favour us with his opinion on the proposition adverted to in para. 3 of

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 951

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of Mr. Elphinston's letter, No. 1104, dated 28th May 1850. It would appear that a copy of Mr. Shaw's letter of 15th April 1850, No. 945, has not been sent to Khandeish; if so, it might be as well were the Revenue Commissioner to furnish a copy, as it is necessary to a correct understanding of the Government letter of 26th April 1850, No. 3592.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

11 June 1850.

(No. 4822 of 1850.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,

I HAVE submitted to the Right Honourable the Governor in Council your letter, No. 1353, of 3d instant, and its accompanying correspondence.

V. 9347.

2. In reply, I have been directed to inform you, that the question as to whether or no Messrs. Ritchie, Steuart & Co. are to have gins let to them on hire has been set at rest; there has been a proviso that the requirements of Government and the growers of New Orleans cotton are to be cared for. His Lordship in Council considers you should point out to Government, and also to Mr. Elphinston, for his explanation, the part of that gentleman's letter in which he intimates, "that by the adoption of the plan he has suggested, there will be no gins to clean any cotton otherwise than that purchased by Mr. Constable." The Governor in Council does not read Mr. Elphinston's letter as meaning this.

3. In justice to Mr. Simpson, the superintendent of cotton experiments, Government would give him an opportunity of affording explanation on the points noticed by you in para. 3 of your present letter, and you are requested to do so in the manner you may deem best calculated to elicit facts to show whether or no Mr. Simpson took measures to encourage the cultivation of New Orleans cotton when last in Khandeish. Copy of Mr. Elphinston's letter of 20th April 1848, No. 509, and its accompaniments, are furnished herewith in reference to this subject.

4. As regards Mr. Price, the Governor in Council is of opinion that if he is to be placed in charge of separate districts he should be considered as subordinate to the Collector, and altogether removed from under Mr. Simpson's control. Government have no objection to Mr. Price being entrusted with the superintendence of the cotton operations in a separate portion of the extensive Province of Khandeish, and you are authorised to arrange accordingly; considering, however, the lateness of the season, and the early period at which cotton is sown in Khandeish as compared with some other provinces, and that plans may have already been arranged for the coming season, it would perhaps be as well were the proposed separation not to take place until after the next ginning season. On this point, however, his Lordship in Council requests your opinion,

5. I am further instructed to refer you to Government letter of 10th instant, No. 4586, relative to the desire of Messrs. Ritchie, Steuart & Co. to obtain New Orleans cotton, as well as to obtain a better description of country cotton than now reaches the Bombay market, and to inform you that Government consider the attainment of both objects is of great importance to the country, and more likely to be ensured by a private agency than by any other measures that have as yet been suggested to the Governor in Council.

6. In para. 7 of your letter under acknowledgment, you notice excessive writing on the part of Mr. Simpson; his Lordship in Council's desire that there should be no unnecessary writing on cotton matters was expressed in Mr. Acting Secretary Courtney's letter of 18th April 1849, to the address of the Revenue Commissioner, Southern Division. I am desired to refer you to the accompanying extract of that passage as showing that Government wish there to be as little controversy as possible, and no more writing than is necessary. I am at the same time directed to state that his Lordship in Council does not consider Mr. Simpson's letter of 14th ultimo, No. 132, as superfluous; Mr. Simpson's opinion was required on propositions made by Mr. Price and you, and consequently given by him; his remarks appear to be sensible, and you are requested to favour Government with your opinion on the proposition adverted to in para. 3 of Mr. Elphinston's letter, No. 1104, dated 28th ultimo.

7. It would appear that a copy of your letter of 13th April last, No. 945, has not as yet been sent to the Collector of Khandeish; if so, his Lordship in Council deems it might be as well were you to furnish it, as it is necessary to a correct understanding of Government letter, No. 3592, of 26th April.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

Bombay Castle, 19 June 1850.

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Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue; dated 10th July 1850. V. 10513 to 15.

(No. 1648 of 1850.)

From the Revenue Commissioner, N.D., to Mr. Chief Secretary *Malet*.

Sir,

V. 10513.

I HAVE the honour to acknowledge the receipt of your letter, No. 4822, of 9th instant, regarding the cotton experiments at Khandeish, and in reply beg very respectfully to submit, as briefly as possible, my explanation upon the several points therein noticed.

2. With reference to para. 2 of your letter under reply, calling upon me to point out where it is intimated, by the adoption of the plan proposed, there will be no gins to clean other cotton than that purchased by Mr. Constable, I beg to refer his Lordship in Council to Mr. Elphinston's para. 2 of letter No. 928, of 2d ultimo, in clause 1st of which I read Mr. Elphinston to propose to let 19 gins out of the 21 belonging to Government, to Mr. Constable; he also proposes to construct 21 more by the 1st of November next, by the establishment at present employed by Government, and to make these also over to Mr. Constable.

3. By this I understand that all the gins, with the exception of two now belonging to Government, and those in process of being made up, viz., 21, are or will be made over to Mr. Constable.

4. To meet this arrangement Mr. Elphinston proposes in the 2d clause of his letter to entertain "an extra establishment of artificers at an aggregate expenditure of Rs. 738 (seven hundred and thirty-eight rupees), for six months, for the construction of 19 additional gins for the use of Government, and for the public who may wish to buy or hire them to get their cotton separated from the seed, as otherwise the improved ginning machinery in the province would be insufficient to answer the demands of the ryots."

5. Whether his Lordship in Council would or would not agree to these propositions, (which was a matter to be determined) it was, I respectfully submit, for this department to point out that the collector was making over to a private firm all the gins, save two, belonging to Government, and that unless the construction of 19 others was sanctioned, and could be completed by an establishment to be engaged, that there would not be gins sufficient to clean the ryots' cotton.

6. Government has set the question at rest by permitting Messrs. Ritchie, Steuart & Co. the use of the gins, and I have no desire to re-open it, but in explanation of the remarks I had made, I trust I may be pardoned in observing the collector's first consideration should have been for the ryots, and I may add, if the arrangements proposed were good for them, and secured their interests, that surely they would have been equally good for Messrs. Ritchie, Steuart & Co., and with every desire to promote the prospects of Messrs. Ritchie, Steuart & Co., or any other mercantile community embarking in a cotton speculation, I think it would have been safer to have retained the Government gins in the hands of the collector for the use of the ryots, and to have made up others for Messrs. Ritchie, Steuart & Co.

7. With reference to your para. 3, I beg to say, my observation "that Mr. Simpson was, I believe, some years in Khandeish, previously to his proceeding home, and during that time no New Orleans was cultivated by him in that zillah," was gathered from a correspondence before Government, noted in the margin.*

8. In the concluding part of para. 10 of Mr. Elphinston's letter, No. 325, of 17th March 1849, *vide* correspondence above, after describing the little success that attended Mr. Simpson's experiments, he remarks, "It is scarcely necessary to state here, that since Mr. Simpson's departure the culture of this species of cotton has been vigorously continued, is extending, and in favour in this province."

9. I intended, with these circumstances before me, merely to allude to the fact that Mr. Simpson was employed in Khandesh, two years and eight months, and that little or no New Orleans cotton was grown, I believe, in any part of that zillah during the period of his superintending the experiments; a reference also to his final report on leaving Khandesh, dated 5th April 1848, shows the same result. I will await, therefore, the further orders of Government before calling upon Mr. Simpson for any explanation as to the past, as he mentions in his letter above alluded to that the culture of the New Orleans under the system proposed by himself was put a stop to by Government, *vide* the 2d para. of Mr. Chief Secretary Pringle's letter, No. 2010, of the 28th May 1847.

10. In advertence to your 4th para. and regarding the employment of Mr. Price, I beg to remark that the season, as observed by Government, being advanced, it might not be advisable to disturb the arrangement proposed by Mr. Elphinston, as suggested in the concluding

* Government letter, No. 7332 of 24th November 1848. Revenue Commissioner's letter to Government, No. 590, of 28th March 1849, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 953

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concluding part of your para. above alluded to; next year, Mr. Price might be deputed, if Government approved of the plan, to Dhollera and Dhundooka, in the Ahmedabad Collectorate,* as it is proposed to commence improvements in those districts as soon as a competent person can be obtained to undertake the superintendence of the experiment.

11. I never doubted that the attainment of the object of the Government, as alluded to in the 5th para. of your letter, was more likely to be ensured by private agency than other measures. I have on all occasions had the disposition to assist Messrs. Ritchie, Steuart & Co., or any other private speculator; my remarks on the arrangements proposed by the Collector were intended to show that I feared he had established a monopoly solely in their favour.

12. My observations contained in the 7th para. of my letter, regarding excessive writing, were not intended to apply to any particular correspondence, but the aggregate amount of the letter writing, 132 public letters in little more than five months in a cotton department at Khandesh, was very large.

13. In reply to the last part of your 6th para., requesting my opinion on the proposition adverted to in para. 3 of Mr. Elphinston's report, No. 1104, of 28th ultimo, I beg to observe that that gentleman's propositions alluded to in paras. 2 and 4 of this letter, were made on the 2d. ultimo, and acquiesced in by Government on the 22d, but could hardly have been received in Khandeish by the 28th. Government, therefore, will now have two establishments engaged in making up gins. I confess, therefore, I cannot myself see the object in further entertaining 16 apprentices on 8 rupees each per month, as the sanction of Government to the above establishments will permit of the collector's employing any persons he may think fit. I will, however, address Mr. Elphinston on the subject, and submit his reply to Government.

14. As directed in para. 7 of your letter, I shall immediately furnish Mr. Elphinston with a copy of my letter, No. 945, of 15th April last.

Revenue Commissioner's Office,
Poona, 24th June 1850.

I have, &c.,
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

MINUTE by the Right Honourable the Governor, dated 5th July 1850, subscribed to by the Honourable Messrs. Willoughby and Blane.

THE collector has been told that in furnishing Messrs. Ritchie, Steuart & Co. with gins, he must take care to provide for the requirements of Government and the growers of New Orleans cotton, and his attention may again be called to the necessity of having a sufficient number of gins made up in time for the approaching ginning season.

V. 10514.

No other portions of this letter require further notice at present.

5th July 1850.

(signed) Falkland.
J. P. Willoughby.
D. A. Blane.

(No. 5412 of 1850.)

From Mr. Chief Secretary Malet to the Revenue Commissioner, Northern Division.

Sir,

WITH reference to your letter, No. 1648, dated 24th ultimo, I have been directed by the Right Honourable the Governor in Council to state that the collector of Candeish has been informed that in furnishing Messrs. Ritchie, Steuart & Co. with gins, he must take care to provide for the requirements of Government and the growers of New Orleans cotton, and to request that you will again call that officer's attention to the necessity of having a sufficient number of gins made up in time for the approaching ginning season.

V. 10515.

Bombay Castle,
10 July 1850.

I have, &c.,
(signed) A. Malet,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 3d May 1850. V. 7039 to 41.

(No. 249 of 1850.)

From the Collector of Customs to Mr. Secretary Goldsmid.

Sir,

I HAVE the honour to request you will be so good as to obtain the instructions of the Right Honourable the Governor in Council as regards the disposal of the saw-gin lying at

V. 7039.

* Para. 9, of Revenue Commissioner's letter to Government, No. 961, of 23 April 1850. Letter to Government, No. 1203, of 17th May 1850.

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Bombay.

at present in the godowns of this department. It is one out of the three received from Dhawar, as reported in my letter, No. 505, dated 2d August last.

2. The other two saw-gins were forwarded to the collector of Khandeish through the Commissariat Department, as directed in the Government letters, No. 5183 and 6213, dated respectively the 21st August and 16th October last.

Bombay Custom-house,
24 April 1850.

I have, &c.,
(signed) *H. Young,*
Collector of Customs.

MINUTE by the Right Honourable the Governor, concurred in by His Excellency the Commander-in-Chief and the Honourable Mr. *Blane*.

V. 7040.

It was estimated when forwarding this gin to Bombay, in March 1849, that its construction at Dharwar would cost 40 rupees. As, however, it will, according to Mr. Laidlaw's statement, require several alterations to adapt it for use, it may be made over to Messrs. Ritchie, Steuart & Co., for 30 rupees. They having informed the Revenue Secretary that they are willing to purchase it for that sum.

30 April 1850.

(signed) *Falkland.*
W. Cotton.
D. A. Blane.

(No. 3617 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Customs.

V. 7041.

Sir,
I HAVE been directed by the Right Honourable the Governor in Council to authorise you to make over the saw-gin alluded to in your letter of the 24th instant, No. 249, to Messrs. Ritchie, Steuart & Co. of this place for 30 rupees.

Bombay Castle, 27 April 1850.

I have, &c.,
(signed) *H. E. Goldsmid,*
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 3d May 1850. V. 7213 & 14.

(No. 1009 of 1850.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 7213.

SUBMITTED with reference to Mr. Secretary *Goldsmid*'s letter, No. 7486, of 21st December last, for the information of Government.

Revenue Commissioner's Camp, Khandalla,
27 April 1850.

(signed) *A. N. Shaw,*
Revenue Commissioner,
Northern Division.

(No. 76 of 1850.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

7214.

Sir,
IN obedience to the instructions of Government conveyed with your endorsement, No. 2621 of the 29th December last, I have the honour to append a memorandum of the articles sold at the late Cotton Experimental Premises, at Broach, after every means had been adopted for giving publicity to the sale.

2. At the same time I beg to state that a copy of this letter has also been transmitted to the Accountant-general in the spirit of Government instructions issued in its letter, No. 493 of the 17th January last, (communicated with your endorsement, No. 283, of the 28th idem) in the instance of the cattle of the late establishment which were disposed of in a similar manner.

Broach Collector's Camp, Mehgaum,
6 April 1850.

I have, &c.
(signed) *J. M. Davies,*
Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 955

III.
Bombay.

LIST of Articles lying at the Cotton Experimental Premises, at Broach, disposed of by public outcry, by permission of Government (Letter No. 7486 of 21st December 1849, to the Revenue Commissioner, Northern Division), together with the prices realised thereby.

Names of Articles Sold.	Amount Realised.		
	Rs.	a.	p.
260 Hoes without handles, in tolerable order - - - -	63	12	-
113 Ditto with ditto ditto - - - -			
229 Handles for hoes, wood partially decayed - - - -	5	-	-
186 Single iron trace-chains, old - - - -	41	-	-
6 Heavy wrought-iron harrows in good order, but perfectly useless - - - -	28	8	-
19 Spare iron teeth for ditto - - - -	1	13	-
60 Cast-iron grates for gins, useless - - - -	-	8	-
2 Wooden harrows, old - - - -	-	10	-
Various pieces of ponderous cast-iron machinery belonging to two old cotton presses - - - -	226	-	-
Box containing old harness, and sundry broken articles, native churka, leather ropes, bamboo mats, &c. - - - -	43	2	-
TOTAL Rupees - - - -	410	5	-

Broach Collector's Camp, Mehgaum, }
6 April 1850.

(signed) J. M. Davies,
Collector.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 22d May 1850. V. 7578.

(No. 3868 of 1850.)

From Mr. Secretary Goldsmid to the Collector of Broach.

Sir,

WITH reference to para. 2 of your letter of 23d April 1850, No. 82, I have been directed to request that you will immediately report what machinery has been placed at the disposal of Messrs. Ritchie, Steuart & Co., consequent on the instructions conveyed in paras. 5 and 6, of my letter of 14th February last, No. 1047.

I have, &c.,
(signed) H. E. Goldsmid,
Secretary to Government.

Bombay Castle, 10 May 1850.

V. 7578.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 22d May 1850. V. 7818 & 19.

(No. 95 of 1850.)

From the Collector of Broach to Mr. Secretary Goldsmid.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 3868, of the 10th instant, requesting me to report immediately what machinery has been placed at the disposal of Messrs. Ritchie, Steuart & Co., consequent on the instructions conveyed in your letter, No. 1047, of the 14th February last.

2. In reply I beg to state, for the information of Government, that agreeably to the priority of choice conceded to Mr. Landon, that gentleman has expressed a desire to retain the whole of the machinery which was lent to him in August last, together with (4) four worn out cotton thrashing implements, being in fact the only available portion of the stock of the late experimental department. This machinery (excepting the "thrashers") has been in full use this entire season, being indeed but barely equal to the steam-power which Mr. Landon has applied to work it.

3. There

296—Sess. 2.

6 I 3

V. 7818.

III.
Bombay.

3. There remain now only the (8) eight sixty-saw gins, to which the Revenue Commissioner alludes in paragraph 4 of his letter, No. 319, of the 31st January last, as being perfectly useless. These, I presume, would be of no value whatever to Messrs. Ritchie, Steuart & Co., since their accredited agent, Mr. Laidlaw, took his departure from Broach a few days ago after a short visit, without expressing any desire to become possessed of them. They may probably fetch a small amount as old iron, and the same may be said of a worm-eaten rice-husking machine, which, besides the eight useless gins, is the only other article now unappropriated coming under the term "machinery."

4. I am now engaged in affixing a value upon the articles selected by Mr. Landon, with the view of submitting the same for the confirmation of the Revenue Commissioner, in terms of your letter above quoted.

Broach Collector's Office,
13 May 1850.

I have, &c.,
(signed) J. M. Davies, Collector.

(No. 3995 of 1850.)

. 7819.

COPY forwarded to Messrs. Ritchie, Steuart & Co., with a request that they will state whether they require the spare machinery referred to in the 3d para.; also, that they will have the goodness to explain why, if it is required, it was not selected by Mr. Laidlaw when at Broach.

Bombay Castle, 16 May 1850.

By order, &c.,
(signed) H. E. Goldsmid,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue,
dated 12th June 1850. V 8406 to 9.

From Messrs. Ritchie, Steuart & Co. to Mr. Secretary Goldsmid.

V. 8406.

Sir,
We have the honour to acknowledge the receipt of your memorandum, No. 3995, of yesterday's date, accompanying copy of a letter, No. 95, of the 13th instant, from the Collector of Broach, and in reply to the queries whether we require the spare machinery referred to in that letter, and if so, why it was not selected by Mr. Laidlaw when at Broach, we beg to state:

1. That the (8) eight sixty-saw gins were represented to us by Mr. Laidlaw as likely to be of use to us if they were now in the state in which he last saw them before proceeding to Belgaum, and one of the objects of Mr. Laidlaw's visit to Broach was to inform himself on this point by seeing the machinery. If the gins be still in the condition described to us by him, we should wish to be allowed the use of them on the terms which the Right Honourable the Governor was pleased to sanction, as communicated to us in your letter, No. 1802, of the 7th March. We would, however, observe that it will be necessary for us to refer to Mr. Laidlaw for a particular description of the state in which he assumed the gins to be when recommending our application for them.

2. On Mr. Laidlaw's return to Bombay he informed us that he had failed in obtaining access to the premises now occupied by Mr. Landon, and where lay, as we understood him to say, the Government machinery which it was his object to see. In confirmation of this he handed to us two notes addressed to him by Mr. Landon in reply to his request to be allowed to inspect the machinery. Copies of these notes we annex.

Bombay, 17 May 1850.

We have, &c.,
(signed) Ritchie, Steuart & Co.

(1)-

Mr. W. Laidlaw, Broach.

V. 8407.

Sir,
Nor having yet received an answer from the collector on the subject, I am unable to say at what time you can see the Government machinery, which I do not require, nor can I at present say what such machinery will consist of.

4th May.

Yours, &c.,
(signed) J. Landon.

(2)-

Mr. W. Laidlaw, Broach.

Sir,
In reply to your note of to-day, I have to inform you that I have proposed to purchase all the Government gins and machinery in my possession; it will, therefore, be putting you to unnecessary

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 957

unnecessary trouble to call to look at any of it till it be known whether my offer be accepted or not.

Broach, 5 May 1850.

Yours, &c.,
(signed) *J. Landon.*

(True copies).
(signed) Ritchie, Steuart & Co.

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Bombay.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. *Willoughby* and *Blane*.

I AM of opinion the collector should be requested immediately to report on the state of the eight sixty-saw gins, and that we regret, after all the consideration and liberality with which Mr. Landon has been treated by us, that he did not do his best to further the objects for which Mr. Laidlaw was sent to Broach.

V. 8408.

Some explanation is also required from the Collector as to the assistance he may have afforded Mr. Laidlaw in obtaining access to the machinery we had placed at the disposal of Messrs. Ritchie, Steuart & Co.

21 May 1850.

(signed) *Falkland*,
J. P. Willoughby,
D. A. Blane.

(No. 4334 of 1850.)

From Mr. Secretary *Goldsmid* to the Collector of Broach,

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 95 dated the 13th instant, and to furnish you with copy one, dated the 17th idem, with enclosures from Messrs. Ritchie, Steuart & Co.

V. 8409.

2. His Lordship in Council requests that you will immediately report on the state of the (8) eight sixty-saw gins referred to in para. 3 of your letter under acknowledgment. The Governor in Council regrets that, after all the consideration and liberality with which Mr. Landon has been treated by Government, he did not do his best to further the objects for which Mr. Laidlaw was sent to Broach.

3. You will also have the goodness to furnish explanation as to the assistance, you may have afforded Mr. Laidlaw in obtaining access to the machinery Government had placed at the disposal of Messrs. Ritchie, Steuart & Co.

Bombay Castle, 27 May 1850.

I have, &c.,
(signed) *H. E. Goldsmid*,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 10th July 1850. V. 9250 to 52.

(No. 117 of 150.)

From the Collector of Broach to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 4334, of the 27th instant, with accompaniment, on the subject of Mr. Laidlaw's late visit to Broach, on behalf of Messrs. Ritchie, Steuart & Co. Having communicated the same to Mr. Landon, I beg to transmit copy of a letter received from that gentleman, which I have no doubt will clear him in the eyes of the Right Honourable the Governor in Council of all intended discourtesy towards Messrs. Ritchie, Steuart & Co. At the same time I respectfully offer the following explanation as regards myself, as called for in the concluding paragraph of your letter.

V. 9250.

2. The only communications I received from Mr. Laidlaw were two notes, verbatim copies of which are annexed, Nos. 1 and 2; Mr. Laidlaw arrived in Broach on the 4th instant, Saturday, and addressed the note, marked No. 1, to me on the same day. I received it in the districts on the following morning, Sunday, and immediately despatched an express to Mr. Landon, requesting him to procure access for Mr. Laidlaw to all the spare Government machinery. This, however, was not in Mr. Landon's keeping, as assumed by Messrs. Ritchie, Steuart & Co., but in my own; having been put away by me some months previously in a godown belonging to Merwanjee, and his (Merwanjee's) agent kept the key. I mention this to account for my writing to Mr. Landon on the subject; my only motive in doing so being my absence from Broach. Had I been in town myself at the time, I should not have thought of troubling Mr. Landon in the matter.

3. By Monday morning Mr. Laidlaw had my reply (which he acknowledges to have received in his note No. 2), with free access to all the machinery of the late cotton establishment, save and excepting that which had been made over to Mr. Landon, by order of Government,

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Bombay.

Government, in August last. Somewhat to my surprise, I learnt by Mr. Laidlaw's note (No. 2) of Monday, the 6th instant, that he was off to Bombay that forenoon, without inspecting the machinery about which he had addressed me on the Saturday. I concluded that his thorough knowledge of its inutility had led Mr. Laidlaw to take this step, though I could not but consider it strange at the time that he should have come up to Broach from Bombay on purpose to inspect the machinery which Mr. Landon had relinquished, and with a full knowledge of what that machinery consisted, and yet that he should take his departure without availing himself of the permission which he had taken the trouble to solicit; were I not in possession of Mr. Laidlaw's own note, the subsequent uncandid explanation made by him to his employers would appear almost incredible. Had he in common honesty showed my note to himself of Sunday the 5th instant, in reply to his of the previous date, this reference would have been unnecessary.

4. As to any umbrage Mr. Laidlaw may have taken at Mr. Landon's note to him of the same date, I can only respectfully say that I have now, for the first time, become acquainted with the correspondence which passed between them. Mr. Laidlaw made no complaint to me on the subject (which is casually touched upon in his second note), nor could I suppose that an inspection of Mr. Landon's private premises formed any part of his employer's instructions. All I understood him to desire was an inspection of the remaining Government machinery, and that was secured to him by return of post. Had Mr. Laidlaw any further request to make, there was nothing which prevented his doing so, as I myself arrived in Broach on the following day, Tuesday, though too late to find him there.

5. I now proceed to submit the information called for in the 2d paragraph of your letter relative to the present state of the eight sixty-saw gins, which have been designated as totally useless. The gins in question were received seven or eight years ago; they are manufactured by Mr. Laird of Liverpool, and contain each 60 saws of eight inches diameter, and appear to have been originally of neat construction. It was soon discovered, however, that as ginning machines they were of no service whatever, and the great proof of their inutility is, that although some of them have been altered from time to time by the different superintendents, with a view to their practical adaptation, they still remain not only unserviceable as a whole, but none of their component parts, even such as the saws, grates, &c., have ever been called into requisition for the manufacture and repair of other machines. I am not sufficient of a mechanist to attempt a description of their defects, but I have little doubt that Mr. Laidlaw, as remarked by Mr. Landon, is perfectly competent from his acquaintance with the machines in question to supply the deficiency. I can, however, state, for Mr. Laidlaw's guidance, should he need the information, that, with the exception of the continued ravages of white ants in the deal woodwork, these gins are much in the condition as when he left Broach. On going into Merwanjee's godown yesterday morning, I observed that two of the machines have subsided to the ground in consequence of the total decay of the timber used in their construction. The other six are rotten, and certainly to appearance not worth removal. I have already recommended to the Revenue Commissioner that they be disposed of by auction as old iron,

6. With the foregoing explanation I respectfully close my letter.

Broach Collector's Office,
31st May 1850.

I have, &c.,
(signed) J. M. Davies,
Collector.

(Accompaniment No. 1.)

To J. M. Davies, Esq.

Sir,

V. 9251.

MR. LANDON informs me he is unable to show me such of the Government machinery he will now not require until hearing from yourself. I beg, at your earliest convenience, arrangements will be made enabling me to inspect such, and report for the information of Messrs. Ritchie, Stuart & Co., Bombay.

As my services are importantly requested in Khandeish, and anxious to get up before the setting in of the rains.

Broach, 4th, 1850.

Yours, &c.,
(signed) W. Laidlaw.

(Accompaniment No. 2.)

To J. M. Davies, Esq.

Sir,

My delay this morning enabled me to receive yours, dated Mahagaum, 5th instant, in answer to mine. Kind acknowledgment of which I respectfully beg to return thanks.

Gentleman in question's letter of 5th instant, stating he had applied for all Government machinery at present under his charge. Tenor of letter seemed to me, an amosity still existed. I, therefore, have not called down to see the machinery in question.

I go

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 959

I go off to Bombay this afternoon, taking from thence various sorts of stores to erect an establishment in Jamneir, in Khandeish.

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Bombay.

Broach, 6 May.

Yours, &c.
(signed) W. Laidlaw.

(True copies.)
(signed) J. M. Davies, Collector.

To J. M. Davies, Esq., Collector of Broach.

Sir,

I HAVE the honour to acknowledge the receipt of your letter of this date, No. 112, with the accompanying correspondence as per margin,* with reference to which I beg to state, that Mr. Laidlaw's application to me on the occasion alluded to (as will appear from his two notes to me herewith forwarded) referred only to the machinery in my possession, the whole of which I had previously proposed to purchase.

The eight 60-saw gins referred to in Messrs. Ritchie, Steuart & Co.'s letter are not in the list of articles made over to me on the abolition of the experiments. They were removed by your direction into Merwanjee's godown, where they still remain, and where they could have been seen by Mr. Laidlaw whenever he pleased, as, in anticipation of the wish expressed in your note of the 5th instant to me to that effect, I sent to Merwanjee's agent for the key of the godown, and gave particular directions, that in case Mr. Laidlaw called, it should be opened for him. Mr. Laidlaw knew perfectly well that these gins were not made over to me on the abolition of the experiments, and he never intimated to me, either directly or indirectly, that he wished to see these machines, nor did he inform me of the objects for which or of the parties for whom he came to Broach. If, as stated in Messrs. Ritchie, Steuart & Co.'s letter, his object was to see these eight gins, I am unable to account for his leaving Broach without doing so, or even saying that he wished to do so. On receipt of your note, dated Mehgaum, the 5th instant, I sent to his quarters to acquaint him that you wished him to see them, when it was found he had already left Broach.

I would here mention, that a gentleman connected with the house of Messrs. Ritchie, Steuart & Co. was here in the early part of February last, when I pointed out and explained to him everything he wished to know; and from that time till the commencement of the present month I have been in occasional correspondence with that firm, without their even intimating that they wished any information relative to the gins in question, or that Mr. Laidlaw was on his way here on their behalf.

With these explanations I would respectfully state, that I shall always take great pleasure in doing everything in my power to further the objects of Government or private parties in this respect, but it would be difficult for me to do so without knowing what those objects are.

I beg leave to add, that it seems most extraordinary to me, that a three years' daily knowledge of these eight gins was not sufficient to convince him (Mr. Laidlaw) that, for cotton-cleaning purposes, they never were, and never could be made, worth the expense of a journey to Broach.

Broach, 30 May 1850.

I have, &c.
(signed) J. Landon.

P.S.—The correspondence accompanying your letter is herewith returned, as required.

(signed) J. L.

MEMORANDUM.

ON reperusing Mr. Laidlaw's notes to me, after writing the annexed letter, I find he does not say that he wished "to see the machinery in my possession," but from the fact that he knew of my not having retained the eight 60-saw gins, and from his saying that he wished to see such of the machinery as "I now do not require," I could, of course, only infer that it was to such of that of which I had had the use, but did not require, to which he referred in his application to me on the subject. I think it proper to make this explanation, lest Mr. Laidlaw might possibly have meant the eight large gins. Certain my answers to him referred only to such machinery as I had in my possession.

(signed) J. Landon.

J. Landon, Esq., Broach.

Sir,

At your convenience please let me know when it would be most convenient to show me such of the Government machinery as you now do not require.

Travellers' Quarter, Broach,
4 May 1850.

Yours, &c.
(signed) W. Laidlaw,
Civil Engineer.

* Messrs. Ritchie, Steuart & Co., to H. E. Goldsmid, Esq., Secretary to Government, 17th May 1850. H. E. Goldsmid, Esq., to J. M. Davies, Esq., Collector, Broach, 27th May 1850.

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J. Landon, Esq., Broach.

Sir,
As I must leave to-morrow morning, and not time to await the result of communications alluded to in your note of yesterday, if convenient I will call down at five o'clock P.M.

Broach, 5 May 1850.

Yours, &c.
(signed) *W. Laidlaw.*

(True copies.)

(signed) *J. M. Davies, Collector.*

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. *Willoughby* and *Blane*.

V. 9252. MR. DAVIES' note to Mr. Laidlaw is not before us. It is evident that no good feeling exists between Mr. Laidlaw and Mr. Landon, and it is therefore just as well that the former should not have been located at Broach by Messrs. Ritchie, Steuart & Co., as was originally intended.

This may be recorded.

(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

11 June 1850.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 11th September 1850.—V. 12,794 to 97.

(No. 2094 of 1850.)

From the Revenue Commissioner, Northern Division, to Mr. Chief Secretary *Malet*.

V. 12,794. Sir,
WITH reference to paras. 3 and 4 of your letter, No. 4922, of 22d June last, I have the honour to transmit, for the information of the Right Honourable the Governor in Council, the accompanying letter, No. 163, of 5th instant, from the Collector of Broach, relative to the eight 60-saw gins not taken by Mr. Landon; and as they are represented, and from what I saw of them I believe them to be useless, I would recommend, as proposed by Mr. Davies, they should be sold for what they will realise.

2. From para. 4 of Mr. Davies' letter, I learn that Messrs. Ritchie, Steuart & Co. hold some Government gins, whether on condition of purchasing them, or for use till they are provided with others, is not clear: but before acting upon the authority contained in paras. 5 and 6 of Mr. Secretary Goldsmid's letter, No. 1047, dated 14th February last, I beg to state, in consequence of the invoice value of these, and the articles alluded to in para. 3 of Mr. Davies' letter, not being traceable, I am unable to fix a valuation on the articles after deducting for wear and tear, &c. But there is no doubt, however valuable the machinery at Broach may originally have been, that it has been ill-cared for, and has no market in its present condition; it would, I think, be therefore desirable to sell off the whole at once, or to get rid of it at a valuation made on the spot; and it is not likely Messrs. Ritchie, Steuart & Co., or Mr. Landon, will purchase an article for which a price is hereafter to be fixed.

3. At the discretion of Mr. Davies, I would respectfully propose he should be requested to close this concern, and if unable to find purchasers for any articles at a price which he is of opinion should not be accepted, that he should send the same, if worth the expense, to the Presidency, there to be disposed of.

Revenue Commissioner's Office, Poona,
16 August 1850.

I have, &c.
(signed) *A. N. Shaw,*
Revenue Commissioner, N. D.

(No. 163 of 1850.)

To *A. N. Shaw, Esq., Revenue Commissioner, Northern Division.*

V. 12,795. Sir,
I HAVE the honour to acknowledge the receipt of your endorsement, No. 1659, of the 25th June last, on Government's letter, No. 4922, of the 22d idem; and with reference to the 3rd para. of the latter, beg respectfully to refer you to the concluding para. of my letter to your address,* No. 107, of the 23rd May last. After the recommendation therein made and the explanation offered in reply to the first part of the 2d para. of Mr. Secretary Goldsmid's letter, No. 4334, of the 27th May last (copy of which I have the honour to annex for your information),

* Forwarded to Government with Revenue Commissioner's letter, No. 1313, of 29th May 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 961

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information), I see nothing for it but to advertise the eight useless gins for sale, and proceed to dispose of them, say on the 15th October next.

2. With reference to the information required in the last para. of Government's letter, I regret to have to state that after referring, first to the Military Board, and afterwards to the Civil Auditor on the subject, I am unable to ascertain the invoice value of the 1561 ten-inch gin saws received some time in 1847-48, without advice, by the late Cotton Experimental Department. Copies of the letters received from the Secretary to the Military Board, and from the Civil Auditor, I beg to submit. Unless the records of Government contain the information required, I see no hopes of obtaining it, or of adjusting the value in the books of this department.

3. With regard to the saws which I stated in my letter to Government, No. 22, of the 23rd April last, I had taken it upon me to retain for Mr. Landon, I would beg respectfully to observe that I have not yet made them over to that gentleman, who has expressed a wish to know the cost before taking them.

4. While on this subject, I would beg to be favoured with instructions whether, in the event of the invoice value being hereafter discovered, I am to debit Messrs. Ritchie, Stuart & Co. for their share of whatever it may be deemed proper to recover on account of these gins. I am led to believe that the cost of these saws cannot be under 3s. 6d. each in England.

Broach Collector's Office,
5 August 1850.

I have, &c.
(signed) J. M. Davies,
Collector.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. Willoughby and Blane.

I would forward copy of this letter and its accompaniment to Messrs. Ritchie, Stuart & Co., with reference to para. 2 of our secretary's letter, dated 15th January 1850, No. 456, and other correspondence; and I would request them to favour us with information as to what they wish done in the matter.

V. 12,796.

24 August 1850.

(signed) Falkland.
J. P. Willoughby.
D. A. Blane.

(No. 6541 of 1850.)

From Mr. Chief Secretary Malet to Messrs. Ritchie, Stuart & Co.

Gentlemen,

WITH reference to para. 2 of Mr Secretary Goldsmid's letter of 15th January 1850 (No 456), and subsequent correspondence, I have been directed by the Right Honourable the Governor in Council to forward you the accompanying copy of a letter (No. 2094), dated 16th instant, with its accompaniment, from the Revenue Commissioner, N. D., relative to the disposal of certain saw-gins at Broach, and to request you will favour his Lordship in Council with information as to what you wish to be done in the matter.

V. 12,797.

Bombay Castle, 31 August 1850.

I have, &c.
(signed) A. Malet,
Chief Secretary to Government.

(Forwarded to the Court of Directors with Bombay Revenue Letter, No. 58 of 1851, dated 16th April). V. 1236 to 1239.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 5th February 1851.

From Messrs. Ritchie, Stuart & Co., to Mr. Secretary Goldsmid, dated 15 January 1855.

V. 1236.

Sir,

WE have the honour to enclose, for the information of the Right Honourable the Governor in Council, copies of a correspondence which has recently passed between the Collector of Khandeish, the Superintendent of Government Cotton Experiments, and our agent in that province, and we beg to express a hope that, under the circumstances detailed in Mr. Constable's letter, the subject may receive the favourable consideration of his Lordship in Council.

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We should have left Mr. Constable's letter to take its course, and waited a reply through the same channel, did it not appear to us that the bringing of it to the notice of Government here might save time (which, owing to the defective state of the gins, is of the utmost consequence), while it presents us an opportunity of expressing our earnest hope that the Right Honourable the Governor in Council will be pleased to adopt some measure of a nature to protect our agency from the effects of the now almost undisguised hostility evinced by the Superintendent of the cotton experiments in Khandeish.

As an instance of the desire of Mr. Simpson to oppose every obstacle to the success of our operations, we may mention that, having received an order from the collector to allow us to receive the very moderate quantity of ten candies of New Orleans cotton from some of the ryots who had contracted to deliver the produce of this variety to Government, the superintendent informed Mr. Constable that he would be supplied with that quantity in the Burgaum Talook; where our agent having proceeded he found that there were only about four maunds obtainable.

The conduct of Mr. Simpson has more surprised us, that we have invariably inculcated on our agent the necessity of a conciliatory demeanour in the transaction of business with that officer, and we do not hesitate to say that he has acted up to our wishes in this respect, while we ourselves, although long aware of the opposition of Mr. Simpson, have refrained from making any official complaints. We had hoped that the evident advantages to the province which were likely to accrue from the establishment of an European agency in Candeish would ensure for us the cordial assistance of the superintendent, the more so as our undertaking had met with such warm support from the Government and the collector of the district, but, on the contrary, our operations have been materially retarded by the proceedings of the superintendent, and their success in the present season rendered extremely doubtful, based as they were on assurances which have not been fulfilled by him. The reception given to our agent, Mr. Stranack, in the Dharwar districts by Mr. Blount, the Government superintendent of cotton experiments there, contrasts strikingly with that which Mr. Constable has met with at the hands of Mr. Simpson; every assistance and advice required by Mr. Stranack having been afforded him in so cordial a manner as to have already placed him in a position to act for us most efficiently, and which we have much gratification in recording.

I have, &c.
(signed) *Ritchie, Stuart & Co.*

Bombay, 15 January 1851.

(No. 1 of 1851.)

To *S. Simpson*, Esq., Superintendent Government Cotton Experiments.

V. 1237.

Sir,

I HAVE the honour to receive your letter, No. 4 of 1851, and in reply beg to hand you the sum of 36 rupees and eight annas for screwing 146 bales of cotton, at four annas per bale.

I return herewith the receipt for the hire of the gins and gin sheds, as I have considered it necessary to refer the question of these payments to my principals in Bombay.

Dhurrungaum,
2 January 1851.

I have, &c.
(signed) *A. C. Constable.*

(No. 6 of 1851.)

To *A. Elphinston*, Esq., Collector of Khandeish.

Sir,

UNDER the instructions contained in your letter, No. 2335, of the 14th December last, I presented a bill for the hire of 40 gins for the month of December 1850 to the agent of Messrs. Ritchie, Stuart & Co. for payment, amounting to 448 Company's rupees. It was returned with the following reply, dated 2d instant.

"I return herewith the receipt for the hire of the gins and gin sheds, as I have considered it necessary to refer the question of these payments to my principals in Bombay."

The refusal on the part of Mr. Constable to pay the Government hire according to his engagement is hereby brought to your notice, with a view to your taking such measures in the matter as you may think fit.

Superintendent's Office, Dhurrungaum,
2 January 1851.

I have, &c.
(signed) *S. Simpson,*
Supt, Gov. Cotton Exp.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA: 963

(No. 48 of 1851.)

TRUE copy forwarded to Mr. Constable, the agent for Messrs. Ritchie, Stuart & Co., who is requested to favour the collector with his early explanation on this subject.

Khandeish Collector's Camp, Mulligaum,
7 January 1851.

I have, &c.
(signed) A. Elphinston,
Collector.

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(No. 5 of 1851.)

To A. Elphinston, Esq., Collector of Khandeish.

Sir,

I HAVE had the honour to receive your endorsement, No. 48 of 1851, on a letter to your address from the Superintendent of the Government cotton experiments, in which that gentleman states that I have refused to pay the Government hire for the gins and sheds according to agreement, an explanation of which alleged refusal you have called upon me to afford; in compliance with your desire I have the honour to state—

That I did not refuse to fulfil my engagement, as I think the extract from my reply embodied in Mr. Simpson's letter will at once show. I had referred the subject of payment to Messrs. Ritchie, Stuart & Co., and I only deferred paying the hire until their reply reached me; I was under no engagement to pay the hire on any particular date, and a delay of eight or ten days was all that could have occurred.

Having stated thus much to clear myself from the charge of having in the instance referred to broken an engagement, I beg to give you the following reasons for my now paying under protest the amount of hire for these machines and sheds:

1. The gins are not as efficient as I was led to expect, when in April last I made the offer to hire them.
2. The newly erected gin sheds, for which I agreed to pay six rupees per month, were made over to me in an unfinished state, and two of them (at Sawda and Nusseerabad) are already in a state of decay.

In proof of my first assertions, I beg to say that Mr. Price, late assistant superintendent of the cotton experiment, assured me before I offered to hire these machines, that the average amount per diem of kuppas which would be cleaned by a 20-saw gin, equalled 1,000 lbs. Mr. Simpson subsequently reduced this average to 800 lbs., with which average I saw reason to be satisfied, and made my calculations accordingly.

I find, however, that not one single gin out of the 40 made over to this agency will clean 800 lbs. in the course of a day, the average being actually under 500 lbs., whilst the same labour is expended, and the same charges incurred.

Before making the offer referred to, I had seen the gins at work in the Government factory at Dhurrungaum, and I was quite satisfied with their performance, and I was then told (I write under correction), that one of the gins cleaned upwards of 1,100 lbs. per day.

Totally unacquainted with these machines, I saw no reason then why, if one could be made to do this quantity of work, all should not be made to do the same, and now my larger experience only confirms this conclusion.

Mr. Laidlaw, the engineer attached to this agency, has at work in Badwur five gins made by Mr. Simpson, and one with the same number of saws made by himself, and he assures me that this latter cleans more than double any one of Mr. Simpson's. Mr. Laidlaw thus writes me under date the 7th instant:—"The large power gin cleans daily five candies of 400 seers, and my new gin in the same time one and a half candies; hand power only 10 maunds, each gin, with the exception of one, cleaning 12 maunds, and I have them worked from six in the morning till six in the evening."

Thus while Mr. Laidlaw's gin cleans 1,200 lbs., the best of Mr. Simpson's only cleans 480 lbs.; and Mr. Laidlaw's, in doing this, does little more than was done by those in the Government factory last year, and less than was done by a gin in the possession of Luximon Shroff of this village.

The maunds referred to by Mr. Laidlaw are of 20, not 40 seers, and the candy is the Cutcha one of 400 seers.

I have never looked at the hiring of these machines in a mercantile point of view, or I should have protested against payment a month ago. Whilst I have over and over again urged the Superintendent to try and remedy the evils complained of, I have been as frequently met by the reply, "that it was no part of the bargain." I repeat that, in a simple business point of view, I should be quite justified in refusing to pay the high rent promised, because the machines are not according to sample, as those I saw at work here last March were taken to be.

All the gins work heavily, and, in addition to that, some of them have the grates so wide that much seed passes through with the wool. I have reason to believe that some of the

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gins were constructed with a view to the cleaning of New Orleans kuppas; and I think, if such be the case, intimation of the fact should have been afforded when they were being made over to this agency.

Some of the gins are also very old, with brushes worn out, and the teeth of the saws broken and destroyed.

Referring to my second reason for protesting against the payment, I respectfully solicit that some competent person be instructed to inspect and report on the state of these sheds.

I cannot conclude this reply to your requisition without most earnestly calling your attention to the probable result of this state of things.

I affirm decidedly and distinctly that the Government gins are most inefficient; that they do not clean the cotton as they could and would had they been made up as carefully as their importance demanded.

Putting out of view the loss that may accrue to Messrs. Ritchie, Steuart & Co., the objects of Government will be most signally and entirely defeated by the cotton sent down to Bombay for transmission to England being found, after all the supposed care and attention bestowed on it, in a leafy and dirty state.

My missions, amounting probably to 2,000 candies, will be no "pocket samples;" and if it be wished to attract hence English enterprise and English capital, it is highly desirable, nay, absolutely necessary, that everything possible be done to render my missions as good as possible, not to shield my principals from loss, but in order that others may not be discouraged from following the example set by Messrs. Ritchie, Steuart & Co.

It may read like bombast, but I am convinced of its truth, that on the success or failure of this agency depends in a large degree the attainment of the great objects Government have in view.

Commissioners may come and make up reports for or against the probability of increasing the quantity and value of East India cotton; but here is a practical trial on an extensive scale, the failure of which will have a far worse effect than all the reports that ever were or ever will be written.

I have in store a very large quantity of kuppas, but unless some remedies are applied, I see no prospect of getting it cleaned before the close of the season.

Some of the kuppas is in every way most excellent, and I have been told by parties on whose veracity and judgment I can rely, that such kuppas was never before seen in Khandeish.

I most earnestly beg that you will take the subject into your early and best consideration. If you would permit me to make a suggestion, I beg to add that, in my humble opinion, the only efficient, as the only immediate, remedy would be to allow me the use of the Government factory, the tools, workmen, &c., for the next four months, as I understand that the gins which were to be made up there are all finished. I should imagine that the superintendent could have no objection to the whole of the workshop and establishment (not office) being placed entirely under my orders for the next four months.

In conclusion, I crave your indulgence for the length as well as for some of the matter of this reply. I feel, however, that the subject is of more importance than as a mere dispute as to the efficient working of a few saw-gins; and believing that so you will consider it.

I have, &c.

Dhurrungaum, 10 January 1851.

(signed) *A. G. Constable.*

V. 1238.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable the Board.

I would forward copy of this to Mr. Elphinston, for his report.

Mr. Elphinston should be instructed, that if in his opinion Messrs. Ritchie, Steuart & Co. have been correctly informed, he should take the most prompt measures in his power to cause Mr. Constable to be furnished with efficient machinery, and that, to ensure this end, he may give Messrs. Constable and Laidlaw access to the Government factory, and the use of the tools and instruments, independent of Mr. Simpson, under such restrictions as may appear to himself to be advisable.

I think that the accuracy of the information contained in para. 3 of this letter should be immediately ascertained and reported on.

24 January 1851.

(signed) *Falkland.*
J. Grey.
J. P. Willoughby.
D. A. Blane.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 965

III:
Bombay.

(No. 790 of 1851.)

From Mr. Secretary *Goldsmid* to the Collector of Khandeish.

V. 1239.

Sir,

THE Right Honourable the Governor in Council has directed me to forward for your report the annexed copy of a letter, dated 15th instant, from Messrs. Ritchie, Steuart & Co., complaining of the treatment their agent in Candeish has met with from Mr. Simpson.

2. If, in your opinion, Messrs. Ritchie, Steuart & Co. have been correctly informed, you are requested to take the most prompt measures in your power to cause their agent, Mr. Constable, to be furnished with efficient machinery; and, to ensure this end, you are authorised to give Messrs. Constable and Laidlaw access to the Government factory, and the use of the tools and instructions therein, independent of Mr. Simpson, but under such other restrictions as may appear to you to be advisable.

3. The accuracy of the information contained in para. 3 of Messrs. Ritchie, Steuart & Co.'s letter should be immediately ascertained and reported on by you.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 25 January 1851.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 5 February 1851. V. 1265 to 1267. V. 1265.

From Messrs. *Ritchie, Steuart & Co.* to Mr. Secretary *Goldsmid*.

Sir,

WE have the honour to make the following representation, and to express a hope that it will meet with the favourable consideration of the Right Honourable the Governor in Council.

Some months ago we obtained from the gun carriage manufactory a large screw, weighing about three and a half tons, intended for a cotton press which we are erecting in Khandeish. This screw we have found it impossible to get forwarded to its destination, as the common country carts used by native contractors are not sufficiently strong for the transport; and it has been suggested to us, as the only means of accomplishing our object, that Government might possibly, under the circumstances, grant the loan of one limber heavy ordnance and one cart platform, to convey the screw, with its appendages, to Dhurrumgaum or Bodwar, in Khandeish. We are the more anxious to obtain the sanction of Government to this accommodation, as the cotton press attached to the Government factory in Khandeish, and of which the use, when not required by Mr. Simpson, was granted to us, is found incapable of performing the work we had been led to expect.

We have, &c.
(signed) *Ritchie, Steuart & Co.*

Bombay, 23 January 1851.

(No. 301 of 1851.)

REPORT by the Military Board.

V. 1265 A.

THERE is no objection to the supply of the carriages required, on condition that they are restored in the same serviceable state in which they are supplied.

(signed) *F. P. Lester*, Lieut.-Colonel,
Commandant of Artillery.

Bombay, Military Board Office,
25th January 1851.

J. Swanson, Major.

(No. 812 of 1851.)

From Mr. Secretary *Goldsmid* to the Military Board.

V. 1266.

Gentlemen,

WITH reference to your report No. 301, dated the 25th instant, I have been directed by the Right Honourable the Governor in Council to request that you will issue the necessary instructions for the supply of the carriages applied for by Messrs. Ritchie, Steuart & Co.

2. Messrs. Ritchie, Steuart & Co. have been informed that the carriages are to be restored in the same serviceable state as that in which they are supplied.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 27th January 1851.

III.
Bombay.
V. 1267.

(No. 813 of 1851.)

From Mr. Secretary *Goldsmid* to Messrs. *Ritchie, Stuart & Co.*

Gentlemen, Dated 27 January 1851.
I HAVE been directed by the Right Honourable the Governor in Council to inform you that the Military Board have been directed to issue the necessary instructions to supply you with the carriages applied for in your letter of the 23d instant; you will have the goodness to take measures for having them restored in the same serviceable state as that in which they are supplied.

Bombay Castle, 27th January 1851.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 19 February 1851. V. 1685 to 1688.

(No. 306 of 1851.)

V. 1685.

From the Revenue Commissioner Northern Division to the Secretary to Government.

FORWARDED to Government for instructions, the Revenue Commissioner being of opinion that the simplest plan would be to make over the use of the press, &c. to Mr. Constable for a period, leaving him to work it as he pleases, on his engaging to pay a fair rent for it, and returning it, save ordinary wear and tear, to Government in good condition.

Revenue Commissioner's Camp, Tannah District,
Nandgaum, 1st February 1851. (signed) *A. N. Shaw,*
Revenue Commissioner
Northern Division.

(No. 178 of 1851.)

V. 1686.

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

Sir,
I HAVE the honour herewith to lay before you copy of the correspondence noted in the margin,* for such notice as you may deem fit.

Khandeish Collector's Camp, Dhurrumgaum,
27 January 1851. I have, &c.
(signed) *Alex. Elphinston,* Collector.

(No. 24 of 1850.)

To *Alex. Elphinston*, Esq., Collector, Khandeish.

Sir,
BEING desirous of getting as much cotton as possible screwed in the Government factory, I should feel greatly obliged by being permitted the use of the press throughout the night on the same terms as by day, only paying for the oil and finding the necessary lamps; I am not prepared to say when I should require to avail myself of this privilege, but probably about the 5th January, by which time the superintendent might have properly trained people to work the press.

Dhurrumgaum,
28 December 1850. I have, &c.
(signed) *A. G. Constable,*
Agent to Messrs. Ritchie, Stuart & Co.

* 1. Letter from Mr. Constable to Collector, No. 24, dated 28 December 1850.
2. Collector's reply, No. 2444, dated 31 December 1850.
3. Collector's letter to Superintendent Cotton Expts. of the 31st December 1850, No. 2443.
4. Reply from Superintendent, No. 16, of the 13th January 1851.
5. Collector's letter to Superintendent, No. 147, of the 24th January 1851.
6. Superintendent's reply, No. 33, dated 25 January 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 967

III.
Bombay.

(No. 2444 of 1850.)

To *A. G. Constable*, Esq., Agent to Messrs. Ritchie, Steuart & Co.

Sir,

In reply to your letter, No. 24, of the 28th December 1850, expressing your desire of getting as much cotton as possible screwed in the Government factory at Dhurrumgaum by night, I have the honour to append for your information copy of my letter of this day's date to the Superintendent of cotton experiments,

I have, &c.
(signed) *A. Elphinston*, Collector.

Candeish Collector's Camp, Mulligaum,
31 December 1850.

(No. 2443 of 1850.)

To *S. Simpson*, Esq., Superintendent of Cotton Experiments, Dhurrumgaum.

Sir,

I HAVE the honour to append copy of a letter from Mr. Constable, No. 24 of 1850, dated 28th December, to my address, expressing his desire of getting as much cotton as possible screwed in the Government factory by night. I conceive Mr. Constable's plan to be a profitable one to Government, and request that you will be good enough to comply with his proposal.

2. With respect to his suggestion of using lamps during the night, no apprehension of injury to cotton need, I presume, be entertained if lanterns are used in the factory instead of open lamps.

I have, &c.
(signed) *A. Elphinston*, Collector.

Candeish Collector's Camp, Mulligaum,
31 December 1850.

(No. 16 of 1851.)

To *A. Elphinston*, Esq., Collector of Khandeish.

Sir,

I BEG to state, in reply to your letter, No. 2443 of the 21st ultimo, that it will be out of the power of this department to comply with the request you make on behalf of the agent to Messrs. Ritchie, Steuart & Co., unless you will authorise the entertainment of the following extra establishment of servants:—

1 Caroon, at	- - - -	8 rupees.
1 Dulal, at	- - - -	8 „
3 Peons, at 5 rupees each	- - - -	15 „
Total per month	- - - -	21 rupees.

Mr. Constable placing the lamps and paying for the oil, as follows:—A lamp for the use of the caroon and weigher, two lamps to be placed in screw-room, four lamps in the press-room, altogether seven lamps, such as will not expose the premises to the risk of fire; Mr. Constable, under any circumstances, to take the responsibility of any accidents that may occur in consequence of the above arrangement.

I have, &c.
(signed) *S. Simpson*,
Superintendent Government Cotton Experiments.

Superintendent Office, Dhurrumgaum,
13 January 1851.

(No. 147 of 1851.)

To *S. Simpson*, Esq., Superintendent of Cotton Experiments.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 16, dated the 13th instant, stating the conditions on which the application of Mr. Constable for the use of the cotton

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cotton

III.
Bombay.

cotton screw-press at night might be complied with, and in reply beg to observe that I do not see any necessity for the entertainment of an additional carkoon and weigher. The carkoon on the fixed establishment, I believe, can without difficulty write during the day whatever he has to write both for day and night, which, as connected with the baling of the cotton of the firm, is very little. Likewise, the operation of screwing is necessarily much slower than that of weighing, and therefore the weigher on the fixed establishment can weigh and set aside in the day-time as much cotton as can be baled both during the day and the night. I therefore request you will be good enough to direct the carkoon and the dupal weigher to do during the day as much of the work of their respective offices as will include the screwing of Mr. Constable's cotton by night as well as by day.

2. The only portion of the additional establishment mentioned by you, that I conceive to be necessary, with due regard to economy to all parties, are the three peons required to superintend the men employed in working the screw. I have accordingly ordered three additional peons to be sent to you, as overseers for this purpose, from the districts.

3. Mr. Constable agrees to find secure lamps and oil for them; with respect to the possibility of any accidents, I trust none may occur, and none seems possible, except through wanton carelessness. It is time enough to settle the responsibility of an accident when it occurs, as it would devolve on the party (Government or the firm) to whom the person to blame may belong.

4. As an inducement to the labourers, Mr. Constable agrees, in addition to the four annas a bale he pays Government, to pay each labourer employed for him at the press at night (and I understand there are 14 of them employed per diem), an anna extra to the hire which each receives from you, and at this rate the mamlutdar of Errondole has engaged to procure 14 additional men for the working at the cotton-screw at night.

Khandeish Collector's Camp, Dhurrumgaum,
24 January 1851.

I have, &c.
(signed) *A. Elphinston*,
Collector.

(No. 33 of 1851.)

To *A. Elphinston*, Esq., Collector of Khandeish.

Sir,

I AM in receipt of your letter, No. 147, of the 24th instant, and beg to state in reply, that the incendiary spirit to which you allude never occurred to me, and will not, I feel certain, apply to any one belonging to this establishment; and if it has any application at all, it would go to those whom you may send, or cause to be sent, inside the Government factory. My previous remarks, regarding the screw press being worked at night, were wholly based upon undesigned accident, arising from the use of open lamps. This covered the whole ground to my objections, or rather precautions against exposing the Government property to the risk of fire by working the press at night, which would greatly, in its present condition, increase the chances of its breaking. It has been estimated, I have somewhere seen, that 10 per cent. of the presses and gin-houses are burnt in the United States of America where they are not worked in the night later than 8 o'clock, and where the precautions are fourfold greater than they can be expected to be in this country. Saw-ginned cotton stands next to powder itself in its combustible properties.

2. Your remarks about the responsibility remind me of the trite old saying, to which I may here be permitted to allude, of "locking the stable door after the steed has been stolen." I should find very little difficulty in meeting your arguments, but do not think it my duty to enter into recriminatory rejoinders, however easily it might be, but to yield a respect for your undoubted authority by virtue of your high office, in the management and use of the Government machinery, which has hitherto been regarded by me as being under my charge. Therefore, having done what I conceived to be my duty, I beg to add, that, so far as I am concerned, the press-house, and the press within it, is entirely at your disposal, or that of any person or persons you may authorise to take charge of it during the night-time. I am averse to giving any orders to any person myself, neither will it be convenient to me to go near the press, or to exercise any control over its working, only in the day-time, therefore it will require to be, if worked at all, at night, under your orders wholly.

I have, &c.
(signed) *S. Simpson*,
Superintendent Government Cotton Department.

Superintendent's Office, Dhurrumgaum,
25 January 1851.

MINUTE

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 969

III.
Bombay

MINUTE by the Honourable Board.

If natives do not make use of the press, and Messrs. Ritchie, Stuart & Co. stipulate that it is to be used for pressing the cotton required by us for the Honourable Court, the arrangement suggested by the Revenue Commissioner may be authorised. V. 1687.

If, however, the press is required for native dealers, the arrangement passed by Mr. Elphinston may be adopted, care being taken by him that safe lamps are used.

(signed) *Falkland.*
J. Grey.
J. P. Willoughby.
D. A. Blane.

5 February 1851.

(No. 1104 of 1851.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division. V. 1688.

Sir,

I HAVE been directed to acknowledge the receipt of your memorandum, No. 306, dated the 1st instant, with accompaniments, relative to an application from Mr. Constable, agent to Messrs. Ritchie, Stuart & Co., for the use of the Government cotton screw press at Dhurrungaum.

2. If natives do not make use of the press, the Right Honourable the Governor in Council authorises the arrangement proposed by you, it being, however, stipulated that Government are to have the use of it whenever required for pressing the cotton required for the Honourable Court.

3. If, however, the press is required for native dealers, his Lordship in Council sanctions the adoption of the arrangement proposed by Mr. Elphinston.

4. In either case care is to be taken by Messrs. Ritchie, Stuart & Co., and the collector, that safe lamps are used.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle,
6 February 1851.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 19 February 1851. V. 1984.

From Messrs. *Ritchie, Stuart & Co.* to Mr. Secretary *Goldsmid*.

V. 1984.

Sir,

WE have the honour to acknowledge receipt of your letter, No. 813, and copy of that, No. 790, to Mr. Elphinston, the former intimating the sanction of Government to our use of Government carriages, as applied for, and the issue of the necessary instructions, through the Military Board, to place the same at our disposal, with the proviso that they should be returned in the same serviceable state as that in which we shall receive them, to which we shall be, of course, very happy to agree.

We beg to express our thanks for the inquiries so promptly instituted on the subject of complaint in our letter of the 15th instant.

And have, &c.
(signed) *Ritchie, Stuart & Co.*

REVENUE DEPARTMENT, 19 November (No. 12) 1851.

Our Governor in Council at Bombay.

WE transmit herewith Forwarding a communication from Mr. A. Finlay relative to the difficulty encountered in the establishment of an agency in Khandeish for purchasing and cleaning cotton. copy of a letter, which has been addressed to our chairman by Mr. Alexander Finlay, a member of the firm of Ritchie, Stuart & Co., of Bombay, relative to the difficulties which they have encountered in their operations for the establishment of an agency in Khandeish for purchasing and cleaning cotton, and forwarding it to the coast for exportation. We desire that these statements may receive your consideration. Dated 16 October 1851.

We are, &c.
(signed) *John Shepherd.*
J. W. Hogg.

London, 19 November 1851.

From *A. J. Finlay, Esq.*, to *John Shepherd, Esq.*, Chairman of the Honourable East India Company.

Castle Toward, near Greenock,
16 October 1851.

Sir,

SINCE I had the pleasure of seeing you at the India House, I have received some additional information from my friends in Bombay, Messrs. Ritchie, Steuart & Co., respecting their operations in the cotton districts of Khandeish, where, as you are aware, they have established an agency for the express purpose of improving the quality and extending the cultivation of the cotton grown there. From their report I am sorry to learn that the road by which they are obliged to send their cotton to Colsette bunder, near Bombay, is now in worse state, if possible, than it was last year. Owing to want of water, it is dangerous to bullocks in April and May; the rains render it impassable during the months of June, July, August, and September, and it is little better than the open fields, and in some places worse during the rest of the year.

Our agent in Khandeish, writing in July last, says, "I beg to draw your attention to the state of the road between the Thull Ghaut and Shapoor. A new road is being constructed, and since that was commenced, three years ago, I am given to understand that no repairs have been made on the old one, over which all the traffic passes; of course every year it becomes worse and worse; until now, I am told, it is truly dangerous to travel on. I do not know what the cotton commissioner (Mr. Mackay) may think of the roads in Guzerat, but I am very sure that he will be greatly surprised to learn that in a province the annual income of which is upwards of 200,000 *l.*, not above 200 *l.* is allotted to the roads in the province," (about 1 *s.* 4 *d.* per *£.* sterling, while in Argyleshire we pay 8 *s.* per *£.* sterling,) besides 1,200 *l.* to the Great Agra road. The collector, however, has a further sum of 200 *l.* placed at his disposal to dig wells or to repair village chowries.

The road Messrs. Ritchie, Steuart & Co. make use of passes by Mulligaum and Nassick to Colsette bunder, which is not very far from Callian, to which place the railway is to go. They expect to have, next season, at least 2,000 tons of cotton to send from Durrungaum to Colsette bunder between 1st January and 1st April—that is equal to about 4,500 cart-loads. Last season they were obliged to pay as much as 19 $\frac{3}{4}$ rupees for each cart, or nearly 4 *l.* 15 *s.* a ton, 180 miles, or 6 $\frac{1}{2}$ *d.* per ton per mile. The average charge of the season was about 16 rupees a cart, in addition to which there is always a charge of about 5 $\frac{1}{2}$ rupees a ton from Colsette bunder to Bombay, so that it cost nearly $\frac{1}{2}$ *d.* per lb. to convey last year's crop from Khandeish to Bombay, being considerably more than the cost of its conveyance from Bombay to Liverpool, and from 25 to 30 per cent. on the value of this staple at Durrungaum; and when I add, that fully one-half of the American crop of cotton is brought from the place of its growth to Liverpool for less than $\frac{1}{2}$ *d.* per lb., you will see how impossible it will be for Indian cotton, which is only two-thirds the value of American, to compete with it in European markets so long as it is loaded with such an enormous charge for land carriage.

But the cost of conveyance is not the only obstacle to the success of our operations.

As I have already stated, the roads are dangerous, from want of water, in April and May, and impassable in June and July, August and September. Cotton-cleaning does not usually begin much before December; and as few carters will commence the journey to Colsette bunder after March, there are not much more than three months available before the monsoon for cleaning the whole crop. All the cotton which cannot be cleaned before the monsoon must, therefore, be kept up the country till October, at a very great sacrifice of quality, warehouse rent, and interest on capital, which together are not less than 25 per cent. on its value in Khandeish. What I have just stated respecting cotton applies equally to linseed, flax, and other agricultural productions. Now it cannot be doubted that the produce of Khandeish might be forwarded to Bombay, as it could be got ready for market during every month of the year, except, perhaps, June and July, at a very moderate cost, and with sufficient despatch and regularity, by means of a tramway or horse railway, the cost of which one year's revenue of the province would be sufficient to defray; and thus the whole produce of that vast and fertile territory might be delivered in Bombay before the rains set in, which is a matter of incalculable importance to the cultivators as well as to the merchant, and, I may add, to the revenue.

So greatly do we feel the loss occasioned by the want of sufficient means of conveyance, that I venture to assert that my partners in India would gladly pay 3,000 *l.*, in addition to the rates charged in England, for the conveyance by railway of similar goods for the use of a tramroad next season from Durrungaum to the Colabar presses, provided that they could, on those terms, have all their cotton delivered at that point previous to the monsoon. And in connexion with this subject I would venture to impress upon you the necessity of carrying the Bombay railway to the Colabar pier and cotton presses, and of providing there a commodious station capable of storing a large quantity of cotton and other produce; otherwise a great additional charge will be incurred by the foreign merchant for cartage (to say nothing of increased facilities of fraud), and much inconvenience will be caused to the public by the transit of many thousand cartloads of merchandize through the thoroughfares.

From the short experience we have had, I am sanguine of success, provided only that our produce be conveyed from Khandeish to the harbour of Bombay even at double the cost per mile, and at not more than ($\frac{1}{6}$) one-sixth of the speed of the railways between Glasgow and Liverpool, and provided, also, that means be taken to secure to the merchant the crop on which

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 971

which he has advanced money; but I am equally certain that success is impossible if those two essential points be not granted. Last season our loss was very great; and unless the remedies to existing evils which I have suggested be immediately applied, we shall for that reason alone, and not because we consider the people, the climate, or the soil unsuitable for the production of cotton, abandon the agency which we have established at so great an expenditure of time, labour, and money.

I have &c.
(signed) *Alex. J. Finlay.*

III.
Bombay.

REVENUE LETTER from the Government of Bombay, dated 29 April 1852.

(No. 58.)

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

FROM the proceedings of which copy is herewith forwarded*, your Honourable Court will learn that we have authorised the continuance, for a further period of two years, of the arrangements sanctioned by us in 1850, as reported to your Honourable Court in our letter of 17th October (No 93) of that year, with regard to the cotton agency established by Messrs Ritchie, Steuart & Co. in Khandeish.

We have &c.
(signed) *D. A. Blane.*
A. Bell.
J. Warden.

Bombay Castle, 29 April 1852.

To *H. E. Goldsmid*, Esq., Secretary to Government, Territorial Department, Bombay.

Sir,

THE period of two years during which the Right Honourable the Governor in Council was pleased to permit that we should enjoy certain facilities in the establishment of a cotton agency in Khandeish having nearly expired, it becomes necessary for us to solicit a renewal of these facilities, with a view to the continuance or abandonment of the business, according as the decision of Government shall be favourable or otherwise to the present application.

In embarking in a business such as that we have established in Khandeish, we indulged in no very sanguine anticipation of the profits to be realised; we were prepared for great difficulties, and much opposition on the part of the money lenders and native traders; we had perused in Parliamentary blue books, and other compilations, numerous letters by servants of the Honourable East India Company, whose acknowledged soundness of judgment and whose means of information entitled their opinions to implicit credence; and at a time when the cotton arriving from all parts of this Presidency was so impure as to render its shipment precarious, and peril the very existence of the trade, we were emboldened to test, practically, the theory of so many eminent Government officers, that direct commercial intercourse with the cultivators in the interior would be alike advantageous to the European merchant, the English manufacturer, and the ryot, and that the impediments usually urged by the former were, for the most part, imaginary. It was at first our intention to erect cotton-cleaning machinery in Broach, as the focus of a large cotton-producing district; but it was intimated to us that it would be more agreeable to Government if we were to choose another field, owing to the presence of Mr. Landon in Broach. This rendered necessary a more complicated system of business than we had proposed, inasmuch as in no other district could we depend on kuppas being obtained without advances of money to the cultivators at the time of sowing the seed, while a number of small stations for the collection of kuppas was also indispensable, involving a large and expensive establishment of European and native subordinates. We were, however, encouraged to proceed by the terms in which the Right Honourable the Governor in Council had been pleased to reply to our letter on the subject, and after some inquiries made in Khandeish by a person deputed from our establishment here for the purpose, we selected that province as the most eligible for the operations we contemplated. On a representation, under date 19 April 1850, of the risks requiring to be encountered, and of the important results to the province which would attend the vigorous carrying out of our plans, Government was pleased to afford us certain privileges for our protection

* Letter from Messrs. Ritchie, Steuart & Co., dated 27 March 1852. Minute by the Right Hon. the President, concurred in by the Hon. Mr. Bell, dated 7 April 1852. Ditto by the Hon. Mr. Warden, dated 12 April 1852. Ditto by the Right Hon. the President, concurred in by the Hon. Mr. Bell, dated 14 April 1852. To Messrs. Ritchie, Steuart & Co., No. 2837, dated 23 April 1852. To the Collector of Khandeish, No. 2838, of the same date. Resolution, No. 2839, of the same date.

III.
Bombay.

protection during the two seasons which have now elapsed. It was believed that after two years our agent would have acquired sufficient experience of the country and its people to render Government support unnecessary.

We thankfully acknowledge the cordial spirit in which the local authorities of Khandeish have carried out the orders of Government on our behalf, and were the future support of Government contingent upon the past use we have made of the assistance granted us, we believe we might appeal with confidence to the Collector and other officers in Khandeish for their testimony as to the beneficial effects which the presence of European agency has already exercised on the trade and revenues of that province. The stimulus given to cotton cultivation, and the consequent great increase of revenue from cotton lands, are matters of notoriety in Khandeish. In the first season of our operations it was difficult to induce the ryots to receive advances of money from our hands, so fearful were they of possible exactions, and of the responsibilities they might incur; but last season hundreds flocked to our agents eagerly seeking advances, and the extent of land put under cotton cultivation, both American and indigenous, was greater than had ever before been known. Unlike Guzerat, where the area of land under cotton cultivation is stated to admit of little, if any increase, Khandeish contains hundreds of square miles of maiden land, which it only requires capital and population to bring into a high state of fertility; but both population and capital are woefully deficient, and the province stands greatly in need of the fostering hand of Government. It is so short a time since it passed from a state of lawless barbarism into the comparative security of British territory, that but few natives of wealth have settled in the country, and still fewer of the inhabitants have amassed wealth therein; there is, consequently, little inducement offered to the ryots of surrounding native states to immigrate into Khandeish, and the annual increase of population is believed to be extremely trifling.

While the advantages reaped by the ryots of Khandeish, and by Government, from the introduction of European capital and skill, have already been palpable and substantial, we ourselves have received no return for the capital, labour, and anxiety involved in the undertaking. The obstacles which we encountered at every step were tenfold what we expected; many of these have been, and more may still be, surmounted by patient perseverance and industry; but there are two grand difficulties which render the success of European agency almost unattainable. We allude to the insecurity of advances and the deficient means of transport to the coast. In addition to these impediments, it has been our misfortune to find in the agent we employed, Mr. Constable, a man whose principles made him wholly unworthy of the great trust reposed in him, and who suddenly absconded from our service four months ago after embezzling a considerable sum of money. A less venal irregularity, which might have been overlooked but for the effect on the native mind, required the dismissal of our assistant agent, Mr. Herbert, immediately on the discovery of Mr. Constable's dishonesty. Thus all the personal experience gained in the course of 20 months was lost, and we found ourselves entangled in an extensive business, the details of which were only known to us by correspondence, and, as may be supposed, had been misrepresented. One of our partners at once proceeded to Khandeish and assumed charge; but it was hopeless to carry out, single-handed, and comparatively unacquainted with the country, people, and modes of business, all that had been put in train. Our cleaning machinery was found unprepared, native subordinates corrupt, and the whole *morale* of the agency, for the time, injured by the conduct of our *employés*. (It was fortunate that an active demand for cotton by Bombay dealers for the China market enabled the ryots to sell their cotton at very high prices, and repay us our advances to the extent of nearly a lac of rupees, which had secured cotton to the value of about three and a half lacs; and independence of the sowcars, consequent upon these advances without interest made by us, was of course no small advantage to the ryots in the disposal of their crops without the intervention of the former.)

Under these circumstances the Right Honourable the Governor in Council will not be unprepared to learn that there has been considerable loss to us (apart from loss by the fraud of our agent) in the first two years of our experiment, and that we find no inducement to prosecute it. It is but natural, however, that we should feel a repugnance to confess ourselves mistaken in our views, which would be the universal inference from our abandonment of the agency; and we should feel it all the more that we do still believe success feasible, with proper management and a continuance of Government aid, which consists in the permission accorded to our agent to be assisted by the district native officers in distributing small advances to ryots, with whose character and means such officers are acquainted. To the extent to which these advances are disbursed from the Government treasury, they are recoverable from the ryots, in case of breach of engagement, as would be revenue demands, constituting a priority of claim should the ryot have previous debts to the shroffs; herein lies the only security of our advances, and without these advances it would be impossible to expect a supply of cotton sufficient to be worth the attention of any European merchant. Did there exist a system of registry of the debts of ryots in the village books for the information of parties proposing to advance upon particular crops, the risks incurred by Europeans would be greatly mitigated; but, in the absence of such system, assistance of the nature hitherto granted by Government is absolutely indispensable. And, what is it in effect? It is analogous to the practice of landlords in England who advance money at interest to their tenants for the improvement of the lands rented; it is simply the supplying to ryots the bare means of obtaining seed and implements for the cultivation of fields which otherwise would remain untilled, so great is the poverty of the people; and our agency is the medium of the advances, and responsible to Government for the

the ultimate repayment of the same, while it secures a market to the ryot for all his produce cultivated with such aid. Immeasurably more advantageous to Government and to the ryots than to ourselves as is such an arrangement, we cannot but expect that our application for a renewal of it, and increase of the amount to be advanced, will be sanctioned by his Lordship in Council. The non-collection of 82,000 rupees from ryots who make engagements with the agency has been wholly inoperative as an inducement to them, and therefore the amount which has been really effectual in furthering our objects has been only 18,000 rupees instead of one lac, as believed by Government. We would respectfully express our hope that the increase of the cash advance to at least half a lac will be sanctioned, and we do not hesitate to affirm that assistance of this kind to private European agency will do more in one year for the promotion of cotton cultivation, than would the costly experimental establishments of Government in 20 years. In Khandeish, indeed, the Government cotton experiments have been a signal failure, or could not fail to be so viewed by practical commercial men; the system of ginning hitherto pursued is found to be unsuited to the country, owing to the extreme paucity of available manual labour, and we understand the collector and present superintendent of the Government cotton establishment propose to adopt the mode of working the gins which we have put in practice during the present season, as the only hope of introducing saw-gin machinery into the province.

With due deference we would take the liberty of remarking, in reference to the Government cotton establishment in Khandeish, that while it entails a heavy annual expense upon Government without conferring any perceptible benefit on the cotton trade, its existence is prejudicial and hostile to private enterprise. Those connected with it not unnaturally feel that the success of an agency such as ours would sooner or later lead to the suspension of the Government experiments, and the temptation to frustrate our objects is strong. Moreover, in the cost of materials, wear and tear, annual salaries, interest of money, and many other items which must be carefully apportioned to the work done by private merchants, so as to show a true result, are not considered in the estimates of ginning expenses usually made by the Government Superintendents; and when they undertake to put up extensive machinery, and to clean for natives at a certain charge per candy, that charge is generally little more than the daily expense incurred, which with us is but an insignificant portion of the total expense really incurred on each candy of cotton. Thus parties who should enjoy the use of Government machinery, such as is proposed to be set up at much expense, would compete with us at great advantage, and Government would be outlaying money for the benefit of only the few individuals to whom the use of the machinery could be given. We should fear the competition of no private individual or company enjoying the same facilities as ourselves, but the maintenance of a Government establishment for the purpose of erecting and working machinery for natives at a fixed charge, representing only a small portion of the gross expenditure, would drive Europeans out of the field. Mr. Landon at Broach charges natives 12 to 15 rupees for cleaning cotton with his saw-gin. The Government superintendent proposes, we have understood, to do the same work for four rupees per candy; the difference would represent the probable costs which would be borne by Government in cleaning cotton at the latter rate. The construction of gins for sale or hire to natives is a boon which no one can fail to appreciate, but it may be doubted whether to build cattle-power machinery, and to maintain an establishment for the working of such gins, is within the province of Government.

The subject of roads in connexion with the cotton trade of Khandeish is one of vast importance, but we cannot hope to see all the difficulties of transport immediately removed; but must trust that the urgent representations which are known to have been made to Government will lead to the sanction of a larger sum from the revenues of Khandeish for the improvement of roads than is now allowed. We would, however, respectfully and earnestly draw the attention of the Right Honourable the Governor in Council to the state of that portion of the high road from Bombay to Khandeish which lies between Kurda and Kussara, twelve miles in length; it is almost impassable, and the bullocks and carts suffer more in the ascent and descent of these twelve miles than in all the rest of the journey. In fact, the fatigue of getting the carts over this piece of road is so great that, in the course of the season hundreds of bullocks are destroyed, to say nothing of the breaking down of carts, and delay in the transmission of the cotton. Between the two places mentioned a new road was in progress, a viaduct partially constructed, in fact, the work far advanced to completion, when, owing to some error in the estimate, it was suspended, to the most serious detriment of the trade.

In conclusion, we would plead the great interests at stake as our apology for the length and freedom of this letter, and pray his Lordship in Council to accord his favourable consideration to the application we make for renewed and increased facilities in the prosecution of our Khandeish agency; as without such facilities we must of necessity abandon the undertaking, which event would be to a certain extent humiliating to us, to the cotton trade of the province itself a serious blow, and to European merchants a confirmation of the feeling which has hitherto prevailed that the extension of their transactions into the interior would be fraught with extreme risk. As the engagement of a new agent and other arrangements depend upon the decision of Government, we shall hope to be favoured with as early a reply as possible to this letter.

Bombay, 27 March 1852.

We have, &c.
(signed) *Ritchie, Stuart & Co.*

III.
Bombay.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Mr. Bell.

THE arrangements sanctioned in 1850 for enabling the European merchant to make his purchases direct from the ryut were much discussed at the time, and the discussion reported to the Honourable Court under date 17 October 1850, No. 93; 16 April 1851, No. 58; and 18 July 1851, No. 108. As that authority has not noticed in their despatch of 19 November, No. 12, this measure relative to Messrs. Ritchie & Steuart's agency, we may infer that they did not disapprove of what was done consequent on the opinion of the majority.

2. The object of Government in sanctioning the arrangement for a period of two years, was to afford such assistance to the firm as seemed necessary during the initiatory stage of their operations, until their agent would obtain a sufficient acquaintance with the country and people to afford them a fair chance of being able to carry out their object, without extraneous aid.

3. These objects have, by the absconding of their agent, Mr. Constable, and the consequent derangement of the organisation of their establishments, been deferred, so that at the end of the period contemplated by Government as adequate, Messrs. Ritchie, Steuart & Co. find themselves in a position, as regards agency, very little in advance of that in which they were when they undertook the experiment.

4. The additional knowledge of the subject, obtained in the course of these two years, does not lead me to view more lightly the advantage likely to accrue from bringing the European merchant into direct contract with the ryut, and the reasons, therefore, that induced Government at that time to afford a certain amount of credit to Messrs. Ritchie, Steuart & Co. appear to have lost none of their original force.

5. On the contrary, these reasons have acquired increased force from the consideration of the great probability that the relinquishment, by Messrs. Ritchie, Steuart & Co., of their operations in Khandeish would greatly discourage future attempts of the same kind, and possibly defeat for ever the object of bringing the European merchant into the district markets.

6. Under these circumstances, I am of opinion that Government can only now choose between continuing of support to Messrs. Ritchie, Steuart & Co. for a further limited period, and considering the introduction of European agency as unattainable.

7. I would therefore continue for two years more the arrangement previously sanctioned. I cannot consent to the more extended aid requested; even had the conduct of the local agent employed by the firm been in all respects unexceptionable, I should still have hesitated to do so; and, as the case stands, I am of opinion that the proposal to extend the tucavee advances from 18,000 rupees to half a lac must be negatived.

8. As regards Messrs. Ritchie, Steuart & Co.'s proposition to abolish the Government purchasing and ginning operations in Khandeish, it is necessary to bear in mind that unless others than themselves are furnished with gins, this would virtually give the firm a complete monopoly of the purchase of the New Orleans cotton, which, in absence of means of ginning, is almost valueless.

9. Government have already, under date the 27th October 1851, authorised the Collector to cease making purchases of New Orleans cotton, provided Messrs. Ritchie, Steuart & Co. give the per-centage they themselves proposed for the crop in advance of the ruling price of indigenous, and this decision should still hold good.

10. I fully admit, however, the strength of Messrs. Ritchie, Steuart & Co.'s argument, that if Government gin the cotton of other parties at a rate far below the real cost of the operation, it may be impossible for them to obtain cotton for their ginning machinery.

11. If, therefore, the Collector is satisfied that the effect of keeping the Government machinery in action is, as stated by Messrs. Ritchie, Steuart & Co., he may be authorised to stop it as soon as existing engagements are fulfilled; but it seems advisable that Government should, at the same time, maintain an establishment for the manufacture and repair of ginning machinery for any parties desirous of purchasing it.

12. Instructions to the above effect to be issued at once to the Collector, in order that he may act on them, unless he sees any objection, which from the correspondence on our records I do not contemplate.

13. The paras. relative to roads to be transferred to the General Department for consideration, in continuation of transfer made on the Honourable Court's letter, of 19th November 1851, No. 12.

14. Messrs. Ritchie, Steuart & Co. to be informed according to the tenor of this Minute.

7 April 1852.

(signed) Falkland.
A. Bell.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 975

III.
Bombay.

MINUTE by the Honourable Mr. *Warden*.

1. THE letter of the Honourable the Court of Directors, of the 19th November last, enclosing one from a partner in the firm of Messrs. Ritchie, Steuart & Co. to their chairman, betokens, I think, something more than an absence of disapproval of what has been done for the benefit of Khandeish, through the agency of that firm; and I should anticipate their approval, not only of our renewing the engagement with those gentlemen in all its integrity, but, under the untoward circumstances that have attended their early operations through the roguery of their agent, of our sanctioning, under such security as the law officers may consider adequate, the additional advance applied for.

2. I consider the views of Messrs. Ritchie, Steuart & Co. quite sound, as regard Government doing that which should be left to private individuals.

3. Mr. Elphinstone is so very dilatory, that his answer to the reference proposed on the 11th para. of the Minute of the Right Honourable the President should be required within a certain number of days.

4. The real out-turn of commercial transactions conducted at the public expense is never known, and the Government should withdraw from such affairs the moment private enterprise is prepared to take their place, and I think it will be quite sufficient to hold the re-establishment of the public machinery *in terrorem* to prevent any injury to the public by its suspension.

5. The General Department should report progress as regards these "12 miles" of road which, last year, destroyed "hundreds of bullocks."

12 April 1852.

(signed) *John Warden*.

FURTHER MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Mr. *Bell*.

It will be seen that I had to strive hard to get Messrs. Ritchie, Steuart & Co. the support which has been accorded them; it is, therefore, needless to say that I am well inclined to support them, and to put them in as good a position for acquiring local experience as they were in before they employed a dishonest agent.

2. Considering, however, the manner in which our revenue officers, of necessity, became mixed up with the commercial transactions of the agency by advancing money from their treasuries, and the possibility of their being mixed up in cases involving charges preferred by one party against the other, of breach of contract, I regret I cannot consent to afford additional assistance to that already given; by mixing ourselves up with the purchases and loan transactions of the firm to the extent they desire, we shall be meeting with many of the inconveniences and disadvantages likely to arise, and we shall secure none of the benefits certain to result from the continuance of Government agency.

3. We wish to render the Bombay agent independent of the local dealers and of the Government; the latter we shall never do if we take on ourselves responsibility to the extent desired by Messrs. Ritchie, Steuart & Co., and thus do away with the necessity of their own local agents becoming acquainted with the cultivators and the means of those who produce the cotton.

I concur in para. 3 of Mr. Warden's minute; one month may be given Mr. Elphinstone for his report.

14 April 1852.

(signed) *Falkland,
A. Bell*.

(No. 2837 of 1852.)

From Mr. Deputy Secretary *Richardson* to Messrs. *Ritchie, Steuart & Co.*

Gentlemen,

I HAVE been directed to acknowledge the receipt of your letter, dated the 27th ultimo, and to state that the Right Honourable the Governor in Council has been pleased to authorise the continuance for a further period of two years of the arrangement sanctioned in 1850, with regard to the cotton agency established by you in Khandeish.

2. Government regret, however, that they cannot accede to the proposal made by you, that the tucavee advances be extended from 18,000 to half a lac of rupees.

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Bombay.

3. As regards your proposition to abolish the Government purchasing and ginning operations in Khandeish, it is necessary, I am to observe, to bear in mind, that unless others than yourselves are furnished with gins, the measure you advocate would virtually give your firm a complete monopoly of the purchase of the New Orleans cotton, which, in the absence of means of ginning, is almost valueless.

4. Copy of paras. 2 and 3 of my letter of this date on the subject, to the Collector, Khandeish, is annexed for your information.

5. Government have already under date, the 27th October 1851, authorised the Collector of Khandeish to cease making purchases of New Orleans cotton, provided your firm give the per-centage you yourselves proposed for the crop in advance of the ruling price for indigenious cotton, and this decision will still hold good.

6. The subject of roads, adverted to in your last paragraph but one, has been transferred to the General Department for consideration.

I have, &c.

Bombay Castle, 23 April 1852.

(signed) *A. Richardson,*
Deputy Secretary to Government.

(No. 2838 of 1852.)

From Mr Deputy Secretary *Richardson* to the Collector of Khandeish.

Sir,

I HAVE been directed to forward you copy of a letter from Messrs. Ritchie, Steuart & Co. of the 27th ultimo, and of my reply thereto of this date, from which you will learn that Government have authorised the continuance, for a further period of two years, of the arrangement sanctioned in Government letter to your address, No. 4245 of 23d May 1850.

2. His Lordship in Council fully admits the strength of Messrs. Ritchie, Steuart & Co.'s argument, that if Government gin, the cotton of other parties at a rate far below the real cost of the operation, it may be impossible for them to obtain cotton for their ginning, machinery.

3. If, therefore, you are satisfied that the effect of keeping the Government machinery in action is, as stated by Messrs. Ritchie, Steuart & Co., you are authorised to stop it as soon as existing engagements are fulfilled; but it seems advisable that Government should, at the same time, maintain an establishment for the manufacture and repair of ginning machinery for any parties desirous of purchasing it. You are requested to submit your report on the subject within one month from the date of the receipt by you of this communication.

I have, &c.,

(signed) *A. Richardson,*

Bombay Castle, 23 April 1852.

Deputy Secretary to Government.

(No. 2839 of 1852.)

RESOLUTION, 23 April 1852.

Ordered, That an extract, para. 6, of a letter from Messrs. Ritchie, Steuart & Co., dated the 27th ultimo, be transferred to the general department for consideration, in continuation of the resolution of Government, No. 9, dated the 2d January last.

(signed) *A. Richardson,*

Deputy Secretary to Government.

EXTRACT Bombay Revenue Consultations, 29 June 1853.

From the Revenue Commissioner, Northern Division, No. 1278, dated 10 May 1853,
with Enclosures.

SUBMITTED for sanction, but the Revenue Commissioner thinks that if the money is given over to Messrs. Ritchie, Stewart & Co. to distribute, the advantage of summary process of recovery may be lost in case of any ryot disputing the question.

No. 7184.

2. This advantage might be retained by Messrs. Ritchie, Stewart & Co. giving the Collector a list of persons to whom they might wish certain advances to be made, and the Collector acting upon that list.

Revenue Commissioner's Camp,
Mahableschwur, 10 May 1853.

(signed) *E. G. Fawcett*,
Revenue Commissioner,
Northern Division.

(No. 958 of 1853.)

To *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division.

Sir,

IN reply to the Revenue Secretary's letter, No. 3554, dated 31st March 1851, received with Mr. Shaw's endorsement, No. 892, dated 4th April 1851, calling on my predecessor to report whether Messrs. Ritchie, Stewart & Co. have availed themselves of the permission to make advances as tuckavee, and to allow purchase-money to remain for a time outstanding as revenue demands against the ryots contracting with them, I have the honour to forward copy of a letter, dated 8th ultimo, to my address from that firm, from which you will perceive the extent to which Messrs. Ritchie, Stewart & Co. have availed themselves of the permission granted to them by Government to make advances to the ryots.

No. 7185.

2. Messrs. Ritchie, Stewart & Co. state they are unaware of any benefit having been derived, either by the ryots or their agency, by the orders* which have been issued to delay the collection of the revenue from those ryots with whom they have entered into engagements, and there can be none, because in Khandeish the cotton crop is an early one, and ripens and is picked before the commencement of the season, realising the revenue if it were a later one, as in the Southern Mahratta country, where the cotton is not picked till the latter end of March and the beginning of April; such an order would have been a great boon to the ryots, and the agency would have experienced the benefit of it.

3. The remaining portion of Messrs. Ritchie, Stewart & Co.'s letter is taken up with the account of their advances to the ryots; the difficulties they meet with in making the ryots fulfil their engagements, and suggesting that Government should increase the amount of advances, for which I conclude they would be responsible.

4. The Government will, I should think, be satisfied in the manner in which the firm have availed themselves of their liberality, more especially if they knew, as I do, the great difficulties they have to encounter with, in the ryots not fulfilling these engagements, and for which there is practically no remedy. There are numerous instances of ryots taking from them advances, and sowing no cotton at all; others have planted and have made over to the firm only sufficient to repay the amount advanced to them, and those who have fulfilled their engagements, and sold to the firm the whole cotton they have grown, are rather exceptions than otherwise. I had intended to have made a few examples of those individuals who had committed the most flagrant acts of breach of faith, by forbidding them to cultivate any Government land at all next year; but I consulted some of the oldest revenue native officials, and they were of opinion that such measures might produce a very general feeling of disinclination among the ryots to have any further dealings with the firm, and consequently might be seriously detrimental to their interests, and I therefore purpose not interfering in any manner whatever.

5. The benefit to this province from the operations of the firm cannot be too highly estimated, and I am respectfully of opinion that Messrs. Ritchie, Stewart & Co. deserve every encouragement and support the Government can afford them; for by the demand they have created for cotton a very considerable increase of revenue has resulted, estimated for A. D. 1851-52, by my predecessor, at Rs. 84,703. 10. 9.; and moreover, by their being on the spot, they have enabled the great body of the cultivators to get better prices for their produce than they otherwise would from the wanees and sowkars, whose practice it has been hitherto to enter into combination at the commencement of the season, and fix a very

* 1. Collector's circular, No. 92, dated 17th September 1850. 2. Collector's circular, No. 61, dated 12th May 1852.

very low price for cotton, higher than which each individual member of the combination binds himself not to give, and consequently the ryots were at their mercy; this system has now been broken through, and the ryots generally are able to obtain fair prices.

6. Independent of the above benefits to Government and to the people, Messrs. Ritchie, Stewart & Co. are actually attaining the object Government had in view in establishing expensive cotton experiments, in introducing improved machinery for cleaning the native cotton, and producing a superior article in the home market.

7. They are erected in (4) four different localities in Dhurrungaon, Choprah, Zawull, and Bodwur ginning establishments; in Dhurrungaon the gins are worked by a steam-engine obtained from England, and in the other places by bullock power. The machinery of the latter is most suitable, and I have requested to be supplied with a model of that put up at Zawull, which has been in use during the whole season, and has been most effective; all this machinery has been put up under Mr. Laidlaw's superintendence by the common village carpenters and blacksmiths; and I have no doubt that if Messrs. Ritchie, Stewart & Co. continue their establishments for three years longer, these village artisans will have acquired sufficient knowledge of the common machinery to repair it without any other assistance.

8. Besides machinery for cleaning cotton, they have entered cotton presses, which I have seen at work, and are very effective.

9. Taking all these circumstances into consideration, I am respectfully of opinion that Government could not make more advantageous use of their money than advancing a considerable sum, say, a lac of rupees, through Messrs. Ritchie, Stewart & Co., as tucavee, for the purpose of promoting cotton cultivation.

10. The only arguments against such a measure that I am aware of is, that it would be giving the interest on that sum for the eight or nine months it would be in the hands of the ryots, to Messrs. Ritchie, Stewart & Co.; but if Government, by so doing, obtained an additional 20,000 or 30,000 rupees of revenue, which I have no doubt they would do, I should think they would not grudge the firm the benefit of the interest; more especially, if the money is not so laid out, it will be lying idle in the Dhoolia treasury. Moreover, I think the firm are entitled to an indulgence of the kind, for the benefit Government is deriving from their introducing a knowledge of machinery among the cultivators of the revenue.

11. I beg to forward two statements; one of the total quantity of land in cultivation, and the other of the quantity of land cultivated with cotton; from which you will perceive the great increase of cotton cultivation in A.D. 1851-52, when Messrs. Ritchie, Stewart & Co. advanced even a lac of rupees. There is not a great increase in the last year on that of the preceding one, which, considering the large increase of the former year, was not to be expected.

12. You will observe that the cotton cultivation has not increased at the expense of other descriptions of cultivation.

Khandeish,
Collector's Camp, Suptshring,
29 April 1853.

I have, &c.
(signed) S. Mansfield,
Collector.

To Samuel Mansfield, Esq., Collector of Khandeish.

Sir,

We have the honour to acknowledge the receipt of your letter, No. 174 of 1853, dated 19th January, to our Mr. Binney, accompanied by extract of para. 5 of a letter, No. 3554 of 31st March 1851, from Government, in the Territorial Department, Revenue, and requesting any information on the subject-matter that we can give you.

Mr. Binney having lately had the opportunity of personally describing in a general way the objects of the agency established by us in Khandeish, and the system adopted for its working, we need only remark, before passing to the results of our experiments, so far as they have been extended, that we have never been able to ascertain how far the measure sanctioned by Government, of non-collection of revenue demands to the amount of 82,000 rupees from ryots who have made engagements with our agency, until they shall have received payment for their cotton crops, has been put into operation. It has appeared to us from the beginning that it has been no inducement to the ryot, because the cotton crop of Khandeish being the earliest in this Presidency can be gathered and sold before the time of collection of revenue demands from the ryots; and this being the case, we see no advantage to us or to the ryots in any departure from the routine of the revenue system of your Collectorate. On the other hand, the advantage of a direct cast* advance in small sums to individual cultivators, in proportion to the size of their field, at the time of year when they require to pay most attention to their crops, to furnish themselves with seed implements, cattle, and extra manual aid, and have least opportunity of adding to their resources by labour of other description, is an assistance which is much needed, and essential to the maintenance, and much more so to the extension, of the cotton cultivation of the province. Upon the recommendation of Mr. Elphinstone, late Collector, and of the mamlutdar, whom he named to our agent as the best qualified to give him reliable information upon such subjects, we

* S. o.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 979

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were induced to advance during the season 1850-51 (commencing with the month of June, when the fields were sown, and continuing till the month of December, when the cotton arrived at maturity), Rs. 91,458. 5. to no less than 8,399 ryots, as shown in the Table subjoined.

STATEMENT showing the Number of Ryots, Beegas, and Advances Paid in the Year 1851-52.

No.	TALOOKAS.	Number of Ryots.	Number of Beegas.	ADVANCES.		TOTAL.			
				Cash.	Cotton Seed.				
				<i>Rs.</i>	<i>a. p.</i>	<i>Rs.</i>	<i>a. p.</i>	<i>Rs.</i>	<i>a. p.</i>
1	Errundole - -	2,143	18,904	23,752	- -	408	- -	24,160	- -
2	Chopra - -	839	5,524 $\frac{1}{2}$	9,946	8 -	1,256	4 -	11,202	12 -
3	Amulnair - -	1,072	5,961 $\frac{1}{2}$	11,000	- -	-	-	11,000	- -
4	Burgam - -	600	3,233 $\frac{1}{2}$	4,000	- -	-	-	4,000	- -
5	Zawl - -	909	5,440 $\frac{1}{2}$	8,240	12 -	739	15 9	8,980	11 9
6	Dhoolia - -	66	225	340	- -	-	-	340	- -
7	Bornur - -	63	1,559 $\frac{1}{2}$	1,626	- -	-	-	1,626	- -
8	Bodwar - -	831	6,197 $\frac{1}{2}$	9,403	- -	327	9 8	9,730	9 8
9	Jamnair - -	1,149	6,790	11,297	- -	1,167	7 -	12,464	7 -
10	Nusseerabad - -	443	3,186 $\frac{1}{2}$	5,157	8 -	-	-	5,157	8 -
11	Sowda - -	284	1,562	2,814	- -	-	-	2,814	- -
	GRAND TOTAL - -	8,399	58,584 $\frac{1}{2}$	87,558	12 -	3,899	4 5	91,458	- 5

The whole of the above advances having been made without any interest or other stipulation than that the produce of every man's field should be held available to us at the market rate of the day, or in case of our declining to receive the same, that the advances should be repaid, the result was a very large increase of land sown with cotton (according to the returns of cultivation) in those talookas to which our advances were extended, and also, as we were informed, an increase of revenue at the close of the year of upwards of 50,000 rupees.

3. While, however, the results as affecting Government and the ryots were thus plainly advantageous, experience taught us that the risk we ran in dealing out a large sum of money to a large number of individuals without other security than a mere written agreement, and as no system of registration of liens on property exists without the means of ascertaining that a ryot, in pledging to us the produce of his field, will not pledge or has not pledged it to others to whom he may have come under obligation, was greater than could be justified by common prudence, or the object we had in view. It was a hopeless matter to think of pursuing defaulters through the tedious process of civil courts, and we therefore adopted in the following season a less extensive plan of advances, confining them to fewer talookas, and to a less number of ryots. The subjoined statement details the particulars, and shows the reduction made to have been nearly two-thirds.

STATEMENT showing the Number of Ryots, Beegas, and Advances paid in the Year 1852-53.

No.	NAMES of DISTRICTS.	Number of Villages.	Number of Ryots.	Number of Beegas Cultivated.	Amount of Advances.					
					Cash.	Value of Cotton Seed, at 10 Rupees per Candy of 1,600 lbs.	TOTAL.			
					<i>£.</i>	<i>s.</i>	<i>d.</i>	<i>£.</i>	<i>s.</i>	<i>d.</i>
1	Errendole - - -	106	1,049	10,010 $\frac{1}{2}$	12,344	12	-	12,344	12	-
2	Amulnair - - -	31	457	2,984 $\frac{1}{2}$	3,642	-	-	3,642	-	-
3	Chopra - - -	1	3	26	44	-	-	44	-	-
4	Bodwar - - -	31	-	6,378	6,562	-	578 4	7,140	4	-
5	Jamnair - - -	14	-	1,037 $\frac{1}{2}$	1,000	-	256 2	1,256	2	-
6	Zawl - - -	58	-	4,464 $\frac{1}{2}$	6,865	-	698 12	7,563	12	-
	TOTAL - - -	241	1,509	24,901	30,457	12	1,533 2	31,990	14	-

III.
Bombay.

4. As we have had occasion to address you, under date the 16th ultimo, with copy of the above statement with reference to the non-performance of contract on the part of many of the recipients of our advances, the investigation you consequently made will have probably, ere now, fully confirmed our above remarks as to the difficulty and insecurity of our position in advancing money on the system hitherto adopted.

5. At the same time it is quite apparent that to keep up cultivation to the present extent, and still more to encourage a progressive ratio, money and seed must be advanced in proper season, and more liberally than during the last monsoon. We beg then, respectfully to submit for your consideration, the proposal that Government should be moved to increase the amount of its advances through us. Its security in Khandeish would be undoubted, because recoverable before all other claims (a security which cannot be extended to any advances of our own); and its working, when distributed in small sums by us to hundreds of the most needy of men, much more efficacious, we venture to say, than the system adopted by Government in the Southern Mahratta country of paying, 12 months in advance, the entire purchase-money to a sowcar or dealer for a given quantity of cotton, without any provision that the same shall be judiciously applied to the assistance of the cultivators.

Trusting that in the above you will find the information you desire,

Bombay, 8 March 1853.

We have, &c.
(signed) *Ritchie, Stewart & Co.*

STATEMENT showing the Extent of Land Cultivated within the Province of Khandeish, for the Years from 1847-48 to 1852-53, inclusive.

Y E A R S.	Extent of Land Cultivated, in		R E M A R K S.
	<i>Beegas.</i>	<i>Punds.</i>	
1847-48 - - -	14,56,024	3 $\frac{1}{2}$	
1848-49 - - -	14,02,758	12 $\frac{1}{2}$	
1849-50 - - -	13,64,050	18 $\frac{1}{2}$	
1850-51 - - -	13,56,808	15 $\frac{1}{2}$	
1851-52 - - -	14,36,035	9 $\frac{1}{2}$	
1852-53 - - -	* 14,99,120	15 $\frac{1}{2}$	* This is an estimate, as I have not received correct returns from the mamlutdar yet.

Khandeish, Collector's Camp,
Suptshring, April 1853.

(signed) *S. Mansfield,*
Collector.

STATEMENT showing the Extent of Land Cultivated with Cotton within the Province of Khandeish, for the Years from 1847-48 to 1852-53, inclusive.

Y E A R S.	Extent of Land Cultivated with Cotton, in		R E M A R K S.
	<i>Beegas.</i>	<i>Punds.</i>	
1847-48 - - -	1,73,827	10 $\frac{1}{2}$	
1848-49 - - -	1,49,424	6 $\frac{1}{2}$	
1849-50 - - -	1,34,637	10 $\frac{1}{2}$	
1850-51 - - -	1,53,865	5 $\frac{1}{2}$	
1851-52 - - -	2,39,430	3 $\frac{1}{2}$	
1852-53 - - -	2,41,704	12	

Khandeish, Collector's Camp,
Suptshring, April 1853.

(signed) *S. Mansfield,*
Collector.

From the Revenue Commissioner, Northern Division, No. 1338, dated 14 May 1853,
with Enclosures.

No. 7186.

SUBMITTED with reference to Revenue Commissioner's memorandum, No. 1278 of the
10th instant.

Revenue Commissioner's Camp,
Mahableshwur, 14 May 1853.

(signed) *E. G. Fawcett,*
Revenue Commissioner, N. D.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 981.

(No. 1089 of 1853.)

TRUE copy forwarded to the Revenue Commissioner, Northern Division, for the information of Government with reference to the concluding part of the third paragraph of my letter, No. 958, dated the 29th ultimo.

Khandeish Collector's Camp,
Suptshring, 10 May 1853.

(signed) S. Mansfield,
Collector.

III.
Bombay.
No. 7187.

To Samuel Mansfield, Esq., Collector of Khandeish.

Sir,

WE have the honour to acknowledge the receipt of your letter, No. 998 of 1853, dated 2d May, accompanied by copy of your letter, No. 958 of 1853, to the Revenue Commissioner, requesting to be informed, with reference to para. 9 of the latter, if we are willing to become responsible if Government shall sanction a lac of rupees to be advanced through us as tuccavee for the growth of cotton.

In reply we beg to state that we are prepared to enter into the usual form of bond for a lac of rupees in place of the smaller sum of 18,000 rupees, the amount which has hitherto been advanced through us to the ryots by Government.

Bombay, 6 May 1853.

We have, &c.
(signed) Ritchie, Stewart & Co.

RESOLUTION.

THE reasons of Government for allowing for a period of two years, so unusual an arrangement as advances to the firm being made as Government tuccavee, were detailed in their letter of 23d May 1850; No. 4245, to the address of the Collector; and in 1852 they consented to extend the system for a further period of two years, in consequence of Messrs. Ritchie, Stewart & Co.'s plans having been deranged by the fraudulent conduct of their agent, Mr. Constable.

No. 7188.

2. Government cannot now consent to increase the amount of their advances as proposed in these papers, although fully aware of the advantages which result to the country from the operations of Messrs. Ritchie, Stewart, & Co., and from bringing a firm of such high name and resources in direct contact with the ryots.

3. If Messrs. Ritchie, Stewart, & Co. will suggest any amendments in the laws as regards registry or mortgage, which will give European houses security against fraudulent practices on the part of persons to whom they may advance money, Government will be happy to take their suggestions into immediate consideration.

4. It is possible the provisions of the law regarding indigo advances in Bengal may be suggestive of some arrangement.

5. As regards the observations at close of Messrs. Ritchie, Stewart & Co.'s letter, dated 8th March 1853, they should be informed that the further operations of Government in the Southern Mahratta country have ceased, and that they have directed the institution of most searching inquiries by the Revenue Commissioner, Southern Division, with a view of ascertaining whether the abuse they indicate did ever exist; Government cannot but think they are mistaken in supposing that it did.

(signed) Falkland,
D. A. Blane.

(No. 3454 of 1853.)

To the Revenue Commissioner, Northern Division, the Revenue Commissioner, Southern Division, being informed.

No. 7189.

13 June 1853.

(signed) A. Richardson,
Deputy Secretary to Government.

EXTRACT Bombay Revenue Consultations, 26 October 1853.

From the Revenue Commissioner, Southern Division (No. 2521); dated 30 September 1853, with Accompaniment.

No. 13,710.

FORWARDED for the information of Government, with reference to their Resolution dated the 13th June last, No. 3454.

2. The Collector of Belgaum, in his reply, dated as per margin, states, "The only instance of the kind (alluded to by Messrs. Ritchie, Stewart & Co.) in these districts which is No. 509, of 9th July. No. 712, of within 26th Sept.

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• Is appended.

within my knowledge, is that to which the accompanying agreement* of Chenmallapa Cin Sidlingapa Walsung, of Kittoor, with Mr. Blount, relates. This agreement, dated 7th April 1852, acknowledges the receipt of an advance of half the cost of 100 candies of cotton, to be delivered in November and December 1852. This agreement not having been fulfilled, is the subject of a suit in the Dharwar Adawlut, under the instructions conveyed in Mr. Secretary Goldsmid's letter, No. 1563, of 12th March 1853." He cannot, he adds, discover any other similar cases.

(signed) *W. Courtney,*
Revenue Commissioner, S. D.
Poona, Revenue Commissioner's Office,
30 September 1853.

(No. 1259 of 1853.)

To *W. Courtney, Esq.,* Revenue Commissioner, Southern Division.

No. 13,711.

Sir,

I HAVE the honour to acknowledge the receipt of your Memorandum, No. 1557, dated the 16th June last, on a Government Resolution, dated the 13th idem, No. 3454, calling for information as to the manner in which advances for cotton purchased on account of Government, have been made in this collectorate.

2. In reply, I beg to state that, previous to 1851, advances of only half the amount engaged for by the dealers were made, in the months of February, March, and April, and the cotton received as soon as possible after the rains. There would have been no advantage in receiving it sooner, as it could not have been despatched during the monsoon, and to have done so would have entailed the necessity of hiring or building warehouses to store it at every gin station.

3. In 1851, except in one instance, that of the first purchase, full advances were made; but I can find nothing on record as to the reasons for this measure, nor have I any recollection of Mr. Blount having consulted me on the subject. It appears, however, from the inquiries I have made, that the dealers positively refused to enter into agreements for the sale of cotton at the price the Superintendent had fixed, viz., 88 rupees per candy, unless advances in full were made. For half advances they demanded 92 rupees, which Mr. Blount considered it inexpedient to give. The ruling market price at the time was about 100 rupees; and as the bargains were made later than usual, viz. in May and June, owing to Mr. Blount having gone to Bombay on the 17th February, from whence he returned on the 6th April, the dealers probably thought that there was a chance of high prices being maintained till after the rains, which may have rendered them unwilling to close with the offers made to them, unless on more advantageous terms than usual. Some of them, indeed, now state that their chief reason for demanding advances in full was that they were afraid that otherwise, in case there should be a great fall of prices, the Superintendent might throw part of the cotton on their hands, on the pretext that it was inferior to the samples.

4. Mr. Blount began to receive the cotton thus agreed for in November 1851, and completed the operation by the end of February 1852. In addition, 33 candies were advanced for in full at 88 rupees per candy, in August, and received in December 1852.

5. In 1852 advances to the dealers were made in full, during the months of March and April, at the price of 72 rupees per candy. The dealers would, no doubt, have held out against offers of half advances; there was a great chance of a considerable rise of prices, which, in fact, did take place some months after; and Mr. Blount was anxious to complete the purchases before his departure for Bombay, on duty. These, I presume, were his motives for adopting the same terms as in the previous year. For my own part, I was under the impression until now that full advances had always been made.

6. Mr. Blount began to receive this cotton in October, and had finished doing so by December 1852; so that in no case had a longer period than seven or eight months elapsed after the payment of advances.

7. In order to prevent the advances from being made a mere convenience, a clause was inserted in the agreements, both of 1851 and 1862, to the effect that in case of the cotton bargained for, or any part of it, being rejected, the said advances were to be repaid, with interest at 12 per cent.; a condition which has been enforced in five instances this year.

8. It has never been usual to make stipulations that advances to the dealers should be applied to the assistance of the ryots. Any such general condition would have been unnecessary, as the dealers are in the habit of making advances of various rates, which I presume they find to be for their own advantage. At the same time it is very unlikely that they would have consented to any specific terms on this head, as that they should make advances at certain rate, or pay the ryots a price to be fixed by the Superintendent.

9. The true interest of the cultivators is, if they can possibly dispense with them, not to receive advances at all, but to keep the cotton in their own hands, so as to take advantage of any rise of prices that may occur. Many of the more substantial ryots already do this; and, under the present system of revenue instalments, there seems to be no great necessity for any but the poorest to receive advances.

10. I would

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 983

10. I would beg, in conclusion, to explain, that the Superintendent was not in a position to dictate his own terms during the last two years, as the dealers knew that if he did not take it, they would have no difficulty in disposing of their New Orleans cotton with advantage at Coompta, which has lately become more than ever the emporium of the cotton trade of this part of India.

Dharwar, Collector's Office,
31 August 1853.

I have, &c.
(signed) *J. S. Law*,
Collector.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue,
dated 31 August 1854.

V. 7979 to 82

(No. 2374 of 1854.)

From the Acting Revenue Commissioner, Southern Division, to the Officiating
Chief Secretary to Government.

SUBMITTED and respectfully recommended for the early sanction of Government. As proposed at the end of Mr. Brice's letter, a value will be put on the machinery, with a view to its sale to that gentleman.

V. 7979.

Poona, Revenue Commissioner's Office,
28 July 1854.

(signed) *H. W. Reeves*,
Acting Revenue Commissioner,
Southern Division.

(No. 1307 of 1854.)

From *J. N. Rose*, Esq., Acting Collector of Dharwar, to *H. W. Reeves*, Esq.,
Acting Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour of forwarding original letters from Mr. Frost, the engineer, for the cotton experiments in this collectorate, and Mr. Brice, of the firm of Messrs. Brice & Co., of Cochin.

V. 7980.

2. Mr. Brice is about to enter upon speculations in cotton in this collectorate, and, for reasons stated in his letter, he applies for the use of part of the machinery which, as stated by Mr. Frost, has been lying unused at Kumutghee for years. Mr. Frost strongly recommends that Mr. Brice's application be complied with; and I give my unqualified support to that recommendation.

3. Mr. Brice appears to be a gentleman of great intelligence, and to be a calm, cautious, prudent speculator. His establishment in this collectorate would, I am respectfully of opinion, be of great advantage to it.

Dharwar Collector's Office,
21 July 1854.

I have, &c.
(signed) *J. N. Rose*,
Acting Collector.

(No. 78 of 1854.)

To *J. N. Rose*, Esq., Acting Collector of Dharwar.

Sir,

I HAVE the honour to transmit you a letter in original from *A. C. Brice*, Esq., respecting a bullock-power machine for working cotton saw-gins of a large size. Mr. Brice has ordered from my factory three of the largest (of 40 saws each), and eight gins of a smaller size; he has endeavoured to provide himself with machinery for working these gins from the gun-carriage manufactory in Bombay; but owing to the press of work there, they are unable to meet his wants; he has therefore submitted an application for the machinery now lying idle at Kumutghee, and which has never been put up or used since it was brought to this country many years ago; and as the Government have decided on not purchasing further consignments of cotton on their own account, it is not probable this machinery will ever be brought to use otherwise than by the sale or loan of it to mercantile men. The machinery would, in my opinion, be kept better together and in good working order by its being put up and in use; and considering that Mr. Brice is anxious to enter largely in the cotton trade of this district, and that his offer is a most liberal one, I would respectfully beg to recommend that he be allowed to remove and put up the machinery at his own expense for at least twelve months, free of charges for the use of the same. At the expiration of that time I would suggest that he be allowed to either hire or purchase it at a fair value. It would prove of better advantage to the interest of Government and the benefit of the cotton experiments in the Southern Maratha country to encourage the *entrée* of respectable merchants into the cotton trade here than to put up or use the machinery at Government expense; I should therefore again recommend Government encouragement by granting the request of Mr. Brice.

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2 Connected

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Bombay.

2. Connected with this bullock-power machinery there are eight 25 saw-gins that were made up in England; but these gins are of no service whatever in their present condition for the cleaning of the cotton of this country. The grates being put too wide apart, which admits of the seed passing with the cotton ginned, I would beg permission to have these gins brought into my workshop here, and put in thorough order to be worked by manual labour, which might be done at a small cost, and they will, I doubt not, meet with a ready sale.

3. Mr. Brice provides himself with gins of a larger size from my factory at a separate cost, to be worked by the machinery under reference.

Dharwar Cotton Experiments,
21 July 1854.

I have, &c.
(signed) *H. Frost,*
Engineer, Cotton Experiments,
Southern Maratha Country.

H. T. Frost, Esq., Superintendent Cotton Experiments, Dharwar.

Sir,

My agent in Bombay advises me that the superintendent of the gun-carriage factory there has declined, on account of the press of Government work, to undertake to make the cattle-power machinery I wrote for, with the view of driving the saw-gins you have in hand for me. As you express yourself unable to manufacture it without suspending work on gins ordered by others, my intention of experimenting in cleaning cotton on a larger scale than has been hitherto attempted in this district, must fall through, and the gins prove useless unless I can be allowed the use for twelve months of parts of some Government machinery that, I hear, has been lying idle for several years in some out of the way place. Mr. Ormiston, acting in my behalf, saw Mr. Inverarity in Belgaum with reference to this machinery, and was assured by him that the undertaking was so well worth encouraging on public grounds, that so far as he was concerned he would have willingly transferred the whole free of charge to any one who would remove it to a suitable locality, and employ it for the purpose Government had in view in getting it out. Nothing strikes one so forcibly as the very inefficient means at present available for the making the extensive production of cotton quickly merchantable. I estimate that it employs 45,000 people for three entire months to free the exported produce of this district from seed, and as so large an amount of labour cannot be diverted at crop time of cotton, and other articles, the kuppas must necessarily be stored to its infinite detriment, and cleaned when labour can be had. The ryot can derive but an indirect and almost inappreciable benefit from a year of high prices in England, because but a mere fraction of his crop can reach there within twelve months, and before a reaction in value has occurred; so that he competes with American on an average of low prices, and never enjoys the benefit of high ones; all advantages from the latter are derived by the sowcar, who buys the kuppas at crop time at about the cost of production, irrespective of the current rate for the staple in England, and without data for anticipating either an advance or decline there; having no means of cleaning his kupas, the ryot is confined to a local market and a limited circle of buyers, who make it their business to clean it; while in its merchantable shape it would be both easily transportable and saleable to a new class of buyers. I am aware that you are doing your utmost to introduce hand-power gins, but though the work has been in hand for some time now, the amount of labour saved by them all does not equal that of 5,000 persons; each cattle machine represents the power of 60 persons as compared with hand-gins, and of 190 persons as compared with the foot-roller. What I propose experimentalizing with in one village requires to be put up in 50, and if I succeed in erecting one during my present visit, I may be induced to return and do my share towards putting the 50 into operation.

Should I be allowed the use of the requisite machinery you have in charge, I should desire that a valuation be now put on it, at which, at the end of the time I am permitted to employ it, I might have the option of purchase.

Dharwar, 18 July 1854.

I have, &c.
(signed) *A. C. Brice.*

V. 7981.

RESOLUTION on a memorandum from the Acting Revenue Commissioner, Southern Division, No. 2374, dated 26th July 1854, submitting with his recommendation a letter from the Collector of Dharwar, dated the 21st idem, with enclosures, relative to an application from Mr. Brice, of the firm of Messrs. Brice & Co. of Cochin, to be allowed the use of the cotton gins, &c. "Kamutghee," in that collectorate.

14 August 1854.

Authorised.

(signed) *C. E. F. Tytler,*
Officiating Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 985

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 20 December 1854—V. 11059 to 62.

V. 11059.

ENDORSEMENT from the Acting Revenue Commissioner, Southern Division, No. 3211, dated 9th October 1854.

Poona, Revenue Commissioner's Office,
9 October 1854.

(signed) *H. W. Reeves,*
Acting Revenue Commissioner,
Southern Division.

(No. 1778 of 1854.)

From *J. N. Rose*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Acting Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour of forwarding a copy of a letter from Mr. Brice, of the firm of Messrs. Brice & Co., applying for the services of Mr. Carvalho, an apprentice in the saw-gin factory attached to the cotton experimental establishment, to assist him in the removal of machinery from Kamutghee, &c.

V. 11060.

2. Mr. Frost, the engineer in charge of the cotton experimental establishment, has reported* that the services of Mr. Carvalho can be spared without inconvenience, and, under the circumstances explained by Mr. Brice, I have taken the liberty of placing the services of Mr. Carvalho at his disposal for the time specified by him, subject to the sanction of Government.

Dharwar Collector's Office,
3 October 1854.

I have, &c.
(signed) *J. N. Rose,*
Collector.

J. N. Rose, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to represent that an appointment offering prospects of early advancement having presented itself to my Assistant, I have felt it my duty to interpose no obstacles to his immediately entering on his new occupations, which was one of the conditions of the offer, and I am hereby placed under the necessity of soliciting that the services of Mr. Carvalho of the saw-gin factory may be allowed me for a month or six weeks, to attend to the removal of the machinery from Kumutghee to Bunkapoor, the preparation for building there, and the ginning and screwing of the cotton purchased in two or three parts of this district. I am about to proceed to Bombay to engage another assistant, and if during my absence my arrangements for making use of the machinery were to remain in abeyance, I shall inevitably lose next crop season. I shall be happy to remunerate Mr. Carvalho during the time that the factory loses his services.

Dharwar, 2 October 1854.

I have, &c.
(signed) *A. C. Brice*

(No. 40 of 1854.)

MEMORANDUM.

MR. FROST begs to inform the collector that the services of Mr. Carvalho can be spared to Mr. Brice for the period required, without any inconvenience to the cotton experimental establishments.

Dharwar, 3 October 1854.

(signed) *H. Frost,*
Engineer, Cotton Experiments,
Southern Mahratta Country.

RESOLUTION on an endorsement from the Acting Revenue Commissioner, Southern Division, No. 3211, dated 9th October 1854, submitting a letter with accompaniment from the Collector of Dharwar, requesting sanction to his having placed the services of Mr. Carvalho, an apprentice in the saw-gin factory, at the disposal of Messrs. Brice & Co., for a month or six weeks.

V. 11061

Proceedings of the Collector approved.

(signed) *C. E. F. Tytler,*
Officiating Secretary to Government.

* See copy of his memorandum subjoined to Mr. Brice's application.

(No. 55, dated 2 June 1854.)

EXTRACT, para. 2, of a Letter from Mr. *H. Frost*.

I WOULD here beg leave to suggest certain arrangements that occur to me which may be made on my departure, and, in the first place, I would state that there is no necessity for the employment of a new engineer as my successor. The apprentices that are being trained under me will suffice; Mr. C. M. Courpalais and Mr. J. Carvalho, two of the first appointed apprentices, and whose apprenticeships will expire next November, are efficient hands. They have constructed several gins of different sizes, and are practically acquainted with their work. I would propose to divide my duties between them, the first to get charge of the gins in the Hoobly, Dummul and Nowlgoond talookas; and the other of those in the Bunkapoor and Raneebednoor talookas. The appointment of two to manage my duties arises from the work daily increasing, and it will be too much for one to attend to. The number of gins in the Dharwar Collectorate is near upon 300, and the occasional repairing of these gins, and others that will follow, will afford a large field for employment; and I feel no hesitation to say that the above-mentioned young men will manage the business in the factory and in the districts most satisfactorily, and the more especially as the native establishment is composed of men who have been under me for the last seven years nearly, and understand their business perfectly.

EXTRACT, para. 2, of a Letter from the Acting Collector of Dharwar, No. 939,
dated 2 June 1854.

Para. 2. I WILL report my opinion of the arrangements proposed by Mr. Frost in the 2d para. of his letter, when I have made myself acquainted in some measure with the working of the establishment over which he presides.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 16 October 1854.—V. 9832 to 37.

(No. 2709 of 1854.)

From the Acting Revenue Commissioner, Southern Division, to Mr. Officiating Chief
Secretary *Goldsmid*.

Sir,

V. 9832.

WITH reference to the 2d para. of the letter from the Acting Collector of Dharwar, submitted from this office, under date the 8th June last, No. 1813, I have the honour to forward, for the early orders of Government, another communication from that officer, dated 9th instant, No. 1416, with its enclosures, relative to a proposal from one Mr. Brice, a merchant of Cochin, for the transfer to him of the cotton experiments in the Southern Mahratta country, under certain conditions.

2. The objects combined in this proposal are fully stated in Mr. Brice's letter to Mr. Rose, dated 1st instant, and may be summarised as follows:—

1st. To provide for the future efficient superintendence of the saw-gin factory, and the machines in the district;

2d. To improve the quality of the different kinds of cotton grown;

3d. To improve the saw-gin by the introduction of cattle-power, and to erect half-screw presses in central and suitable spots in the cotton-growing tracts;

4th. To introduce a better sort of cart for the carriage of cotton;

5th. To establish full screw-presses on the sea coast; and

6th. To open up a direct cotton trade between England and the Southern Mahratta country.

3. To enable him to undertake the task of working out these objects, Mr. Brice requests that,—

1st. He may have for a period of four years the free use of the gin factory at Dharwar, together with the tools in hand; and that he may be put in charge of the press-house and presses at Hooblee.

2d. That the monthly salary and allowances at present paid to Mr. Frost and his establishment (exclusive of mechanics) this last year, viz., 754 rupees, be granted him for the four years, to furnish the funds for premiums to be drawn by him as he advances in the fulfilment of certain definite engagements, which are as follow:—

1st. To erect and work for hire in any two important towns in both the Dharwar and adjoining districts, in each year, a set of cattle-power gins and half-screw presses.

2d. To employ in each year 20 new carts of an improved make.

3d. To

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3d. To erect and work for hire at a port on the coast accessible to large ships, iron presses, such as are in use in Bombay.

4th. To make the first direct shipment to England within 18 months.

5th. To supply (during the four years) the public with saw-gins, as Mr. Frost at present does, at the cost of construction, and to keep the same in repair for 12 months without additional charge; and,

6th. To repair at the expense of Government such machines as may have been sold liable to be kept in repair, or that these repairs be set against his right of charging on such goods as may be pressed at the Hooblee half-screws (of which he proposes to be allowed the use), a rate similar to that which he will work his own presses for, and which will, of course, include something for wear and tear.

4. Supposing Mr. Brice to be a fit person, the advantages that will be derived by Government by these proposals may be said to be—

1st. The securing of an efficient and personally interested superintendent for the gin manufactory and the growth and improvement of cotton, in place of Mr. Frost, who is on the point of retiring.

2d. The launching of the cotton experiments upon a trial which will satisfy the mercantile public, and at the same time enable Government to withdraw from them.

5. These proposals seem to me to comprise all that Government has ever desired to accomplish, and the engagements which Mr. Brice binds himself to appear well suited to the purpose of carrying them out.

6. I beg to express my concurrence in the opinion recorded by Mr. Rose in his 2d and 3d paras., that the young men to whom Mr. Frost proposes to entrust the gin factory are quite unfit for so important a charge; while, on the other hand, if Mr. Brice really is a fit and trustworthy man, and does what he proposes, his services will be cheaply purchased at a premium of 36,000 rupees.

7. From a demi-official note received from Mr. Rose, which, with its enclosure, is also herewith submitted, it will be seen that that officer speaks in high terms of Mr. Brice, and that he entertains hopes of great results from his speculations in the Southern Marathia country.

8. The chief points for consideration are, is Mr. Brice what Mr. Rose believes him to be, and can Government trust him with so large a portion of the public interests? The inquiries which I have made in Bombay do not induce me to look upon Mr. Brice as a person of very extensive mercantile business, indeed his proposed speculation would of itself lead to an opposite supposition. But regarding that gentleman purely as a speculator, we may, nevertheless, entertain his offers, provided they are on the whole fair, and do not disable Government, by failure on his part, from resuming those duties to the public which it is proposed to make over to him.

9. That there must be some risk in any case of this sort, there can be no dispute, and the question therefore may be said to be, whether the risk in this case is more than what may fairly be incurred on the part of Government? Should Government continue the experiment on its present footing, they will have to keep in regular pay a well-qualified professional superintendent and his establishment, and maintain all the attendant expenses, under any circumstances; by entertaining Mr. Brice's proposals, they will be called upon to pay a superintendent of whom they know nothing, and who is, moreover, an unprofessional one; but the other expenses will cease. Hitherto the superintendent and his establishment have been paid monthly, but these it is now proposed to pay yearly, and, if necessary, even still less frequently, and so far, therefore, the arrangements may be regarded as fairly balanced between the contracting parties, for the payment of Mr. Brice's receipts in arrears must be considered as a very good guarantee for the fulfilment of his engagements.

10. The trust reposed in Mr. Brice's hands by the delivery to him of the valuable machinery may be considered safe, in so far as the machinery and his operations will be watched by the collector and his establishment; and as Mr. Brice is himself actually interested in keeping the machinery in an efficient state, his own speculations and his engagements bringing him also so publicly forward, it is scarcely possible for any failure on his part to occur without immediate discovery. Failure in the machinery would prevent his carrying out his engagements, as well as spoil his own speculations.

11. But one year's experiment would, if successful, very much remove the risk under this head; while, on the other hand, one year's failure would not leave Government in a much worse state than they now are, if it were stipulated that no portion of the premium will be paid until the machinery, tools, houses, &c., be declared by a committee to be in an efficient condition. To enable Government then to resume their duties in the machinery department in an efficient manner, in the event of Mr. Brice's failure at any time during the four years, it appears to me advisable to call upon him to engage in a legal manner, *i. e.* to give security to deliver up the machinery and houses, &c. (as per list signed by him as receipt, in giving him charge) to Government in an efficient condition, and in the same state as they are when placed in his hands, or pay the full value* of them. Further, I would suggest that

*. Which should be specified in the list or receipt.

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the yearly portion of the premium should be paid only after a full report of the progress made by collector in the completion of the arrangements, and under the special sanction of Government.

12. If Mr. Brice consents to these additions to the contract which he has proposed, I do not see that Government will incur any risk which the wants of the British manufacturing public and the extension of the cotton cultivation do not clearly warrant; and I would accordingly recommend that Mr. Rose be authorised to close with his proposals at once.

I have, &c.

(signed) *Henry W. Reeves,*

Acting Revenue Commissioner, Southern Division.

Poona, Revenue Commissioner's Office,
29 August 1854.

(No 141 6 of 1854.)

The Revenue Commissioner, Southern Division, Poona.

Sir,

V. 9833.

WITH reference to my letter (No. 939) of the 2d of last June, forwarding an application from Mr. Frost, engineer, attached to the cotton experiments in this collectorate, for permission to resign his appointment at the end of next January, in which I promised to report my opinion of the arrangements proposed by him, when I had made myself in some measure acquainted with the working of the establishment over which he presides, I have now the honour of submitting the promised report, together with a statement of the arrangements I would propose with regard to Mr. Frost's establishment in connexion with the extension and improvement of cotton cultivation.

2. Mr. Frost proposes to place his two apprentices, Mr. Courpalais and Mr. Carvalho, whose apprenticeship will expire next November, at the head of his establishment. I have no wish to disparage the characters of these young men, who are reported by Mr. Frost to be efficient mechanics; but they are connected by birth and parentage with this station, the former being a son of the deputy accountant of the collector's office, and the latter a son of the apothecary employed under the civil surgeon; whereas it is desirable that persons entrusted with the duties now conducted by Mr. Frost be free from local associations and attractions; and their youth and present position as apprentices are fatal objections to their being raised at one step to the head of the very establishment in which they have been educated. Such sudden elevation would, under any circumstances, be dangerous to the equanimity of such very young men, and it would render it difficult for them to acquire due influence over the artificers and workmen with whom hitherto they have been intimately associated.

3. Moreover, destitute as they must be of experience, it could not be expected that they should originate improvements in the machinery now employed, in which there would appear to be room for improvement, for the saw-gins now constructed here are adapted only to American cotton, and do not suit the native staple. To trust the management of the engineer establishment to such totally inexperienced machinists would be nearly tantamount to binding ourselves to abide by the last improvement, and to shutting out hope of further progress.

4. The Superintendent of Cotton Experiments having resigned his office, and no one having been appointed to fill it, I imagine Mr. Frost's successor would be required to direct his attention to the cultivation and preparation of cotton, a subject which should not be lost sight of; and I may add, that the circumstances of their position, which would render it difficult for the young men recommended by Mr. Frost to obtain proper influence and control over the mechanics in the workshop, would have the same depressing effect on their endeavours to direct the operations of the ryots in cultivating and preparing cotton for the market.

5. I cannot, therefore, recommend the adoption of the arrangement proposed by Mr. Frost.

6. The efficient superintendence of experiments in cotton requires a knowledge of the qualities of cotton fibre, and intimate correspondence with brokers, perhaps even with spinners, in England, in order to ascertain and to remedy such defects of quality or of preparations as unfit it for export, or deteriorate its value. Difficult as it is to obtain the services of a skilful and otherwise eligible engineer, and of an efficient superintendent of experiments, each in his separate capacity, it would be much more difficult to obtain a combination of the qualities required for both offices in the same individual. For this reason, I am opposed to the system upon which the cotton experiments are at present conducted; but instead of proposing any modification of it, I have to lay before you a proposal made to me by Messrs. Brice & Co., of Cochin and Coompta, which appears to me not only to embrace all the objects aimed at by Government in establishing an experimental agency, but to go further, and to promise advantages which are only to be gained by extensive operations, planned and executed by men of experience, and home connexion, whose
intellects,

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intellects, accustomed to exercise in that direction, are sharpened and strengthened by deep personal interest, while their judgments and energies are tempered by grave risk and responsibility, and who know that they must regard good faith and liberal dealing as part of their stock in trade, if they should have no higher inducement to practise them.

7. Mr. Brice has stated his proposal so fully, that it is unnecessary to lengthen this letter by entering into its details, but I will submit a few explanatory remarks which occur to me.

8. The charges for the cotton experiments for 11 years, commencing with 1843-44, amount to 1,74,652 rupees. Mr. Brice has stated them in round numbers at 1,75,000 rupees.

9. In the 8th para. of his letter, Mr. Brice proposes that he be allowed, for four years, the annual cost of the present establishment, exclusive of salaries paid to mechanics; I have ascertained from Mr. Brice, in conversation, that it is not his intention to discharge the mechanics employed and trained in the Government factory, but that he would require their services, and be willing to secure them at a fair rate of remuneration.

10. He suggests that he be allowed four years' annual cost of the present establishment, as premium to be drawn by him as he progresses in fulfilling certain engagements which he details.

11. In further explanation of this suggestion, I have to state that the present cost per mensem of Mr. Frost's establishment, exclusive of mechanics, is as follows:—

		Rs.	a.	p.
Mr. Frost's Salary	- - - - -	650	-	-
One Writer	- - - - -	25	-	-
Six Peons	- - - - -	24	-	-
Vacant :		639	-	-
One Writer	- - - - - Rs. 35			
Two Mukudums	- - - - - 20			
		55	-	-
		Rs. 754	-	-

(Mechanics, Rs. 351.)

12. Mr. Brice would, therefore, have to receive 36,192 rupees, being four times the amount of annual cost, and he would expect to be paid 2,262 rupees on the erection, in this district, of each of eight sets of cattle power gins, with half-screw presses, being half the full amount of premium on the erection of eight complete sets of gins; Rs. 1,809. 9. 7. on the erection of each of the first five iron presses he may erect at a port on the coast, or one-fourth of the full premium on the erection of five iron presses, and payment of the remaining fourth, (9,048 rupees) on shipment of 1,000 bales of cotton at that port, direct to England.

13. As a guarantee that Messrs. Brice & Co. shall not withdraw from the engagement which they now propose to enter into before it has been completed, I would stipulate that it shall be optional with Government to make payments as immediately above detailed, without regard to time, or to distribute the total amount to be paid, in four equal portions, over the four years of contract. It would be for Government to decide, when the occasion arose, whether they would encourage the speedy erection of machinery, and the speedy attainment of the ulterior objects of effectually cleaning, and packing, and shipping cotton, at a port of easy access to the district in which that cotton is produced, by making payments as the erection of that machinery progressed, or whether it would be more expedient to limit payments, as above suggested, in guarantee for the continuance, for four years, of the manufacture of gins and superintendence of cotton cultivation.

14. I would beg leave to attract your particular attention to the 13th para. of Mr. Brice's letter, especially to the arrangements he proposes with a view to the prevention of false packing, the admixture of sand and dirt, and the damping of the staple. A late decision of the Session Judge, confirmed by the Sudder Foujdaree Udalt, of which a copy is appended to this letter, renders almost void the provisions of Reg. III. of 1829. I do not question the correctness of the decision, which may be strictly legal, but if to tell an intending purchaser that he might take adulterated and damaged cotton do not constitute offering for sale within the meaning of the regulation, and if the bare fact of cotton so offered, being mixed with sand and dirt, be not sufficient to implicate the owners or offerers in fraud, it would be extremely difficult to obtain evidence sufficient to convict them, and they might easily escape the penalties of the law under the plea of credulity, or negligence, or errors of judgment on the part of their servants. The preventives suggested by Mr. Brice certainly would have a much better effect in checking frauds on the part of cotton merchants than the penalties of the law encumbered by legal niceties, and in the difficulty of procuring evidence sufficient for legal conviction it is very desirable that we should resort to other means for checking fraud, and protecting trade.

15. In conclusion, I would respectfully urge the immediate consideration of the proposal now submitted, and a speedy decision upon it, in order that the ensuing season may not be lost to Messrs. Brice & Co. I need not remind you that in a speculation of this kind, loss of

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of time is loss of money, and that if a decision cannot be obtained in time to enable them to take advantage of the approaching season, it would be better for them to exert their means and energies in some other direction.

Dharwar Collector's Office,
9 August 1854.

I have, &c.
(signed) *J. N. Rose*,
Acting Collector.

J. N. Rose, Esq., Acting Collector of Dharwar.

Sir,

As Government are about to lose the services of Mr. Frost, who of late years has filled the appointment of superintendent of cotton experiments in this district, I take the liberty of submitting a proposal which will ensure the rapid attainment of those results, which, after so many years of anxious attention and enormous expense, yet remain to be secured. I preface my offer with a few remarks, which I trust may not be deemed inappropriate.

2. The object in undertaking the experiments was to introduce a finer description of cotton, to improve the culture of the indigenous kind, and the mode of preparation for market of both, and generally to aid in encouraging an increased production of a quality suited to English wants.

3. Success has attended the introduction of American seed; the saw-gin has to a trifling extent been adopted by the natives, but for American seed cotton only; two half presses have been erected at Hooblee, but are never used; a manufactory of saw-gins is in efficient order.

The pay of superintendents in effecting this much has been 1,75,000 rupees, and the time occupied has exceeded 10 years.

I would not be understood as making reflections on any one when I term the results as rather insignificant, nor shall I, I trust, be deemed presumptuous in stating, that if mercantile energy had been directed by fair premiums to the effecting of the same objects, far less time and money would have been expended and greater advances made.

An occasion seems to present itself of providing for the future efficient superintendence of the saw-gin factory, and the use of the machines in the district, to which the attention of the establishment is now exclusively applied, and at the same time of arranging that the cost to Government shall be devoted entirely to the furtherance of schemes which it has been the anxious desire on their part to promote, but which, even in times of cheap money and dear cotton, no one has ventured to attempt.

There yet remains, to improve the qualities of the cottons grown by keeping the two varieties of foreign distinct and by marked classifications of native kind, to arrange the saw-gin so that it can be immediately adapted to each variety, to introduce cattle-power gins and half presses in every important town, to prove the economy of having wider and covered carts, to establish full presses on the coast, and open up a direct trade to England.

I beg respectfully to propose that I be allowed for four years the free use of the gin factory here, and the tools that may be on hand and are requisite for the manufacture; that I have also placed under my charge the press-house and presses at Hooblee, and that the salary and allowances that Mr. Frost and his establishment (exclusive of mechanics) have drawn this last year, be sanctioned for the four years, to furnish the funds for premiums to be drawn by me, as I progress in fulfilling the following engagements:—

To erect and work for hire, in any two important towns in this and the adjoining districts in each year, a set of cattle-power gins and half-screw presses.

To employ in each year 20 new carts, of improved make.

To erect and work for hire at a port on the coast, accessible to large ships, iron presses, such as are in use in Bombay.

To make the first direct shipment to England within 18 months.

In order to carry out satisfactorily such undertakings, I should have to engage the services of two European engineers, and it would be through them, under my own supervision, or that of a gentleman connected with my firm, that I propose to conduct the gin factory here, whence I engage during the four years to supply the public with saw-gins as at present, at the cost of construction, and keep the same in repair for 12 months, without additional charge, enjoying the free use of the building, tools, and nominally of the superintendent's establishment services. I should not surcharge the gins with any item to cover these, and remunerate myself. I would cause to be inspected oftener than now the gins in use in the district by natives and others, and repair at the expense of Government, as now, such machines as have been sold, liable to be kept in order. Or the last might be set against my right of charging on such goods as were pressed at the Hooblee half-screws (use of which, I propose, shall be free to me) a similar rate to that which I should work for in my own presses elsewhere, and which would, of course, include something for wear and tear and rent.

I beg to point out that I should be virtually discharging the duties of Superintendent of Cotton Experiments at an outlay to myself for engineers' salary, and till I had accomplished a portion of my self-imposed engagements, should not be entitled to draw the remuneration attached

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attached to the appointment. I venture further to remark, that an undertaking of this extent seems to me as worthy of a guarantee as any that has been proposed, and I respectfully claim for it the earliest possible attention and cordial support of all departments of the Government to which it may have to be referred, as the scheme involves the selection and survey of the port. The engagement in England of one engineer at least, and probably some instruction in Manchester as to the objectionable properties of East India cotton, and the ordering the construction of cattle-power machinery and powerful presses.

At the expiry of the four years, I should desire to be privileged to take over the premises, &c., at a fixed sum, thereby identifying my interest with the preservation of everything while enjoying its use.

It should be my duty to convert the present stock of unsuitable machines made here and in England at various times to a useful purpose, at the expense and for the benefit of Government.

In opening large gin-houses for public hire, the greatest possible advantage would, I think, accrue. Care would be taken that each variety of cotton would be separately ginned, and at once half-pressed under European superintendence; it would bear the gin-house mark which would be a guarantee against false packing, the admixture of seed and dust, or the damping of the wool; the inspection of one bale would be sufficient to determine the value of the parcel bearing the one mark; and, so far as concerned cotton from such sources, public discredit, and reclaims for mistakes, would prove stronger incentives to care than the fear of penalties from legislative enactments. The rapidity with which seed cotton would be cleaned, would prevent the necessity in a great measure for its being stored in heaps for some eight and ten months, to its infinite detriment both as to colour and strength of staple. The sowcars would possibly for a time prefer the liberty of adulteration, and continue their present system of business, but the establishment of gin-houses would do much to make the ryots independent of the native dealers, and the creation of a direct trade to England would at once enhance the value to the seller, by as much as the aggregate of losses and charges to Bombay at present lowered it; there would no longer be a lament over the cultivator's high assessment, or India's inability to compete with America. In quality his produce would be improved at least 10 per cent. on value it would be enhanced some 15 per cent. to him as seller.

It will but remain for others to follow quickly in my wake, profiting by and avoiding my mistakes; and for Government to open roads in every direction, and encourage speedy modes of communication. Trusting that the interest of the subject will be a sufficient excuse for my expressing myself so much at length.

Dharwar, 1 August 1854.

I have, &c.
(signed) A. C. Brice.

My dear Reeves,

I HOPE the plan proposed in the accompanying letters for extending the cotton trade of this district may meet with your approval. My own opinion is, that it would do much more to promote the views of Government in one year than has been done in the last eleven. I think it is exactly what we want. A government could hardly hope to succeed in experiments of the sort we have here. It is not their business. The best way to gain their object is to encourage private enterprise.

If you approve of the plan, I hope you will forward it to Government supported by your recommendation, as quickly as possible. Mr. Brice is very much afraid of delay. In talking over the matter, and going over the terms which he has stated in his letter together, we assumed that the annual cost of Mr. Frost's establishment was 10,000 rupees, which would have given 40,000 rupees for the four years. When I pointed out that the cost was 3,000 rupees below our calculation, he sent me the annexed reply, and gave up 3,000 rupees at once, rather than have cause for delay. I mention this and send his note to show you the value he puts upon time. His note will show you, too, that he is bent on bringing the scheme into full operation in twelve months.

Government will, of course, wish to know something of Mr. Brice and his antecedents. He first established his firm at Cochin, in 1839, when no direct export had ever been made thence to England, and he was the first to make one about three months after his arrival. The trade in cocoanut oil at that time did not exceed 500 tons per annum. Last years 7,200, besides 2,550 tons of fish oil were exported, and there are now twelve firms besides that of Brice & Co. at Cochin. Mr. Brice also originated the trade in ginger from the Malabar coast, the value of which he has raised from 30s. per cwt. to from 60s. to 140s. per cwt. His firm intend to continue their business without diminution at Cochin.

He came to the cotton districts inland to the north of Compta in search of merchandise to place over cargoes of cocoanut and fish oil, which, being very liable to leak, are extremely dangerous to all other kinds of cargo, and are always therefore placed lowest in the holds of exporting ships.

Mr. Brice tells me that he is well backed by Dunbar & Sons, of London, the largest ship-owners in the world, larger than Green, I believe, and large merchants besides; and he says he has promise of Manchester support. He is learning Canarese, and has already acquired some colloquial knowledge of it.

I should think there would be no difficulty in obtaining information of the character of the firm from merchants in Bombay.

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I have seen a good deal of Mr. Brice since he came here. He arrived about the middle or end of June, intending to buy cotton, and he very soon raised the price of horns and hides. I was very much pleased with what I saw of him, and mentioned that we were going to lose Mr. Frost, and that I was very much against placing the gin factory in charge of the boys, who are his apprentices. We talked a good deal on the subject, and he agreed to draw up a memorandum of what he could undertake, which he sent to me, and which, with some additions and alterations, is embodied in his letter. He had no intention whatever of embarking in any such speculation when he first came here. If Government agreed to his terms his establishment here will be of incalculable benefit to the country; we shall have many sorts of merchandise exported from this and the adjacent districts. They will add somewhat to the Madras Customs Revenue, as they would, of course, ship at a Madras port. They may reduce ours a little.

You may make any use you please of the whole or any part of this letter. I have sent up the papers rather roughly, for the preparation of the plan has occupied a good deal of time, and I am very anxious to save as much time as possible.

I hope you will give your support to the scheme.

Dharwar, 9 August 1854.

Yours, &c.
(signed) J. N. Rose.

My dear Mr. Rose,

I ABIDE by my offer; 3,000 rupees spread over four years will not materially affect my calculations of results; the delay that might be entailed, by a reference to the Governor-general, would militate most materially against my future success, and destroy the prestige which will attach to my carrying the whole through "slick" in 12 months, as I hope to do. The estimate of 40,000 rupees was by guess; the terms stand four times present allowances, or 36,192 rupees. You can have copies of my letter and memorandum; urge the necessity for an early answer, if it be only private, and to be acted on "without prejudice;" as the lawyers agree, that is, at my risk in case a hitch occurs.

9 August 1854.

Yours, &c.
(signed) A. C. Brice.

(No. 3195 of 1854.)

From the Acting Revenue Commissioner, Southern Division, to the Secretary to Government.

V. 9834. FORWARDED, for the early instructions of Government, with reference to the Revenue Commissioner's letter, No. 2709, of 29th August last.

Poona,
Revenue Commissioner's Office,
7 October 1854.

(signed) H. W. Reeves,
Acting Revenue Commissioner,
Southern Division.

(No. 1775 of 1854.)

From J. N. Rose, Esq., Collector of Dharwar, to H. W. Reeves, Esq., Acting Revenue Commissioner, Southern Division.

Sir,

V. 9835. WITH reference to my letter, No. 1416, of the 10th August 1854, submitting certain proposals made by Mr. Brice, of the firm of Messrs. Brice & Co., of Cochin and Coompta, I have now the honour of forwarding a copy of a letter from Mr. Brice to my address of this day's date.

2. I would respectfully draw your attention to the circumstances explained in Mr. Brice's letter, and request an early reply to mine, above referred to.

Dharwar, Collector's Office,
2 October 1854.

I have, &c.
(signed) J. N. Rose,
Collector.

To J. N. Rose, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to inquire if you can favour me with an answer to my proposition of the 1st August. The constituents, for and with whom I am acting, will be anxiously expecting definitive instructions regarding the presses, ginning machinery, and stores for the factory, preparatory arrangements for obtaining which, with the least possible delay, were urged by

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by the mail of the 24th August, which was the first that left after my proposal was submitted. It will not be safe for a vessel to leave England after December in order to touch on the coast to discharge machinery, and if my advices are delayed, it will involve the postponement of all operations in this country till this time next year, and then it will require the greatest energy, with a larger staff, to be able to avail of the cotton season of 1856. I need not say that this would prove most fatal to the undertaking, and it was to provide against this contingency that I went the length I did in preparations without the knowledge as to whether my offer would prove acceptable or not. If not approved of I have only to cancel the orders, which were made conditional, and request the despatch elsewhere of the ship that was to be kept in readiness to leave for Coompta on the 15th December.

Dharwar, 2 October 1854.

I have, &c.
(signed) A. C. Brice.

RESOLUTION on the Papers noted in the Margin,* relative to a Proposal for making over the Cotton Experiments in the Southern Mahratta Country to Messrs. Brice & Co.

THE Governor in Council cannot accede to the proposed terms; he is willing to let Messrs. Brice & Co. have, free of charge, the use of the press and buildings for one year, provided they enter into an agreement to restore them in an undamaged state, and, at the end of the one year, or two, if preferred, Government will sell the stock to Messrs. Brice & Co. for a reasonable price, the amount to be determined by Government at once, on the Collector forwarding, which he is required to do before Mr. Frost leaves, a statement showing actual cost and estimated value of stock.

V. 9836.

2. All Government require to maintain are, the means of making and repairing gins for the use of the people of the district, until satisfied that Messrs. Brice & Co., or other individuals, will do so efficiently, and on moderate terms.

(signed) C. E. F. Tytler,
Officiating Secretary to Government.

Communicated to Revenue Commissioner by letter, dated 11 October (No. 4674) 1854.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 3 March 1855.—V. 1068 to 1076.

From A. C. Brice, Esq. to the Officiating Secretary to Government.

Sir,

WITH reference to my proposal to take over the cotton experiments in the Southern Mahratta Country, and the copy of resolution of Government thereupon, No. 4674 of 1854, I have the honour (A.) to express my readiness to take over the presses and building at Hooblee at an agreed valuation, pay for them within six months, and afterwards enter in possession, provided the other portion of my offer be met. The screw-house at Hooblee is well situated with respect to the cotton district in general, but for European purposes it must be removed to a place contiguous to the American cotton fields, say, for example, to Kumudghee, and I could not therefore undertake to return them in an undamaged state, nor could I become a purchaser at a valuation which the premises would bear, if adapted to my wants, as they now stand.

V. 1068.

In compliance with a suggestion from the Right Honourable the Governor, I beg to submit another plan by which I may be enabled to carry out the projects named in my former letter.

I agree to erect eight cattle-power saw-gins in various parts of the district, each of 160 saws. I bind myself to take charge at once of the factory at Dharwar, and construct gins, to be supplied to Government at the present charge, which is only the cost of materials and artisans' labour; the premises and stock at Dharwar to be valued at once, and to be leased to me for two years at a nominal rent, I undertaking to pay the present valuation at the end of the two years. For the fulfilment of this engagement my other properties may be held as collateral security. I undertake to erect screws on the coast, and make the first direct shipment of cotton to England. I have an engineer conditionally engaged, and am prepared to show that, by the succeeding mail to the receipt of my advices, the machinery will be shipped. (B.) I will bear the engineer's salary for working Dharwar factory, and supply gins as
long

* Letter from the Acting Revenue Commissioner, Southern Division, No. 2709, dated 29th August 1854, with accompaniments. Memorandum by ditto, No. 3195, dated 7th October 1854, with accompaniments.

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long as they may be required; nor gins only, but machines for dressing hemp and flax, seeds and coffee, and subject myself to the risk of loss from working the saw-gins in the district, accepting in compensation the free enjoyment of as many acres of waste land in Dharwar or Belgaum as one of the eight gin-houses shall be computed to require for the production of cotton for it, to be worked continuously for three months. I to enjoy this land for the unexpired term affixed by the Revenue survey, and afterwards to stand in the same position as the native ryot. I to select the land, and to be put in possession of one-eighth of the above quantity for each of the gin-houses I open, and which has been officially reported as fit for work. Should the gin-houses be first in operation, I am to pay rent for the land according to Revenue survey assessment, until I produce official certificate to prove my having sciewed and shipped direct to England 1,000 bales cotton.

I am to be bound to bring suitable soil under cotton cultivation within two years after taking possession, and will agree to work 50 acres for each, flax and hemp. The Government to be at liberty to resume the land if any three independent arbitrators decide that I have vitiated my engagements wilfully.

Bombay, 19 December 1854.

I have, &c.
(signed) A. C. Brice.

REFERENCE to the Collector of Dharwar, through the Acting Revenue Commissioner, Southern Division.

(No. 5700.)

V. 1069. FORWARDED to the Collector of Dharwar for immediate report, through the Acting Revenue Commissioner, Southern Division.

By order, &c.

Bombay Castle, 28 December 1854.

(signed) C. E. F. Tytler,
Acting Secretary to Government.

From A. C. Brice, Esq. to the Officiating Secretary to Government.

My dear Sir,

V. 1070. At your request I have the pleasure to furnish a few data, the better to enable an opinion to be formed on my proposition for taking over cotton experiments in the Southern Mahratta Country:—

COTTON GINS manufactured at Dharwar Factory.

	20 Saws each.	18 Saws.	14 Saws.	7 Saws.	Others.	Total.
1848-50	9	13	8	51	10	91
1851	11	31	0	64	5	111
1852	7	11	0	32	5	55
1853	0	3	0	27	0	30
						287

Realised by sale of these, 29,780 rupees; having been sold at cost of materials and artisans' labour, this must be assumed as the cost. The expense of the establishment at Dharwar has been for the last two years 9,000 rupees per annum, as obtained from books to which I was allowed access. Previous to that the salary of superintendent, clerks, and peons, which only is comprised in the 9,000 rupees, was about 8,000 rupees; say from 1848-1853, six years, four at 8,000 rupees, two at 9,000 rupees - - - - - Rs. 50,000

Cost of materials and wages, paid smiths and carpenters, say - - - 30,000

Rent of premises, interest, wear and tear of tools - - - - - 1,000

Dr. Rs. 81,000

Cr. By gins sold - - - - - Rs. 30,000

Difference - - - - - - 51,000

Rs. 81,000

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 995

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100 saws estimated to clean 280 maunds kupas per diem, one acre planted with cotton may be calculated to yield 10 maunds of kupas; one cattle-power saw-gin will clean the produce of 28 acres daily—worked during three months or 75 days = 2,100 acres; eight gin-houses would clean, say 17,000 acres, before the monsoon; total area planted with cotton, 3,00,000 acres in Dharwar. Extensive, therefore, as is the work I offer, to undertake, it is small as compared with the wants of the country. Rent of 2,100 acres would be at an average assessment of

1½ rupees per acre, only - - - -	Rs. 3,050 per annum.
2 " " " - - - -	4,200 "
2½ " " " (highest rate) - - - -	5,100 "

To yield me anything whatever, the locality would have to be colonized from the Konkan. At present the land lies waste for want of population. To get the produce away Government would have to make roads, and pending their opening the rent may be halved, even if cultivated. At all events, against an annual outlay of 9,000 rupees for establishment, at 2,000 rupees to 3,000 rupees for repairs, my proposition offers the income that Government would derive from making 4,000 people, who existed before, able to afford to live on this waste land alone; and it opens up a direct trade for 3,00,000 acres production.

An engineer will cost me 350 rupees per month - - - -	Rs. 4,200 per annum.
Rent of premises at Dharwar - - - -	400 "
Wear and tear of tools - - - -	600 "
	<u>Rs. 5,200</u> "
Repair of gins, 287 already sold by Government, if at 10 rupees each, per annum - - - -	2,870 "
	<u>Rs. 8,070</u> "

To do any good, I must cultivate my land at once, make it worth more than the assessed rate, make other articles besides gins in the factory, and keep my machines at work at a profit.

Yours, &c.
(signed) A. C. Brice.

Bombay, 5 January 1855.

REFERENCE to the Collector of Dharwar through the Acting Revenue Commissioner, Southern Division. (No. 65.)

THE Acting Secretary to Government presents compliments, and with reference to the Government endorsement* (No. 5700) dated 28th December 1854, requests that the Collector of Dharwar will have the goodness to report through the Acting Revenue Commissioner, Southern Division, the present expense of the cotton experiments in the Southern Mahratta country, and the saving which may be effected if Mr. Brice's proposal for taking the cotton experiments in question is sanctioned.

V. 1071.

2. Copy of a further communication from Mr. Brice, dated the 5th instant, is herewith sent, for the Collector's information, and an early answer requested.

(signed) C. E. F. Tytler,
Acting Secretary to Government.

Bombay Castle,
8 January 1855.

REPORT by the Revenue Commissioner, Southern Division (No. 208) 1855.

THE Revenue Commissioner, Southern Division, has the honour of forwarding, for the consideration of Government, a report from the Collector of Dharwar, on Mr. Brice's offer.

V. 1072.

2. The terms proposed by Mr. Brice are so indefinite, and so loosely expressed, that the Revenue Commissioner is unable to make up his mind regarding them; and he regrets that he

* Forwarding a letter from Mr. Brice, dated 19 December 1854, for Collector's report through the Acting Revenue Commissioner, Southern Division.

he has not had an interview with that gentleman, which would have led to a full exposition of his intentions, and perhaps to a satisfactory arrangement for the furtherance of the culture and preparation of cotton.

(A.) Mark by the Revenue Commissioner in Mr. Brice's letter. 3. By the following sentence in his letter, *vide* (A.), "I have the honour to express my readiness to take over the presses and building at Hooblee at an agreed valuation, pay for them within six months, and afterwards enter in possession," does Mr. Brice intend that he will purchase the two presses, together with the press building at Hooblee, at a fair valuation?

(B.) Mark by the Revenue Commissioner in Mr. Brice's letter. 4. And by the words at (B.) "I will bear the engineer's salary for working Dharwar factory, and supply gins as long as they may be required, and subject myself to the risk of loss from working the saw-gins in the district," &c. &c., does Mr. Brice intend to convey to Government his intention to supply, so long as he holds the Government land rent-free, new saw-gins of every kind, both to Government and the ryots of the Southern Mahratta country, at the present charge, *i. e.*, only the cost of materials and artisans' labour, whenever they may be required, without any delay; and also keep in repair, without loss of time to the ryots, all the saw-gins already distributed to, and all such as may hereafter be purchased by or given to the ryots of the Southern Mahratta country?

5. Has Mr. Brice pointed out to Government the property which is to be held as collateral security for the fulfilment of his engagements, and is it sufficient?

6. These are questions to which the Revenue Commissioner is unable to obtain answers without considerable delay, but which are, however, highly important.

7. It appears absolutely necessary that, in case of Mr. Brice's failure previous to his payment of their value, Government should have the means of making and repairing gins for the use of the people of the Southern Mahratta country; and no proposal, unaccompanied by an agreement to restore the machinery and buildings in an undamaged state, in such an event, should, the Revenue Commissioner thinks, be accepted by Government. This is, however, a condition which Mr. Brice does not seem inclined to accept.

8. The Collector of Dharwar has forwarded to the Revenue Commissioner two other letters (Nos. 141 and 159) dated 20th January and 22d January 1855, respectively, from which latter it appears that the dead stock belonging to the cotton establishment at Dharwar may be fairly valued at 43,500 rupees, say. From the former, it is sufficiently clear that the establishment at Dharwar may be worked without a superintendent, at a profit of Rs. 116. 8. per mensem, or 1,398 rupees per annum.

Forwarded with this memorandum: no copy kept,

9. If, as proposed by Dr. Forbes, an artisan be entertained at a salary of 200 rupees per mensem, the annual cost to Government would be only 1,000 rupees. Several important errors are pointed out in Mr. Brice's calculations, the correction of which places the loss of Government on the experiment at a considerably lower figure than 51,000 rupees, the sum mentioned by that gentleman.

10. If the profit realised by Government on the sales in England be taken into account, it may be that no loss whatever, or very little indeed, has been incurred.

11. All things considered, the Revenue Commissioner is of opinion that the concession of waste land required by Mr. Brice is a great deal too valuable, and that the terms offered him in the Government letter (No. 4674), of 11th October 1854, are sufficiently liberal.

12. If Mr. Brice continues to reject the terms offered him by Government, the establishment may, the Revenue Commissioner thinks, be left under Dr. Forbes until a sufficiently expert artisan be found to superintend it.

13. The apprentice, Mr. C. Courpalais, might be advantageously provided with the opportunity of improving himself in mechanical knowledge, which is proposed by Mr. Ogilvy in the 9th paragraph of his letter.

14. Government will then have to provide a good practical mechanic to superintend the construction and working of the new machinery required in the Southern Mahratta country.

15. Dr. Forbes should be authorised to lay in a timely and sufficient supply of material to prevent the loss that is reported to have been hitherto entailed on Government, as remarked by Mr. Ogilvy in his 8th paragraph.

Poona,
Revenue Commissioner's Office,
25 January 1855.

(signed) H. W. Reeves,
Revenue Commissioner, Southern Division.

(No. 27 of 1855.)

V. 1073.

MR. BRICE not being present at Dharwar to explain the offers made by him in the above letter, the Collector can only assume the meaning they appear to bear, and report accordingly.

2. It would appear that Mr. Brice agrees "to take over the presses and building at Hooblee, at an agreed valuation, pay for them within six months, and afterwards enter in possession;"

possession;" but he does not agree to return them in an undamaged state, or to "become a purchaser at a valuation, which the premises would bear if adapted to his 'wants' as they now stand."

3. He is "ready to bind" himself "to take charge at once of the factory at Dharwar, and construct gins to be supplied to Government at the present charge, which is only the cost of materials and artisans' labour, the premises and stock at Dharwar to be valued at once, and to be leased to 'him' for two years, at a nominal rent, 'he' undertaking to pay the present valuation at the end of the two years; for the fulfilment of this engagement 'his' other properties may be held as collateral security." He "will bear the engineer's salary for working Dharwar factory, and supply gins as long as they may be required; nor gins only, but machines for dressing hemp, flax, seeds, and coffee."

4. He agrees "to erect eight cattle-power saw-gins in various parts of the district, each 160 saws," and subjects himself to the risk of loss from working the saw-gins in the district, accepting in compensation the free enjoyment of as many acres of waste land in Dharwar or Belgaum as one of the eight gin-houses shall be computed to require for the production of cotton for it, to be worked continually for three months; "he to select the land, and enjoy it "for the unexpired term affixed by the revenue survey, and afterwards to stand in the same position as the native ryot."

5. He is to be put in possession of one-eighth of the above quantity of land for each of the gin-houses he opens, and which has been officially reported as fit for work; but he is to pay rent for the land according to the revenue survey assessment, until he produces an official certificate to prove that he has screwed and shipped to England 1,000 (one thousand) bales of cotton.

6. He is to be bound to bring suitable soil under cotton cultivation within two years after taking possession, and he agrees to grow 50 acres of hemp and 50 acres of flax.

7. The Government to be at liberty to resume the land, if any three independent arbitrators decide that "he has violated his engagements wilfully."

8. First, as regards the presses and buildings at Hooblee:—

The two presses, which Mr. Brice does not agree to return in an undamaged state, are entered in the Government list of dead stock as worth (4,776) four thousand seven hundred and seventy-six rupees; and the press building, which he will not take at all, and which would be valueless without the presses, are entered in the same list as worth (6,488) six thousand four hundred and eighty-eight rupees.

9. He admits that "the screw-house at Hooblee is well situated with respect to the cotton district in general," and therefore it would be advisable to allow the presses to be removed from the place where they now are, to the certain depreciation of valuable property, more especially as it is not improbable that other parties may be willing to rent and work them where they are.

10. He would take charge of the factory at Dharwar at once, and at the end of two years pay for them at the present valuation. He would work the establishment at his own cost, and supply gins, &c. at their cost of construction. He does not, however, say that he will keep in repair the cotton gins already distributed among the people, but in any agreement entered into with him he should be bound down to do so. He would doubtless charge for cleaning cotton at his own gins, and therefore it would not be his interest to maintain those supplied to the ryots in a working condition. It would be extremely difficult to oblige him to fulfil any engagements he might make to repair gins at fixed charges, should there be any disposition on his part to evade them.

11. I may observe, that I have not been able to ascertain in what the property consists that Mr. Brice offers to be held as collateral security for the fulfilment of his engagement.

12. He agrees to erect eight cattle power saw-gins, of 160 saws each, on condition that after he has shipped direct to England 1,000 bales of cotton, he is to be allowed to select as many acres of the best waste land suitable for cotton cultivation as one of the eight cattle-power saw-gins may be able to clean, if worked continuously for three months; and to be placed in possession of one-eighth of that land for each of the gin-houses when opened to the public, and to enjoy the land rent-free to the close of the 30 years of the revenue survey settlement, and ever afterwards to possess the land, subject to the payment of the Government cess on it.

13. It remains for me to compute the quantity of land that Mr. Brice would claim under the above proposal, and the probable amount of Government rent that would be foregone in his favour, were his proposition acceded to.

14. It has been ascertained from experiments that a cattle-power gin of 160 saws can clean, in a working day of 10 hours, 7,200 lbs., or 257 maunds; or, calculating the month 30 days, and not excluding Sundays, 23,130 maunds in three months. An acre of land will, at an average estimate, yield 8 maunds of cotton (224 lbs.), and therefore Mr. Brice would claim about 2,896 acres on the above estimate; and reckoning the Government rent on that land at Rs. 1. 8. per acre, the annual gain to him up to the termination of the 30 years fixed by the revenue survey would be about (4,336) four thousand three hundred and thirty-six

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six rupees; and supposing that he fulfils the conditions offered by the end of two years, he would enjoy this exemption for not less than 22 years. Again, Mr. Brice might, if the terms offered by him were acceded to without a definite understanding, compute a working day at 24 hours, and so be able to claim more than double the quantity of land specified above.

15. If, however, Mr. Brice were to be required to take both the Government presses and buildings at Hooblee at a fair valuation, to bind himself down to repair all the gins that have been or may be distributed among the people, and engage to gin cotton for the public for reasonable specified charges, and to fix the amount of land to be assigned to him at, say 2,500 acres, bearing a rent of (3,750) three thousand seven hundred and fifty rupees, the terms offered by him would be reasonable in a pecuniary view as regards Government, for they would be relieved of the expense* of keeping up the factory at Dharwar, and would only lose for a term of years the rent of a tract of land that might or might not be brought under cultivation in the meantime.

16. But the interests of the public are also to be consulted, and it must be considered how far they would be secured by acceding to Mr. Brice's proposals. Were Government to close with his offers, the ryots would, in all probability, view him in the light of a Government agent, a circumstance that would enable him to secure a monopoly of the cotton market in these districts to the exclusion of all healthy competition; he would enjoy a large tract of land, selected by himself, rent-free, for a long term of years, and in perpetuity subject to the payment of the Government assessment; and he would also have it in his power to monopolise the ginning of cotton.

17. Government, in their resolution, dated the 11th of October last, No. 4674, observe: "All Government require to maintain, are the means of making and repairing gins for the use of the people of the district, until satisfied that Messrs. Brice and Co., or other individuals, will do so efficiently and on moderate terms." It appears hardly necessary, for the attainment of that object, to accede to Mr. Brice's terms; and therefore I would beg to suggest that they should be declined, and that Dr. Forbes, who is ready to undertake the charge, should be allowed to superintend the working of the factory until its real expenses are ascertained, and other suitable arrangements can be made. I may add that Dr. Forbes informs me that the establishment is working well, and that he is of opinion that it can be made to pay its own expenses.

18. It may be hoped, that New Orleans cotton, the cultivation of which in these districts is annually increasing, has so approved itself to the people of this country that it can now flourish without further aid from Government, and may be left to make its own way in the market.

Dharwar, Collector's Office,
6 January 1855.

(signed) T. Ogilvy, Collector.

(No. 141 of 1855.)

From T. Ogilvy, Esq., Collector of Dharwar, to H. W. Reeves, Esq., Acting Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to report through you, on the propositions contained in a letter from Mr. Brice, dated the 5th instant, a copy of which was transmitted to me with a memorandum from the Acting Secretary to Government, Territorial Department, dated the 8th instant, No. 65, in which I am desired to state what is the present expense of the cotton experiments in the Southern Mahratta country, and the saving which may be effected, if Mr. Brice's proposal is sanctioned.

2. From the accompanying memorandum on the subject by Dr. Forbes, who is at present in charge of the factory, it would appear that, deducting the salary of a superintendent or mechanic at the head of the establishment, the factory can be worked at a profit of Rs. 116. 8. per mensem or 1,398 rupees per annum; or, allowing for a mechanic at 200 rupees per mensem, at a cost of about 1,000 rupees per annum.

3. I have every reason to believe that Dr. Forbes' estimate, which has been framed from the records of the cotton-gin factory, is correct.

4. Mr. Brice estimates that the cotton experiments in the Southern Mahratta country have cost Government 81,000 rupees in six years, and realised 30,000 rupees, leaving a net loss of 51,000 rupees; and he offers in consideration of being exempted for a term of years from the payment of about 4,000 rupees of annual rent, to relieve Government from that expense and to develop the resources of the country, by peopling a large extent of waste land, and affording a direct export to the cotton produced from 3,00,000 acres of land, provided Government open out a cart communication to the coast.

5. Mr.

* Rs. 455 per mensem, or Rs. 5,460 per annum, exclusive of engineer's pay.

5. Mr. Brice's estimate is not altogether accurate. He has omitted to take into account eighty saw-gins manufactured and sent to Khandeish and Guzerat, and therefore the number given by him should have been 367 instead of 287, and the price at which they were sold should have been stated at about 38,360 rupees, instead of 30,000 rupees. Again, the charges for the repairs of gins, which Mr. Brice estimates at 10 rupees each, per annum, are left out of the calculation. The charge for the repair of 287 gins would amount, according to Mr. Brice, to 2,870 rupees per annum, and deducting two-thirds as the price of materials, the saving in artisans' labour would amount to 956 $\frac{2}{3}$ rupees a year, or to 5,740 rupees in six years.

6. The chief item of expense to Government was the salary of a superintendent of cotton experiments, which was incurred with a view to introduce an improved variety of cotton into the country, and the use of the saw gin for its preparation to suit the foreign market; but now that both of those objects have been attained the expense need no longer be incurred, and should be excluded from the calculation. Besides, I believe that those expenses were covered by large profits derived from the purchase and sale of cotton on account of Government, judging from one transaction of the kind that I find recorded in 1849, where a profit of 12,000 rupees was realised.

7. Inasmuch as it is probable that by judicious management Mr. Brice could work the gin factory at a profit, the terms offered to him by Government in their resolution, dated the 11th October last, No. 4674, appear to be sufficiently liberal. The rent of land in the zillahs of Belgaum and Dharwar has been fixed on a scale sufficiently low to admit of its being profitably cultivated; and therefore all that Government are now called upon to do for the encouragement of cotton cultivation and private enterprise generally, is to secure to the public a supply of cotton gins, and the means of repairing them, and easy access to the coast.

8. In the event of Government declining to accede to the terms offered by Mr. Brice, I would beg to suggest that Dr. Forbes should be allowed to lay in a timely and sufficient supply of materials to prevent the loss that has hitherto been sustained by Government from the improvident system hitherto pursued in the factory.

9. With regard to the remarks contained in Dr. Forbes' 4th paragraph, on the subject of the four apprentices belonging to the cotton factory, one of them, Mr. C. Courpalais, who has completed his term of service, is described by him as a lad of excellent character, of good education and abilities, with a turn for mechanics, which if properly cultivated would make him a useful practical artisan. He has learnt how to make a good serviceable gin, which is all that he can acquire in the Dharwar factory, and therefore I would beg to recommend that he should be entertained for two years on a salary of 40 rupees per mensem at the Mint, or gun-carriage manufactory, or wherever he can be put in the way of acquiring a practical knowledge of mechanics. The two apprentices whose term of service has not yet expired, do not up to the present time promise to be good mechanics, and therefore it will not be necessary to provide for their further training unless they evince hereafter a greater aptitude than they now do for their present employment. The fourth apprentice, Mr. J. Carvalho, is in the employment of Mr. Brice, and therefore I am unable to ascertain what his wishes are; but I am informed that he is a promising young man, likely to become a good mechanic, and therefore deserving of aid and encouragement.

Dharwar, Collector's Office,
20 January 1855.

I have, &c.
(signed) T. Ogilvy, Collector.

REMARKS.

I HAVE framed the foregoing statement with care, and may mention that the returns of the establishment are rather under than over-estimated; the amount for repairs is put down at 200 rupees monthly. Mr. Brice estimates it at 239 rupees.

2. The charges also for materials are taken from what they cost at present as purchased in small quantities from the bazar, and this is often done at a ruinous price. Wood, for instance, might be stored from the neighbouring forest at one-third of the sum now paid for it. With a better arrangement in purchase of stores a saving of at least 20 per cent. might be effected.

3. I have estimated for the gins of eight saws, being those with which the establishment is at present occupied, and which are most in demand; but at the low price charged the profit on these is less than that on large gins, being 35 per cent. on the latter, and only 10 per cent. on the former.

4. As regards the apprentices, there are four on the roll of the establishment; two of them have completed their terms of service, and the other two will also have done so in a few months. Of the former, one has been lent to Mr. Brice, who pays him. The other is desirous of being permitted to proceed to Bombay to perfect his knowledge of mechanics.

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either at the Mint or gun-carriage manufactory. As the value of any work done by them is not included in the foregoing estimate, the amount of their salaries, 120 rupees, has not been included as part of the cost of establishment.

5. The cost therefore to Government of continuing the cotton experiments will depend upon the difference between the profit shown, and the sum for which the services of a person qualified to conduct the duty can be procured. As no alterations or improvements have been introduced for the last four years in the construction of gins, the workmen are now perfectly conversant with their manufacture; and I should therefore imagine that a practised artisan, quite capable of superintending the work, might be procured from some of the public establishments on a salary of 200 rupees.

Dharwar, Cotton-gin Factory,
17 January 1855.

(signed) *G. F. Forbes*,
Assistant Magistrate, in Charge Cotton-gin Factory.

(No. 159 of 1855.)

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Acting Revenue Commissioner, Southern Division.

Sir,

AGREEABLY to the instructions contained in the Resolution of Government transmitted with your endorsement, dated the 14th October last, No. 3281, I have the honour to furnish two statements, one giving details of the dead stock belonging to the Dharwar cotton experiment department, with its present value, and the other giving the same information in regard to the Belgaum dead stock belonging to the same department.

2. Neither Mr. Frost's, nor my own records, afford information as to the actual cost of the dead stock, and therefore I have no sufficient data on which to form a correct estimate of its present value; but perhaps Mr. Frost's valuation, as corrected by Dr. Forbes, is sufficiently accurate for the present purpose.

3. It will be observed that the entire value of the dead stock belonging to the cotton experiment establishment, buildings included, has been estimated in the accompanying statements at Rs. 43,719. 14. 8.*

4. I have only now been able to obtain correct copies of these statements, or they should have been forwarded earlier.

5. For further particulars relative to the proposals made by Mr. Brice, I beg to refer you to my letter to your address, dated 19th instant, No. 141, with accompaniments, and to my report dated 6th instant, No. 27.

Dharwar, Collector's Office,
22 January 1855.

I have, &c.
(signed) *T. Ogilvy*, Collector.

RESOLUTION on the Documents, as per margin,† relative to certain offers made by Mr. Brice, connected with the Cotton Experiments in the Southern Mahratta country.

V. 1074.

GOVERNMENT agree with the Revenue Commissioner that the concessions required by Mr. Brice cannot be acceded to.

2. Mr. Reeves should finally ascertain whether Mr. Brice rejects the offer made to him by Government Resolution, No. 4674, of the 11th October last, and report accordingly.

(signed) *H. Young*,
Officiating Secretary to Government.

Communicated to Revenue Commissioner, Southern Division, with Letter No. 565, dated 8 February 1855.

* Dharwar	-	-	-	-	Rs. 36,600	-	8
Belgaum	-	-	-	-	7,119	14	-
TOTAL	-	-	-	-	Rs. 43,719	14	8

† Letter, dated 19 December 1854, from Mr. A. C. Brice. Memorandum, No. 208, dated 25 January 1855, from the Revenue Commissioner, Southern Division, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1001

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EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 27 June 1855.—V. 5570 to 73.

(No. 1490 of 1855.)

From the Revenue Commissioner, Southern Division, to the Secretary to Government, dated 30 May 1855.

FORWARDED for the orders of Government. There can be no doubt whatever that in their resolution of October 11 last, No. 4674, Government referred to the whole of the stock belonging to the cotton establishment at Dharwar, all the machinery and buildings of which Mr. Brice asked the use, as detailed in para. 3 of the Revenue Commissioner's letter to Government, No. 2709, of 1854, dated August 29.

V. 5570.

2. Dr. Forbes suggests the offer to Mr. Brice of the Hooblee press-house and presses at 25 per cent. discount on the original cost; but at the same time recommends Government to consider and determine whether, looking at the favourable situation of Hooblee, and the fair prospect of the presses and house being required for use at that town in a year or two, it may not be better to retain them.

3. The Collector proposes the former of these courses, without, however, noticing the latter; the Revenue Commissioner concurs with Mr. Ogilvy in advocating the offer of this stock to Mr. Brice, because he thinks it highly advisable to save time. Mr. Brice will, if he purchases, commence operations immediately. The measure will greatly facilitate that gentleman's operations, and will probably lead to the establishment of private presses at Hooblee.

4. The gift of the cattle-power machinery to Mr. Brice, also advocated by Mr. Ogilvy, has the concurrence of the Revenue Commissioner, who is of opinion that there is no occasion for the conditions proposed by Dr. Forbes.

Poona, Revenue Commissioner's Office,
30 May 1855.

(signed) *H. W. Reeves,*
Revenue Commissioner,
Southern Division.

(No. 749 of 1855.)

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Revenue Commissioner, Southern Division.

Sir, Dharwar Collector's Office, Camp Teygoor, 15 May 1855.

V. 5571.

WITH reference to your endorsements, Nos. 423 and 750, and dated respectively the 14th February and 10th March last, I have the honour to transmit, for your information, the copy of a letter from Mr. Brice, dated the 9th ultimo, in which he replies to the offer made to him by Government, in their resolution, dated the 11th October 1854, No. 4674, and further to forward copies of the correspondence* on the same subject, noted in the margin.

2. Mr. Brice observes, "I have never understood Government to be willing to make over to me the works connected with the cotton experiments, but limited the use, free of charge, to the press-house at Hooblee only." My own impression is, that Government, in their resolution of the 11th October last, No. 4674, referred to the whole stock belonging to the cotton experiment establishment; but however this may be, Mr. Brice's remarks are couched in a tone of complaint that does not appear to me warranted by the dealing of Government towards him.

3. He has declined to make any offer for the Hooblee press-house and presses, and, therefore, Dr. Forbes has suggested that they should be offered to him at a discount on the original† cost of 25 per cent., or for Rs. 8,449. 5. 9. Considering that the press-house and presses are at present of little or no use to Government, that they were probably more expensive

* 1. Mr. Brice's letter, dated 18 April 1855. 2. Assistant Magistrate in charge of cotton gin factory. Dr. Forbes' letter, dated 19 April 1855.

† Original cost,—	1. Building	-	-	-	-	Rs. 6,488	15	11
	2. Presses	-	-	-	-	4,776	13	-
	TOTAL	-	-	-	-	Rs. 11,265	12	11

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expensive originally than they should have been, and that they are not without defects of construction, I would beg to recommend that Dr. Forbes' suggestion should be acted on.

4. Dr. Forbes further recommends that the cattle-power machine for cleaning cotton, the free use of which, for 12 months, has been allowed to Mr. Brice, should be presented to that gentleman as a gift, on certain conditions. The machine was valued by Mr. Frost at 1,500 rupees; but for the reasons stated by Dr. Forbes, its value is very much less than that at present, and therefore the suggestion appears to be deserving of consideration. I am disposed to recommend, however, that the gift should be made unconditionally, since the self-interest of the party into whose hands the machine might eventually fall, would probably insure its being placed in the most advantageous locality, and its being worked in the most efficient manner.

I have, &c.
(signed) T. Ogilvy, Collector.

To T. Ogilvy, Esq., Collector of Darwar.

Sir,

Dharwar, 9 April 1855.

IN reply to your favour of 19th ultimo, I have the honour to refer to Government minute 4674 of 1854, in which it is said, "The Governor in Council is willing to let Messrs. Brice & Co. have, free of charge, the use of the press and buildings for one year, provided they enter into an agreement to restore them in an undamaged state; and at the end of the one year, or two if preferred, Government will sell the stock to Messrs. Brice & Co. for a reasonable price, the amount to be determined by Government at once.

With reference to this minute, I stated in my reply to secretary to Government, dated 19th December, the screw-house at Hooblee is well situated with respect to the cotton district in general; but for European purposes, it must be removed to a place contiguous to the American cotton fields; say, for example, to Sumusgee; and I could not undertake to return them in an undamaged state, "nor could I become a purchaser at a valuation which the premises would bear, if adapted to my wants as they now stand."

I understand that in this reply I was considered to have attempted to impress Government with the idea that the building at Hooblee was of no value to me, and that I only expected to pay for the presses.

I wanted the presses elsewhere, and demonstrated by the fact of their never having been used where they were, except by Mr. Stranack for a week, and by myself, as an experiment, that their removal was necessary to bring them into use. The building would have remained uninjured, but of little value to me, as compared with what it would have been if on a spot where I wanted such an one.

This was the only impression I intended to convey, and I deem the explanation necessary, in order to remove the notion, if it does, as I am informed, exist, that I attempted to depreciate, below a reasonable price, the property in question, and was treating with the authorities in a way that I should not deem honourable between merchants.

I would also beg to explain that I have never understood Government to be willing to make over to me the works connected with the cotton experiments, but limited the use, free of charge, to the press-house at Hooblee only.

The building and presses, I may be allowed to remark, were equally at the disposal of the public at large, who, however, are not likely to avail themselves of them. In all my proposals, I asked for no exclusive use of anything in accepting the Government terms. I should have gained no advantage, but should have been assuming the liability for damage that might in course of time and wear have occurred. I would beg to draw particular attention to this, lest at some future time Government may erroneously conclude that great assistance and encouragement were offered to me.

I acknowledge to have been granted, at a moderate rent, an unoccupied fort, fast falling into ruins, and free of charge, for 12 months, the use of some machinery that had been lying idle for years, which latter subject I refer to in a separate paragraph.

I was to have the option of purchase of this machinery at the end of twelve months after giving it a fair trial. The valuation that was to be made of it was to be what it might be worth where it lay. Mr. Frost's state of health prevented his going to the spot to assess the value or superintend its removal in safety. I consented to undertake its transport to this for valuation, the expenses of which were to be allowed me off the local valuation. I caused it to be delivered safely at the factory here. In erection by Mr. Frost it was broken, and the injury hidden by him from Dr. Forbes. Its inapplicability to bullock draught, as it was either not discovered, or the information suppressed, upon an engineer arriving to superintend its erection in the district towards the end of January, the above two defects were ascertained; he has had to direct the repair and alteration, to obtain speed, and after a delay of two months, during which time his salary has been running on, the parts of the machinery that had to be adapted for use are just ready. I have seen the whole, and beg to assure you that the valuation put on it by Mr. Frost is just double
what

what a perfect machine that has been made for me in England will cost me in the districts, freight and all charges paid. When off this reduced value you deduct what it has cost to bring the machinery from Kumutgee, and what I have had to pay the engineer while the repair and alteration were being made, you will see that at a gift I had better have been without it. I am making out no case; the facts are all patent. Government got saddled with a machine that required to be worked by trotting horses instead of bullocks, moving over 1½ miles an hour; their engineer never found this out, and Mr. Frost unconsciously misrepresented the machine to me; hence part of the expense; the cost was caused by a less venial error.

As regards the valuation which I hear has been put on the press-house and presses at Hooblee, I can only conceive Mr. Frost to have been influenced in his views by what they were said to have cost, and unconsciously excited to believe the result of his labours as satisfactory. If Government will let me know what they will take for them, I will immediately let you know whether I will become a purchaser on their original terms. As respects the machinery, the comparison of my drawings, and advice of cost of that coming out with the Government machine and Mr. Frost's valuation, will corroborate what I state.

I have, &c.
(signed) A. C. Brice.

(True copy.)
(signed) T. Ogilvy, Collector.

To Dr. Forbes.

Dharwar, 18 April 1855.

Dear sir,
By the tracing shown, you will have seen that the machines that I have on the way out are exact counterparts of the Government machinery, now that it is altered; my services proved to you that the cost of each was but 72 l., and charges to Coomptah, if the ship touches there, but 8 l., or 900 rupees will place them in any part of the district.

As respects Hooblee building, I must beg you to excuse my complying with your suggestion, that I should make an offer for it. In the Government minute, they reserve to themselves the right of fixing "a reasonable price;" and I should be robbing them of an opportunity of encouraging my projected arrangements were I to name the sum that I would be disposed to give for the building and presses, and should most certainly subject myself to obloquy for some time, while Government were making themselves acquainted with the true worth of the premises, by naming a figure so entirely disproportioned to the charges with which they had been debited. Five years ago, when Cochin was already a place of importance and trade direct to England well developed, three exactly similar, except the releasing arrangement, wooden presses, two powerful iron ones, and a two-stoned brick and tiled building four times the size of that at Hooblee, with half an acre of land, held at a low rent, and frontage, and jetty off which ships could load, already in use, and giving returns, were sold by auction for 12,500 rupees; the building was estimated at 9,000 rupees, the iron presses; the three wooden ones at 1,000 rupees. We are erecting such a wooden building at Hooblee, and may be held as to the worth of the place at Hooblee. From the construction of the presses is attended with double the expense that need be incurred; the use of men have to be employed, one in the pit to lash, the other above to assist in the arrangement of our press being prepared for Bunkapoor, the one gang only of the premises, three times the size of the other, and costs as much to lift the pressed bales out of the pit, as it has done in the case of the Hooblee presses. As to the state in which the building and presses are, I make no doubt, but that they will be found defective, upon competent examination. In the arrangement of the presses, the following are the requisites. It they are to work the screw presses, both I have, &c.
(signed) A. C. Brice.

(True copy.)
(signed) T. Ogilvy, Collector.

(No. 40 of 1855.)

To T. Ogilvie, Esq., Collector, Dharwar.

Dharwar Cotton Gin Factory, 19 April 1855.

(No. 40 of 1855.)
I have the honour to state, that on receiving the annexed communication, dated 9th April, and forwarded for my opinion, I had a conversation with Mr. Brice on the subject of the Hooblee presses; and finding that he represented so many circumstances which in his opinion lowered the value of the premises and machinery to him, I thought the best plan was to ask him to state what he would be inclined to give for them. He agreed to consider my proposal, and I have just now received his reply, which I annex, and in which he declines making an offer.

2. If it be an object with Government to dispose of the presses, I would beg to suggest that they should be offered to Mr. Brice at a reduction of the original cost to Government, sufficient

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sufficient to comprise both depreciation for wear and tear, and for the possibility alluded to by Mr. Brice, of Government having been charged more than a private individual would have been in the first instance. In my opinion a deduction of 25 per cent would be amply sufficient.

3. It is quite true that the Hoobly establishment has not hitherto brought in any returns worth mentioning, but it is by no means certain that this state of matters is likely to continue, especially if the improvements in the part of Sedashwagur and the roads leading to it are carried out; Hooblee is not only the greatest market town in these parts, but also the large town on the verge of the cotton districts nearest to Sedashwagur, and in the rise of the latter place it must participate. It is, therefore, a point for the consideration of Government, whether it would be advisable to part with these presses at a loss, on the avowed intention of their being removed, or to retain them with a fair prospect of their being required a year or two hence.

4. With regard to the cattle power machine, I beg to observe, that I scarcely suppose Mr. Frost wilfully suppressed any information regarding its imperfection in point of speed; the defect was one that might have escaped his observation, as it certainly did that of Mr. Brice's engineer, who would have carried it off as it was, if it were not that his attention was especially drawn to the probability of this deficiency. It is quite true that some time was required to execute the repair and the alteration discovered to be necessary; but it is another question, whether this delay caused Mr. Brice either loss or inconvenience, as up to this period he has not been able to provide himself with the building required for setting the machine to work, nor is he likely to do so for some time to come. I find, on referring to the accounts of the workshop, that the machine was first applied for on the 7th of February, and it was completed for delivery on the 30th March; less time might have sufficed; but being aware of the above-mentioned fact, much expedition was not deemed necessary, and part of the machinery still remains unremoved from the gin factory. Mr. Brice's engineer was not detained to superintend the alteration; having given his instructions, the workmanship was conducted in his absence.

5. As regards the disposal of the machine, I would beg to suggest that it may be given to Mr. Brice as a gift, under certain conditions; viz. that he is to erect it in the districts, and neither to remove from the Dharwar Collectorate, nor dispose of it to any other party without the consent of Government. Doing so will not only evince a liberal desire to encourage European enterprise, but it will also effect the object which Government appears to have had in view in settling such machinery to work in the districts; viz. a desire to encourage its introduction, by affording the native dealers an opportunity of observing the superior advantages and economy of this mode of cleaning cotton.

6. I may add, that Mr. Brice's remarks regarding the high rate of Mr. Frost's valuation are not without grounds. From the drawings shown to me as well as the invoice of charges, it is clear that a new article, originally constructed on correct principles, may be had for much less money; and it must be considered that this is not only an altered machine, but also depreciated, in consequence of the unfortunate accident it met with in the hands of Mr. Frost.

I have, &c.
(signed) *G. T. Forbes,*
Assistant Magistrate in charge Cotton Gin Factory.

(True copy.)
(signed) *T. Ogilvy,* Collector.

RESOLUTION on a Memorandum from the Revenue Commissioner, Southern Division, No. 1490, dated the 30th May 1855, submitting a Letter from the Collector of Dharwar, with Accompaniments, and recommending the offer to Mr. Brice of the Hooblee Press-house and Presses, on the terms proposed by Dr. Forbes, as also the Gift to that Gentleman of the Cattle-power Machine belonging to the Cotton Experiments Department in that Collectorate.

V. 5572. GOVERNMENT authorise the offer of the Hooblee press-house and presses to Mr. Brice, on the terms proposed by Dr. Forbes.

2. If the Collector is satisfied that Mr. Brice will prosecute his intentions of promoting the local cotton trade, and has some guarantee of this in the investment by that gentleman, of capital in the purchase of business premises, or otherwise, Government authorise him to make Mr. Brice a free gift of the cattle-power machine, without exacting any further conditions.

(signed) *W. Hart,*
Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1005

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 19 September 1855.—V. 8198 to 8201.

(No. 2494 of 1855).

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

In handing up the foregoing application for the sanction of Government, the Revenue Commissioner has the honour to record his concurrence in the opinion expressed in para. 2 by the collector, with regard to the price to be demanded for the cotton presses.

Poona, Revenue Commissioner's Office,
28 August 1855.

(signed) *Henry W. Reeves,*
Revenue Commissioner,
Southern Division.

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V. 8198.

(No. 1363 of 1855.)

From *T. Ogilvy, Esq.,* Collector of Dharwar, to *H. W. Reeves, Esq.,* Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to transmit for your information the copy of a letter, with accompaniments, received from Dr. Forbes, superintendent cotton-gin factory at Dharwar, relative to an offer made to him in a private note by Mr. Brice, of the firm of Messrs. Brice & Co., to the effect that he is willing to purchase three small cotton gin-presses in store in the factory for 150 rupees each when complete.

2. One of those presses is now complete, and is valued by Dr. Forbes at 150 rupees, the price offered. The two others should be sold to cover the cost of their completion, at 211 rupees each.

3. Inasmuch as those presses were procured by Government for the purpose of instructing the natives of this zillah in their use, and as Government no longer press cotton on their own account, I would beg to recommend that they should be sold to Mr. Brice for the prices named above, since their use by that gentleman will forward the objects of Government by practically demonstrating to the native merchants, and others interested, the advantages derivable from them.

4. I beg to add that I have authorised Dr. Forbes to allow to Mr. Brice the use of the press that is in working order, pending further instructions on the subject.

Dharwar, Collector's Office,
21 August 1855.

I have, &c.
(signed) *T. Ogilvy,* Collector.

(No. 86 of 1855.)

To *T. Ogilvy, Esq.,* Collector, Dharwar.

Sir,

I HAVE the honour to forward the accompanying communication from Mr. Brice with reference to three small screw presses now in store at the gin factory, and beg to state for your information, that they were originally procured with the view of pressing cotton into small bales suitable for conveyance to the coast, when that article was being purchased by Government. As they are not likely to be again required for the above purpose, and are apt to spoil from keeping, I would beg to recommend that they may be disposed of.

2. One only of the above presses was put in perfect working order; the two others remain in a partially unfinished condition, and some expense will be incurred in completing them. The valuation by Mr. Frost at the time of handing over stock was 150 rupees each, but from the annexed estimate which I have framed, it will appear that the actual cost of workmanship and material amounts to 211 rupees; and if sold, the two that have not been in use ought each to fetch that sum; the other, having suffered a good deal from wear, is probably not worth more than 150 rupees.

3. As Mr. Brice is anxious to test this mode of packing before the season closes, I will, if you have no objection, hand over the latter article to him at the price mentioned, subject of course to the approval of Government, and will have the other two completed and ready for delivery by the time that an answer may be received with regard to Mr. Brice's offer.

Dharwar Cotton-Gin Factory,
18 August 1855.

I have, &c.
(signed) *G. F. Forbes,*
Superintendent Cotton Gin Factory.

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ESTIMATE showing the Cost of Construction of a Four-Maund Cotton Screw Press at the Cotton Gin Factory, Dharwar.

	Rs. a. p.	Rs. a. p.
1 iron screw with 2 female screws - - - - -	- - -	103 - 1
14 Lots with nuts of 1 inch round iron, weighing 3 maunds 7 lbs, at 2 rupees per maund of 28 lbs. - - - - -	6 8 -	
40 bolts with nuts 4½ inches long, of ½-inch square iron, weighing 20 lbs., at 2 rupees per maund of 28 lbs. - - - - -	1 6 10	
4 clamps, 4 plates and 4 bars on doors of 2 by ½-inch flat iron, weighing 4 maunds 24 lbs., at 2 rupees per maund of 28 lbs. - - - - -	9 11 5	
1 belt round the capstan of 2 by ½-inch flat iron, weighing 3 maunds 24 lbs., at 2 rupees per maund of 28 lbs.-	7 11 5	
Smith's labour - - - - -	11 1 8	
Consumption of charcoal - - - - -	1 8 -	
Wear and tear of smiths' tools, &c. - - - - -	9 7 10	
1 pair of iron hinges, wrought, 5 inches - - - - -	1 - -	
6 dozens of 2½ inches iron screws, at 3 rupees per gross of 12 dozens - - - - -	1 8 -	
3 logs of honny wood, at 10 rupees each - - - - -	30 - -	
Hire of sawing ditto - - - - -	3 - -	
Value of carpenter's labour - - - - -	20 - -	
Ditto of cooly ditto - - - - -	6 - -	
		108 15 2
	Rs.	211 15 3

Dharwar, Cotton Gin Factory,
18 August 1855.(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

To Dr. Forbes, in Charge of Cotton Gin Factory.

Dear Sir,

I BEG to say that I will purchase the one small iron screw press that is in order upon completion of the alteration for roping, for the price set on it, say 150 rupees.

I shall be glad to be allowed the temporary use of the other two, and agree to take them at the same price, provided I find them suit my purposes; they will require to be made stronger than at present, and altered in the same way as the one I am buying.

Dharwar, 30 July 1855.

I am, &c.

(signed) A. C. Brice.

(True copies.)

(signed) T. Ogilvy, Collector.

RESOLUTION on a Memorandum from the Revenue Commissioners, Southern Division, No. 2494, dated 28 August 1855, submitting a letter from the Collector of Dharwar, proposing the sale to Mr. Brice, of the firm of Messrs. Brice & Co., of three small screw presses in store at the gin factory at that station, one for 150 rupees and two for 211 rupees each.

V. 8200.

Authorised.

15 September 1855.

(signed) H. Young,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 19 October 1855.—V. 8723 to 26.

(No. 2472 of 1855.)

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

V. 8723.

FORWARDED for the orders of Government, under date 19 April last; Dr. Forbes reported his having called upon Mr. Brice to say what he would give for the press house and presses at Hooblee.

2. Mr. Brice's refusal to make an offer was also reported in his own words, which are these:—

See Mr. Brice's
letter of 18 April
1855.

"In the Government minute they reserve to themselves the right of fixing 'a reasonable price,' and I should be robbing them of an opportunity of encouraging my projected arrangements

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1007

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ments were I to name the sum that I would be disposed to give for the building and presses, and should most certainly subject myself to obloquy for some time, while Government were making themselves acquainted with the true worth of the premises, by naming a figure so entirely disproportioned to the charges with which they have been debited."

3. The minute here referred to must be the Resolution, dated 11 October 1854, No. 4674, in which the whole of the stock was considered.

4. On this, Government offered the press-house and presses to Mr. Brice at 25 per cent. discount on the original cost, on the suggestion of Dr. Forbes, and made Mr. Brice a present of certain cattle-power machinery which he asked the use of, proposing to purchase it at the end of a certain time.

5. Mr. Brice now says, he "was prepared to find that the expectations of Government would be much higher than I should feel justified in offering, and to an extent that made me indifferent to continuing a negotiation, all other proposals being refused; I am only induced to make the present offer from the disposition to assist me that the gift of the machinery manifests, and the belief that under this feeling Government will give me credit for a desire to meet them fairly, notwithstanding the large difference in our views of the value of what they offer."

6. If, however, Mr. Brice desired credit for fair dealing, he should at once have made the offer which was invited by Dr. Forbes, or have plainly informed that officer of the large difference in his views and those of Dr. Forbes, of the value of the press-house and presses which he so clearly saw. The obvious way of procuring encouragement to his proceedings, and to avoid the obloquy which he says he feared, was to state the whole case openly, in a straightforward manner, to enable the local authorities to deal with them at once, and thus at the same time save the trouble of long and repeated references.

7. It is not at all unlikely that Government have been overcharged for the house and presses; and Government have never doubted that they have been often obliged to pay much more for their work than private individuals, and Mr. Brice's unwillingness to state the whole of his mind on this subject is not very intelligible.

8. No notice need be taken of the querulous portions of Mr. Brice's letter to Mr. Ogilvy.

9. The Revenue Commissioner respectfully suggests that Government should confirm their gift of the cattle-power machinery to Mr. Brice, who seems to be extensively engaged in commercial dealings in Dharwar and Belgaon.

10. And that they once more offer Mr. Brice the press-house and presses as they are, at a fair valuation, to be determined by a committee, as proposed by Mr. Ogilvy. The price to be paid immediately a good road shall have been constructed between Hooblee and Sudasheoghur. Meanwhile Mr. Brice to be allowed to occupy the press-house at a rent to be decided also by the committee.

11. If Mr. Brice should object to take the house and presses on these terms, Government can retain them.

12. Since writing the above the Revenue Commissioner has received a further communication from Mr. Ogilvy, dated 16th instant, No. 1340, on the subject of his reference to the executive engineer alluded to in para. 7, which is herewith forwarded for the information of his Lordship in Council.

Poona, Revenue Commissioner's Office,
24 August 1855.

(signed) *Henry W. Reeves,*
Revenue Commissioner,
Southern Division.

(No. 1314 of 1855.)

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Revenue Commissioner, Southern Division.

Sir,

WITH reference to your endorsement, dated the 26th June last, No. 1794, on a correspondence with Government, in which in their resolution dated the 30th May last, No. 2657, they authorise the offer to Mr. Brice of the cotton presses and press-house at Hooblee, at a discount of 25 per cent., or for the sum of Rs. 8,449. 5. 8., I have the honour to transmit for your information the copy of a letter from that gentleman, dated the 12th ultimo, in which he declines to accept of those terms.

V. 8724.

2. Mr. Brice states that he feels bound to tender back the gift of the cattle-power machinery, lest its acceptance should be deemed incompatible with his refusal of the presses and press-house at Hooblee; but as I am satisfied that he has actually and energetically engaged in the local cotton trade, I feel sure that Government would not wish to withdraw their gift for the reason assigned by him.

3. He observes that the screw presses might be of service to him at Tuddry, but not at Hooblee, in the present state of cart communication; and adds that as the press-house would be useful to him without the presses, notwithstanding defective construction, he is willing to rent the latter till "roads give it value," when he would purchase it for the sum of

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of 3,500 rupees. He also offers to purchase the presses at whatever two that he is having made are found to cost him, provided the charge for their removal to Tuddry is deducted from their price, and that allowance be further made to him for one of the screws, if it is, as he supposes, found to be cracked.

4. Mr. Brice remarks that the erection of large screw presses at Hooblee is premature, in the present state of intercommunication, since smaller ones, suitable for pressing bales for pack bullocks to carry, are the only kind at present wanted in the interior, and that he consequently proposes erecting small presses at each of his stations in the heart of the country.

5. To this I may observe, that there is already a good road all the way from Hooblee to the ports of Coompta and Tuddry, by which large bales of cotton can be transported in carts; and that as good roads are likely to be extended shortly from Hooblee, through rich cotton lands, to the districts of Raichore and Bellary, the value of the press-house and presses at Hooblee is sure to rise. It would therefore appear to be disadvantageous to Government to part with them at a depreciated price at present, and therefore the negotiation might, perhaps, be allowed to drop, unless it is desired to afford aid and encouragement to Mr. Brice, as an enterprising merchant engaged in developing the resources of the country.

6. All things considered, I would beg respectfully to suggest that a further offer of the press-house and the presses should be made to Mr. Brice for such prices as a competent committee may put upon them, and that he should be allowed to occupy the press-house for such rent as the same committee may determine, until a good road has been constructed all the way from Hooblee to Sudasheoghur; and that he should then be bound to pay the price fixed on for them, and that in the event of a refusal of these terms the matter should be allowed to drop. The committee might be composed of Major Hebbert, Captain Anderson, Superintendent Revenue Survey, or Dr. Forbes, and a person nominated by Mr. Brice, or Mr. Brice himself, or formed in any other way that may be considered most fair.

7. An extract from that part of Mr. Brice's letter that complains of the defective construction of the Hooblee press-house has been sent for the remarks of the executive engineer, by whose department it was built.

8. Mr. Bruce complains of the slowness of the post between Dharwar and the coast, reckoning it to travel, including stoppages, at the very dilatory rate of one mile and a half an hour. Doubtless a reference on this subject to the post-office department at Bombay, and to the Government of Madras, would effect an improvement in this respect. Eventually, I have no doubt that it will be much to the advantage of trade to lay down telegraphic wires from Sudasheoghur to Hooblee, through which a line already passes to Madras, since Sudasheoghur is expected to become a port of direct export to Europe, and an important mart.

9. Mr. Brice appears, from what he states in his letter, to be very extensively and actively engaged in developing the trade of this part of India, and it is to be hoped that his operations may prove successful, and that the difficulties that he states have hitherto opposed his progress will vanish when the roads that are in contemplation by Government from the interior to the south-western port have been constructed.

Dharwar, Collector's Office,
11 August 1855.

I have, &c.
(signed) T. Ogilvy, Collector.

To T. Ogilvy, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to acknowledge your favour, No. 1,038 of 1855, of 30th ultimo, advising that Government had authorised you to make a free gift to me of the cattle-power machinery that had been obligingly lent to me, and to offer the press-house and presses at Hooblee for Rs. 8,449. 5. 8., being 25 per cent. discount on what they stand at in the Government accounts.

I thankfully appreciate the intentions of Government in giving me the machinery, but as I must respectfully decline the offer of the press-house and presses on the terms named, I feel bound to tender back the gift, lest the acceptance of the one may be deemed incompatible with the refusal of the other. I would not be misunderstood as declining the gift if it was intended to be made independent of the offer.

I have explained in a former letter, that I thought it advisable to have the presses removed from Hooblee; these away, the building remains useful only as a store; for such purpose the deep pit which cost 400 rupees is not only useless, but as much will have to be expended to fill it up or cover it over, I have had but 3,000 rupees, and 3,500 rupees named as the probable cost of erecting such another building without the pit, but I have no definite nor reliable offer. My engineer's letter, received this morning, says, "I should say it might be worth 3,000 rupees;"—"I would call your attention to the roof; you will find the tie-beams out of all proportion small, and the consequence is, they are already bent; should one break,

break, the whole roof would assuredly fall in, as the pillars would all tumble with the slightest cross pressure. The building would have no value except as old materials, unless the projected roads are fixed to pass through Hooblee. The cost to Government of the building, without the pit, is 6,000 rupees."

I should be agreeable to pay rent for the building, with the presses out of it, until the roads to Sudasheoghur through Hooblee are complete, and then to pay the extreme price I have had named, 3,500 rupees, and take over the premises; meanwhile it to be my duty to obviate the chance of the roof falling, and bear the risk of it as well as the expense.

I was of opinion that the presses could be advantageously used in other parts of the district; I am now satisfied that their use anywhere up here will be very, very limited, and beg to give my reasons: while the districts have no roads, traffic depends on pack-bullocks; a few hours' rain prevents the use of carts for days; ere the cotton reaches a made road, or any roads that may be made within the next five years, it has a coating so impermeable as to be safe from further damage for the rest of its journey; compressing may be safely dispensed with if preservation of quality is the object, unless done where the cotton is grown. The Hooblee presses make bales of 12 maunds each; bullocks can only carry that weight in two packages, and small presses in a great many places are necessary.

The bulk unpressed cotton occupies increases the risk of damage and cost of transport to Bombay, but now that presses are in course of erection by me at Tuddry, the necessity for cotton going to Bombay is obviated, and the other object of pressing done away with; the principle of pressing is good, colour is preserved, loss in weight saved, storing and transporting rendered easier, and I propose giving each of my stations in the heart of the country a small press to itself; the Hooblee presses may be brought into use at Tuddry, but they are small for my purposes. The well holds but 12 maunds of foot-rolled cotton; ginned cotton is much more bulky, and to put this weight into a bale it takes too long a time. My engineer says, with reference to them: "One I am sure is cracked so much, so as not to be safe; I think both are." Were they both new and perfectly sound, their value would be found to be absurdly disproportioned to the sum charged to Government, which is 5,000 rupees; I am willing to take them off their hands at whatever two that I am having made at Tuddry are found to cost me, the expense of removal thither to be allowed me of this sum, and allowance made for the cracked screw, if it proves to be cracked; the presses are not worth more than they will cost me to make a new, but as expediting my work I should be glad to have them, and put my establishment on to the small presses.

I was prepared to find that the expectations of Government would be much higher than I should feel justified in offering, and to an extent that made me indifferent to continuing a negotiation; all other proposals being refused, I am only induced to make the present offer from the disposition to assist me that the gift of the machinery manifests, and the belief that under this feeling Government will give me credit for a desue to meet them fairly, notwithstanding the large difference in our views of the value of what they offer; the sum I name for the building, and what I must at once expend on it, are, in my own and others' opinions, what it would cost me to construct one like it. I have only opinions to guide me in this part of the transaction; but some slight acquaintance with the items of expenditure induces me to believe that the difference between what the timber used would cost me or my contractors, and what it cost Government, would alone prove to be as much as the sum at issue between us. With regard to the presses, I shall have proof in my own accounts of what two of rather larger size and same power actually do cost; for, as I gave up all idea of taking those at Hooblee, I have put a set in hand. I make no mention of the proffered discount of 25% on cost. As respects the terms of payment, I will pay for the presses on removal; for the building, when roads give value to it. Induced by the favourable reception given to my first proposals, I acted in anticipation of Government's final concurrence, and the breaking off of the negotiation came too late to enable me to have my orders countermanded. What I should never have dreamt of, beginning without their assistance, I find myself obliged now to do for my own protection without any aid; the difficulties before me are very great, though many have been overcome; the Madras authorities attach a public importance to my success, and are doing all in their power to aid in it.

I may mention as at the head of my list of difficulties, that my firm is the only European one in Coompta, and that we have to withstand alone the combined opposition of every native merchant. Every possible measure has been adopted to deter their connexions from trading with us, and native ingenuity exhausted to drive us away. I experienced the same 18 years ago when opening the trade direct to England from Cochin, and knew what to expect before I undertook my task; but in imposing on myself my further labours, I acted under the full conviction that I should receive great assistance from this Government.

It was on the strength of my personal soundings of Tuddry River that its survey proving it a good harbour was obtained. My first assistant built a house at Coompta as the first step towards settling at Tuddry. I have had to build another, and progress is now being made towards the erection of full presses there; but every tree we use, every stone we want, has to be cut by our own establishment; the place is but now a village of 100 inhabitants, and all labour has to be furnished from Goa and this district. To divert the trade from Coompta to Tuddry, it is necessary for me to create a market at the foot of the Gaults, where traffic will diverge; this will be a matter of extreme delicacy and difficulty; wholesome competition must not be allowed to run into reckless opposition, undertaking the business for my own advantage. I must find this in its benefiting those who use the facilities I offer to all, as I profit by them myself. Opposition must be met by aid; bitterness by calmly advocating and practising friendly measures; personal and pecuniary sacrifices must

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must be made, and arrangements made to meet all requirements, that the advantages may be so apparent as to prevent the risk of disappointment, contests, and the failure of my plans. The Madras Government have just placed at my disposal the toll collections on the Sircy road to make a bunder at the place; I propose to make the market. A sum is allotted for a like purpose at Tuddry; both places have to be made post towns; I have offered to bear the expense for six months. Dawk arrangements between this, a telegraph station and the coast, have to be remodelled, and a continual correspondence kept up on the subject. It is a matter affecting the interests of this district materially that the body of buyers settled at Coompta should be able to communicate with the body of sellers in this district under seven days: at present the post only travels at the rate, including stoppages, of $1\frac{1}{2}$ miles per hour. To avoid the great depreciation of property in Coompta, which would follow an entire diversion of trade to Tuddry, I have urged forward surveys for a canal between the two places, which will be opened almost as soon as my arrangements are complete. Much more may be said; but to sum up all, I may point out that it is only for want of a road to Sudasheoghur, or the expectation of one being open for carts at all seasons for five years to come, that I make a start at Tuddry. The trade will ultimately go to Sudasheoghur, and all I do now be useless when that occurs.

As respects my operations here, I may venture to say that their influence will effect a change for the better. I have fixed stations at Roan, Nurreegul, Gudding, Nowlgoond, Summooduttee, Bunkapoor and Raneebednoor, and am opening others. My establishments buy from ryots direct, and are employing a large number of persons in foot-rolling cotton, giving proof of the superiority of quality obtainable by a little care. My ginning establishments will not be at work till next season, as my buildings cannot be erected before then, though in hand now. I hope then to have the foregoing, that I arranged for in expectation of receiving Government support.

I am obliged to become my own carrier, and expect in this department to make changes of some importance. My arrangements throughout the district and main line of road will embrace the working of about 1,000 head of cattle and a proportion of carts. At present goods take, in the fair season, 10 or 12 days to go to Coompta; mine will go in 48 hours, one day faster than the post, and continue through the season.

The labour of directing matters is very considerable, and a heavy amount is at stake on my retaining my health to set them fairly going. My very anxiety on this score may create failure, and for a long time to come deter others from following my example of settling in these districts; it was to make my mind more easy under a long continued drain and series of checks and disappointments that I sought for substantial aid from Government.

Dharwar,
12 July 1855.

I have, &c.
(signed) *A. C. Brice.*

(No. 346 of 1855.)

To *T. Ogilvy, Esq.*, Collector of Dharwar.

Sir,

I HAVE the honour, in reply to your letter No. 1306, to state that the roof of the cotton press-house is a very light one, only single tiles, and that the roof timbers possess excess of strength for this weight.

2. The roof would have been in as good order as when put up but for some shrinkage of the junglewood parts in drying more thoroughly, which they have done since put up two years ago. From this cause some deflection has occurred, but as examination shows me that, notwithstanding this, the whole framework is in full and fair bearing, without flaws, I have no hesitation in saying the roof will stand for years with fair play. All apprehension about the pillars giving way is quite groundless.

3. The cost of the building was 6,488 rupees, and that of the roof 2,677 rupees, nor would it cost Mr. Brice more than 300 or 400 rupees to add any strength to the roof he thought necessary when the building became his own property. He could not build himself a similar shed for 6,000 rupees. If its arrangements suit his purposes, he should, I think, pay a fair price for the transfer; if not, I dare say some one else will, a year or so hence, after the new bridged road is opened.

Executive Engineer's Office, D. D.
Dharwar, 15 August 1855.

I have, &c.
(signed) *W. G. Hebbert,*
Major, Executive Engineer, D. D.

RESOLUTION on a Memorandum from the Revenue Commissioner, Southern Division, No. 2472, dated 24 August 1855, with accompaniments, relative to the offer made to Mr. Brice of the cotton press-house and presses at Hooble, in the Dharwar collectorate, and the gift to that gentleman of a cattle-power machine belonging to the cotton experimental department in that collectorate.

V. 8725.

MR. REEVES' suggestions approved, and to be acted on.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

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D PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1011

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Ext. RE
I. EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 11 September 1856.—V. 5939 to 42.

MEMO (is No. 2151 of 1856.)

FORW. 1. RANDUM from the Revenue Commissioner, Southern Division, dated 11 July 1856.

V. 5939.

tober 18 2. RESOLVED to Government for orders, with reference to their resolution, dated 10 October 1855, No. 4232.

The below transcribed papers.

3. The Revenue Commissioner is of opinion that the offer of Mr. Brice to purchase out the press-house and presses should be accepted. Payment to be made within twelve months from the date on which the Government acceptance may be communicated by the Collector of Dharwar to Mr. Brice.

4. No alteration whatever should be permitted in the premises or machinery, without the permission of Government. Mr. Brice must agree to keep the premises and machinery in thorough repair until he pays the purchase-money.

5. Until payment of the price fixed Mr. Brice should pay 5 per cent. per annum on the purchase-money, i. e. 325 rupees.

6. In the event of Mr. Brice declining these terms, Government may, the Revenue Commissioner thinks, permit him to hold the house, premises, and machinery, at an annual rent, calculated at 15 per cent. on the committee's valuation, without liability for repairs.

Poona, Revenue Commissioner's Office, (signed) H. W. Reeves,
11 July 1856. Revenue Commissioner, Southern Division.

(No. 1024 of 1856.)

From T. Ogilvy, Esq., Collector of Dharwar, to H. W. Reeves, Esq., Revenue Commissioner, Southern Division.

V. 5940.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement No. 3016, dated 16 October last, on a resolution of Government, dated the 10th idem, No. 4232, approving of your suggestions, that Government should "once more offer Mr. Brice the press-house and presses as they are at a fair valuation, to be determined by a committee, as proposed by Mr. Ogilvy. The price to be paid immediately a good road shall have been constructed between Hooblee and Sudasheoghur; meanwhile Mr. Brice to be allowed to occupy the press-house, at a rent, to be decided also by the committee."

2. In reply, I have now the honour to forward for the consideration of Government the proceedings of a committee assembled at Hooblee, on the 7th ultimo, under the above authority, composed of the gentlemen named in the margin, * Mr. Brice having † accepted the terms suggested by yourself and sanctioned by Government.

3. It will be observed that the committee have agreed that the press-house at Hooblee, constructed by the executive engineer, is a strong and substantial building, in good order; that the two cotton presses in that building are well finished, made of sound teak, substantially put together, but that the plunger of one of them bends slightly at the period of greatest pressure, which is a fault that can be rectified at a trifling expense; and that one of the screws is blemished by a longitudinal wood-crack.

4. They considered that a deduction of 15 per cent. on the original cost of the press-house, which was Rs. 6,498. 15. (six thousand four hundred and eighty-eight rupees, fifteen annas), without including the charge for superintendence, would be fair and liberal, and therefore assessed its value at 5,515 rupees (five thousand five hundred and fifteen), and that a deduction of 25 per cent. should be made in the original cost of the presses, which was Rs. 5,101. 10. 11. (five thousand one hundred and one rupees, ten annas, and eleven pies); assessed their value at 3,826 rupees (three thousand eight hundred and twenty-six)

5. The value set by the committee on the press-house and presses together, thus amounted to 9,341 rupees (nine thousand three hundred and forty-one.)

6. To this valuation, however, Mr. Brice, one of the members of the committee, dissented.

7. The committee observed in their proceedings, that the intrinsic was not necessarily the market value of the building and presses, and that "the question of present value is one that can hardly be discussed, except between the buyer and seller."

8. With regard to rent for the premises, the committee determined that if it were settled that Mr. Brice is to purchase them eventually, and he undertakes to keep them in good repair, he

* President: Lieutenant Playfair, executive engineer. Members: Dr. Forbes, civil surgeon; A. C. Brice, Esq.

† In a letter to the Collector, dated 6th November 1855.

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he should pay 5 per cent. on the purchase-money agreed on, but that, if he merely intended to rent without purchasing them, he should pay rent at 15 per cent. per annum on the committee's valuation, without liability for repairs.

In a letter dated the 24th ultimo, No. 911.

9. Mr. Brice was then called upon to state, for the information of Government, whether he was willing to take the press-house and presses at the valuation fixed on them by the committee, of which he was himself a member, and in the meantime pay the rent fixed for their use by the same committee. He was also invited, in the event of his declining those terms, to state distinctly what terms alone he was willing to accept, in order that they might be submitted for the final decision of Government.

In a letter to the Collector, dated 26th June last.

10. Mr. Brice replied, "I beg to remark, that the committee did not consider it within their province to fix the value that I was to pay for the press-house and presses at Hooblee. In compliance with the request in the second paragraph in your letter, I beg to offer the sum of six thousand five hundred rupees (Rs. 6,500) for the premises, payable when the roads to Sudasheoghur are completed, or before, at my option; meanwhile I engage to keep them in thorough repair, and to pay as rent the sum of three hundred and twenty-five rupees per annum (Rs. 325), being 5 per cent. on the purchase-money, and to be at liberty to make such alterations, additions, or removals, as our business requirement call for, in so far as these do not deteriorate the value of the property, as a security to Government for the due payment of the purchase-money."

With a letter, dated 28th June 1856.

11. The proceedings were then returned to the committee, with a request that they would state their opinion on Mr. Brice's offers.

12. Lieutenant Playfair and Dr. Forbes not agreeing in opinion, stated their views in separate letters.

In a letter to the Collector, dated 30th June last.

13. Lieutenant Playfair observes, "I think the sum of six thousand five hundred rupees so far below the value of the property, that I cannot recommend its acceptance; the building has failed for its intended object, it is true, and if not sold, may be for a time idle in the hands of Government. To Mr. Brice, however, the buildings, if he wants them, should be surely worth what it would cost him to build others, and the valuation laid down in the committee's proceedings fairly expresses that value; had Mr. Brice offered eight thousand, however, I should have been inclined to say, accept it, provided the money was paid down." *Vide* the remarks following.

"2. I most strongly recommend Government in no case to agree to the condition that the purchase-money is to be paid when the roads to Sudasheoghur are finished; under present circumstances they may be never completed; and the insertion of such a clause would lead to endless difficulties. The expression 'roads,' in the plural, is indefinite; 'finished' also may lead to questions as to what finished is,—merely a moorum road, or a moorum road bridged, or a metalled road, &c., &c. If the building is to be sold, let it be unconditionally, for ready money.

"3. I think it would be unwise to agree to the conditions laid down in Mr. Brice's last para., that he may be permitted to make 'such alterations, additions, or removals as his business requirements call for, in so far as these do not deteriorate the value of the property, as a security to Government for the due payment of the purchase-money.' He should either buy the building outright, or rent it on the terms laid down for that case in the proceedings, and be allowed to make no additions or alterations without the permission of his landlord, Government.

"4. I have thus given my opinion freely, after due consideration; should Government, however, determine to accept the sum of six thousand five hundred rupees, I would most earnestly recommend that it may be a ready money sale, and not one clogged with conditions.

"5. I have asked Dr. Forbes for his opinion also, and have the honour to send it with this."

In a letter to the executive engineer's address, dated 2 July 1856.

14. Dr. Forbes states, "I have perused the rough copy of your reply to the Collector's letter, No. 950 of 1856, and beg to state that I entirely concur with your remarks in regard to the stipulation that the purchase-money should not be paid by Mr. Brice until the roads to Sudasheoghur are finished." "The indefinite nature of such a clause is objectionable, and almost certain to lead to difficulties, unless the exact description of road meant, &c., is fully and fairly specified."

"3. As Mr. Brice has not accepted the valuation of the committee, the sale and purchase become entirely new transactions, in virtue of which, he cannot lay any claim to the above condition, and as he now proposes being allowed to make such alterations and additions to the premises as the requirements of his business may demand, I think that if he is to have the property at a large sacrifice upon the original cost, it should be for cash down, or at least for payment within a reasonable period, in short, a *bonâ fide* transaction, not dependent upon any contingencies.

"4. With regard to Mr. Brice's offer of 6,500 rupees, the question appears to me to be whether it is, or ought to be, an object with Government to get rid of the property; if so, it will not, I fear, answer to estimate its value at the original cost, making the usual deductions; its actual worth is what it will fetch, and unless the Committee is prepared to point out some certain prospect of future enhancement, I think the present offer (if modified as above indicated) is at least deserving of consideration.

"5. Be the cause what it may, the enterprise has hitherto undoubtedly disappointed the expectations which gave rise to it, and as far as I can judge, its success for at least some years to come, is by no means a matter of certainty; if it should fail, the actual value becomes reduced.

reduced to that of the wood, brick and mortar of a condemned concern, and as some expense is now incurred in maintaining it, independent of the risk attending non-insurance, I am inclined to recommend that Mr. Brice's offer be accepted, provided that the payment is made at once, or within twelve months of the date of purchase."

15. Lieutenant Playfair is thus of opinion that Government should either not accept of less than 8,000 rupees (eight thousand) ready money, or rent the press-house on the terms laid down by the committee, whilst Dr. Forbes recommends that the sum of 6,500 rupees (six thousand and five hundred) offered by Mr. Brice should "be accepted, provided that the payment is made at once, or within twelve months of the date of purchase."

16. In erecting the press-house and presses at Hooblee, Government had in view the development of the cotton trade, by stimulating private enterprise, and their object would appear to be most likely to be speedily attained by allowing the premises to pass into the hands of a mercantile firm; but, inasmuch as they may hereafter rise in value, it is not incumbent on Government to accept of Mr. Brice's offers unless they are considered fair.

17. Perhaps, all things considered, it might be well to bring these transactions to a close, by accepting the terms offered by Mr. Brice, as modified by Dr Forbes, that is, that Mr. Brice should pay 6,500 rupees (six thousand and five hundred) for the press-house and presses within twelve months from the date of purchase, and rent them at 5 per cent. on the purchase-money until it is paid.

18. In the event of Mr. Brice declining these terms, he might be required to pay rent for the press-house and presses on the terms laid down in the committee's proceedings, "and be allowed to make no additions or alterations without the permission of his landlord, Government."

Dharwar, Collector's Office,
7 July 1856.

I have, &c.
(signed) T. Ogilvy,
Collector.

PROCEEDINGS of a COMMITTEE assembled at Hobblee on the 7th June 1856, in obedience to Instructions received from the Collector of Dharwar in his Letter, No. 715, of the 29th May 1856, to report upon the Value of the Press-house and Cotton Presses there.

PRESIDENT.

Lieutenant J. W. Playfair, Engineers, Executive Engineer, D. C.

MEMBERS.

Dr. Forbes, Civil Surgeon, Dharwar.

A. C. Brice, Esq.

THE committee having assembled at Hooblee proceed to the cotton press-house. It appears from former correspondence between Mr. Brice and Government, that he entertained doubts of the strength of the roof, owing to the apparent slight scantling of the tie-beam of the trusses. The executive engineer shows the committee a table of scantlings for Calicut teak timber trusses, framed from elaborate calculations made by General Waddington of the Bombay Engineers, in which the scantling of a tie-beam for a roof of the span of the press-house (28) is given as 4" x 4". That the tie beams of the press-house are 5" x 6", and though not of teak, are of a strong description of jungle wood. Mr. Brice then shows to the committee a book published for the guidance of subordinates in the Public Work Department at Madras, in which the scantling of tie-beams for the above-mentioned span is given as much greater; but it is explained to him that these dimensions are taken from Treagold's Carpentry, and are calculated for pine timber, and under the supposition that the tie-beam has to carry the weight of a ceiling, whereas the tie-beams of the press-house are subjected to a tensile strain only. The executive engineer then enters into some explanation as to the nature of the strains on tie-beams particularly, and on trusses similar to those in the press-house generally, and draws attention to the fact, that though now erected for three or four years, the roof appears in every part in excellent order. The executive engineer further states positively, that, to the best of his professional knowledge, the scantling of the tie-beam is ample, and Mr. Brice is satisfied with the explanation. The question as to the general state of repair of the building is then mooted, and Mr. Brice is requested to ask his people, who are constantly using the building, to point out any defect, or state of disrepair that might escape the notice of the committee; this is done, and from the answers received, and their own observation, the committee are satisfied that the building is in general good order, Mr. Brice fully concurring.

The committee next proceed to examine the cotton presses, two in number, and to satisfy themselves of their working condition, press a bale of cotton in each. The result is perfectly satisfactory.

These presses appear to the committee to have been made with great care, every part being well finished, the wood sound good teak, and very strongly and substantially put together.

The plunger of one of the presses bends slightly at the period of greatest pressure, but this can be put to rights at a trifling expense.

One of the screws has a longitudinal crack, which does not appear in the least to impair its efficiency, and is apparently only a wood-crack, difficult to be avoided in timber of this girth.

Mr. Brice, however, points out that such a crack renders the thread of the screw weaker and more likely to break than if the wood was perfectly sound. The other members, though considering this crack of little consequence, concur with Mr. Brice that it is a blemish.

Beyond this matter of the plunger and the crack, no further defect in the screws is apparent to the committee, nor is any other defect alleged by any of Mr. Brice's people, who are constantly at work with them.

The committee, after a fair discussion, appear to be unanimous in considering that—

1. The building is well and substantially built, and in a general good state of repair.

2. That the presses have been made up with care and very well finished; are in good working order, and sound in every respect, except that one of the plungers requires strengthening, and one of the screws has a longitudinal crack in it.

The question of value then occupies the attention of the committee.

It appears that the press-house, when completed in 1853, cost *Rs.* 6,488. 15., it having been estimated at *Rs.* 7,435. 11., showing a saving in the cost of construction over estimate of *Rs.* 946. 12.; taking into consideration, therefore, the present good state of preservation of the building, and that it has been built but a few years, a deduction of 15 per cent. from the original cost appears fair and liberal. They therefore assess the value of the building, without the presses, at *Rs.* 6,488. 15., less 15 per cent., or 5,515 rupees.

The presses appear to have cost *Rs.* 4,776. 13., to which must be added the cost of their erection, *Rs.* 263. 2. 7., and of making a crane to hoist bales from the pit, *Rs.* 61. 11. 4., making a total cost of *Rs.* 5,101. 10. 11.

From this total, considering that the presses, though in excellent working order, still have the slight defects pointed out by Mr. Brice, and have been in use for a time, the committee think it fair to make a deduction, and that 25 per cent. is liberal and meets the case fairly; they therefore assess the value of the presses at *Rs.* 5,101. 10. 11., less 25 per cent., or 3,826 rupees.

The committee believe that in their report as to the state of the buildings and presses they are unanimous; but with regard to the valuation, Mr. Brice a dissident.

In the correspondence that has previously taken place with regard to the Hooblee press-house and presses, it has been hinted that the cost of them to Government has been greater than it ought to have been; for this the committee can see no grounds whatever. With regard to the building itself, it was erected by the professional officers of Government, and the charge for superintendence, which is a large item in all works, is not included in the total cost given above.

The presses were made up in Bombay, in the Government's own workshops, and finished with great care and skill; in either case, unless fraud is supposed to have taken place, for which unfair supposition there is not one particle of foundation, the Committee cannot see why they should have cost more than they ought to have done, and therefore have refused to entertain this question at all in their proceedings.

But Mr. Brice tells the other members of the committee, that making the presses himself, he could supply and erect them at Hooblee at a less cost than that at which the committee have valued the Government presses. This may or may not be the case. The other members of the committee would willingly take anything of this kind into consideration, but no facts are at hand to guide them; no presses of the sort made by Government have been made by others and erected at Hooblee, and therefore no comparison between the price of one and the other can be made. Again, Mr. Brice suggests to the other members of the committee the propriety of measuring the presses, and taking out their cubic contents, &c., and deciding their value with reference to the market value of the materials and the probable cost of workmanship; but the other members feel that such a proceeding would never enable them to form a just valuation, the cost of workmanship in a machine of this description being very great, probably much more so than that of the materials; and though they could form an opinion as to the value of the materials, they could not on that of the workmanship, and have no reason whatever to doubt that the cost as given in the Government accounts is a fair one.

The committee having estimated the intrinsic value of the building and presses, do not wish it to be understood that this is their present value, either to Government or any other party, as under existing circumstances, experience has shown that these presses have not been resorted to, to the extent that must have been anticipated at the time of their original construction, and that as a remuneration, or even as a self-paying undertaking, they have proved a decided failure; and taking this view of the matter, the committee feel that the question of present value is one that can hardly be discussed, except between the buyer and seller.

With regard to what rent Mr. Brice should pay for the premises, the committee think that if it is settled that he is to purchase them eventually, and he undertakes to keep them in good repair, then 5 per cent. on the amount of purchase-money so agreed upon would be sufficient; if, on the contrary, he merely wishes to rent without any intention of finally purchasing, it appears to the committee that there is no other course to adopt than to charge him 15 per cent. per annum on the valuation given above (such being the rent levied generally under military regulations), the Government, of course, keeping the building in repair as owners.

The committee have thus endeavoured to give a fair statement of their proceedings, with the matters mooted in their discussion, and attach their signatures hereto, with the understanding

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standing that any one of the members may append (should he wish to do so) his own separate remarks at the foot.

(signed) *J. W. Playfair*, Lieutenant-Engineers, President.
G. F. Forbes, Civil Surgeon, Member.
A. C. Brice, Merchant, Member.

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RESOLUTION of Government.

Government sanction an offer being made to Mr. Brice on the terms proposed by the Revenue Commissioner in his Memorandum, No. 2151 of the 11th July 1856.

V. 5941.

(signed) *H. Young*,
 Officiating Chief Secretary to Government.

Communicated to the Revenue Commissioner, Southern Division, with Letter, No. 3222, dated 26 August 1856.

V. 5942.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 7th March 1857.—V. 1174 to 80.

(No. 3260 of 1856.)

Endorsement by the Revenue Commissioner, Southern Division, dated 28 October 1856.

V. 1174.

(signed) *H. W. Reeves*,
 Revenue Commissioner, Southern Division.

Poona, Revenue Commissioner's Office,
 28 October 1856.

Thomas Ogilvy, Esq., Collector, Dharwar.

Sir,

We have the honour to acknowledge your letter, No. 1492, of 4th September, with sundry enclosures, on the subject of the Hooblee screw-house.

V. 1175.

We agree to accept the premises on the terms named, namely, 6,500 rupees (six thousand five hundred), to be paid in 12 months, and interest, at the rate of five per cent. on the above amount, from this date to the date of payment.

Coompta, 16 September 1856.

We have, &c.
 Pr. pro. *A. C. Brice & Co.*
 (signed) *Andrew Brand*.

(No. 1627 of 1856.)

True copy forwarded to the Revenue Commissioner, Southern Division, with reference to his endorsement, No. 2673, dated 29th ultimo.

Dharwar, Collector's Office,
 23 September 1856.

(signed) *T. Ogilvy*, Collector.

On Government
 Resolution,
 No. 3222 of 26th
 idem.

(No. 2994 of 1856.)

It being desirable that in stipulations of this description the exact terms should be detailed and settled with legal formality, the Collector is requested to explain whether he has made provision for a settlement of the kind with Mr. Brice, to be made after final receipt of the orders of Government.

2. The Revenue Commissioner, Southern Division, observes, that in repeating the terms on which Mr. Brand, for Mr. Brice, accepts the offer of Government, no allusion is made to those in the third paragraph of the Revenue Commissioner's report to Government of 11th July, on the subject of alterations. The Revenue Commissioner requests, therefore, to be informed whether or not they are agreed to by Mr. Brice.

(signed) *H. W. Reeves*,
 Revenue Commissioner, Southern Division.

Poona, Revenue Commissioner's Office,
 29 September 1856.

(True copy).
 (signed) *S. St. J. Gordon*,
 First Assistant Collector in Charge.

1016 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

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(No. 1811 of 1856.)

WITH reference to the preceding endorsement, the First Assistant Collector in charge has the honour of forwarding for the approval of Government the accompanying original document, duly executed by Mr. Brand on behalf of Messrs. Brice & Co.

Dharwar, Collector's Office,
18 October 1856.

(signed) S. St. J. Gordon,
First Assistant Collector in Charge.

(No. 4501 of 1856.)

REFERENCE to the Revenue Commissioner, Southern Division, dated 17 November 1856.

V. 1176.

IN para. 6 of his memorandum, No. 2151, dated 11 July 1856, the Revenue Commissioner stated, that in the event of Messrs. Brice & Co. declining the terms proposed to them, Government might permit them "to hold the house, premises, and machinery at an annual rent, calculated at 15 per cent. on the committee's valuation." This proposal was sanctioned in the Government resolution, No. 3222, dated 26 August 1856.

2. Clause 3 of the agreement now submitted by Mr. Reeves provides that Messrs. Brice & Co. are "to pay for the use of the same at 15 per cent. on the purchase-money agreed on, or at the rate of 1,575 rupees per annum."

3. The Revenue Commissioner, Southern Division, is, therefore, requested to furnish explanation as to why interest is calculated on the purchase-money, instead of on the amount of the committee's valuation; also to state how interest at 15 per cent. on 6,500 rupees (being the amount of purchase-money) amounts to 1,575 rupees per annum.

Bombay Castle, 17 November 1856.

By order, &c.
(signed) H. Young,
Officiating Chief Secretary to Government.

(No. 210 of 1857.)

REPORT by the Revenue Commissioner, Southern Division, dated 23 January 1857, with Enclosure.

V. 1177.

WITH reference to the foregoing, the Revenue Commissioner, Southern Division, has the honour to annex an amended agreement, entered into by Messrs. Brice & Co., which is in strict accordance with the terms proposed by the Revenue Commissioner, and sanctioned by Government.

Poona, Revenue Commissioner's Office,
23 January 1857.

(signed) H. W. Reeves,
Revenue Commissioner, Southern Division.

V. 1178.

WE, the undersigned, agree to purchase from the Government of Bombay their press-house and serow cotton presses at Hooblee, for the sum of 6,500 rupees (six thousand and five hundred), payable on or before the 15th September 1857, and until such purchase-money be paid, to pay rent for the use of the premises at 5 per cent. on the purchase-money, or at the rate of 325 rupees (three hundred and twenty-five) per annum.

2. We further engage to make no alteration whatever in the premises or machinery without the permission of Government, and to keep them in thorough repair until the said purchase-money shall have been paid.

In the event of our failing to pay the stipulated purchase-money on or before the 15th September 1857, we engage to return the premises and machinery to Government in an undamaged state, and to pay for the use of the same at 15 per cent. on the calculation of the committee, or at the rate of 1,401 rupees (one thousand four hundred and one) per annum, less such charges as may have been incurred for ordinary repairs.

Pr. pro A. C. Brice & Co.
(signed) Andrew Brand.

V. 1179.

RESOLUTION of Government.

Approved and sanctioned.

(signed) H. Young,
Officiating Chief Secretary to Government.

Communicated to Revenue Commissioner, Southern Division, with letter, dated 20 February (No. 217) 1857.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1017

No. 24 of 1851.—Territorial Department, Revenue.

III
Bombay.

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

Honourable Sirs,

WE have the honour to forward copy of our proceedings, consequent on an application made by the Chamber of Commerce in this city, to facilitate the inquiries which Mr. A. Mackay has been deputed to make, as to the causes which prevent an increased growth of cotton in India.

Rev. Cons. 1851,
V. 2483 to 86,
Circular No. 1704,
and Resolution
No. 1707, dated
25 February 1851.

Bombay Castle,
3 March 1851.

We have, &c.
(signed) *Falkland.*
T. Grey.
J. P. Willoughby.
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated March 1851.—V. 2483 to 86.

From *John Connon, Esq.*, Secretary Chamber of Commerce, to Mr. Chief
Secretary Malet.

Sir,

I HAVE the honour, by direction of the chairman and committee of the Chamber of Commerce, to request the favour of your bringing before the Right Honourable the Governor in Council the annexed copy of a letter received by them from the chairman of the Manchester Chamber of Commerce, introducing to them *Alexander Mackay, Esq.*, who has been deputed by that association to come to India to inquire into the causes which prevent an increased growth of cotton in this country; also the annexed extracts from the minutes of proceedings at a special general meeting of the Bombay Chamber, convened on Wednesday the 12th of February 1851, to receive Mr. Mackay, from which documents his Lordship in Council will at once perceive the objects of Mr. Mackay's mission, and the spirit in which this Chamber has received him.

V. 2483.

2. The committee is aware that it is unnecessary, except as a matter of form, to comply with the resolution passed at the late general meeting, in informing the members of this government of Mr. Mackay's arrival here, of which his Lordship in Council is aware; and for the same reason they direct me, in "expressing a hope that the Government will afford him every facility in the prosecution of his researches, whether at Bombay or throughout the Presidency," to add that they are well assured his Lordship in Council will require little solicitation to induce him to comply with that request which they now respectfully, and in terms of the Chamber's resolution, tender.

Bombay, Chamber of Commerce,
19 February 1851.

I have, &c.
(signed) *John Connon,*
Secretary.

COPY Letter from the Chairman of the Manchester Chamber of Commerce and Manufacturers to the Chairman and Committee of the Chamber of Commerce, Bombay.

Gentlemen,

It will have become known to you, through the report contained in the Manchester newspapers of the 9th of November last, one of which was forwarded to you by our secretary, that, at a special general meeting of this Chamber, held on the 7th of that month, it was unanimously resolved to depute *Alexander Mackay, Esq.*, to India, to make full and impartial inquiry into the obstacles which prevent an increased growth of cotton there.

V. 2484.

You will also have observed that the third resolution of that special general meeting was couched in the following terms: "That this Chamber, recognising with much pleasure the interest always manifested by the Chamber of Commerce of Bombay in the question of an increased growth of cotton in India, authorises its President to address a letter on its behalf, introducing Mr. Mackay to the members of that influential association, and recommending him to their good offices and assistance in the prosecution of his important mission."

In the fulfilment of this duty, I now introduce Mr. Mackay to your most kind, confiding, and zealous attentions, being convinced that you will find in him all the talents and independence and rectitude of character so requisite in a serious investigation of this kind, which will inspire confidence in the unbiassed truth of his reports, and render any suggestions that may arise out of this inquiry deserving of the gravest consideration.

To an enlightened body like yours I need not enter into the motives which have prompted the course now practically adopted. The simple fact that the cultivation of cotton has rather declined than increased in India; that although the manufacturing industry of this country has for some years past been most injuriously affected for want of sufficient raw material, the efforts hitherto made to render the quality of Indian cotton acceptable in
this

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this market have been almost barren of result; the belief that there must be some cause or causes for an apathy so depressing to India and so hurtful to the interests of both countries; the conflicting opinions given respecting those causes; the certainty that India is capable of growing good cotton; the assertion of the representative of the East India Company in the House of Commons during the debate in that House on the 18th of June last, that India did not want to grow good cotton; the often declared misery of the ryots; and the impossibility that the resources of India can ever be developed under the system which has hitherto prevailed there; though not the whole, are yet grounds amply sufficient to call for a searching but independent examination into the sources of so much unmitigated and unremedied evil. This Chamber urged the Imperial Government to undertake this scrutiny, but the memorial was abortive, and I refer you with extreme regret to the report of the debate of the 18th June for the most unsatisfactory reasons assigned, why the House of Commons should refuse to sanction such an inquiry.

But the inertness of Government cannot warrant a people in tamely enduring evils which may be remediable, and therefore every other resource failing, this Chamber has determined to endeavour to ascertain the cause of the stunted commercial intercourse between Great Britain and her most valuable dependency, and, if possible, how it may be improved, and to this end seeks with confidence the valuable co-operation of your Chamber.

In no way can you render a more important service than by selecting some gentleman, native or European, well skilled in the languages and customs of the country, who may truthfully and without bias assist Mr. Mackay in his important investigations.

I have reason to hope that this mission will not meet with any obstruction from the Government of India.

By joining us cordially in the prosecution of this important inquiry, I venture to hope that you will contribute to the social and economical improvement of India, and to an eventual enlargement of commercial intercourse between the two countries.

Chamber of Commerce and Manufactures,
Manchester, 16 December 1850.

I have, &c.
(signed) *Thomas Bazley*,
President.

EXTRACT from the Minutes of Proceedings at a Special General Meeting of the Bombay Chamber of Commerce, convened on Wednesday the 12th February 1851, to receive *Alexander Mackay*, Esq.

"It was moved by J. Smith, esq., seconded by R. Strong, esq., and unanimously resolved,—

"That this meeting, having heard read the letter of Mr. Bazley, president of the Manchester Chamber of Commerce and Manufactures, dated 16th December last, introducing Mr. Mackay to the chairman and committee of the Chamber of Commerce at Bombay, offer to Mr. Mackay a cordial welcome to India; and desires to tender to him all the resources and assistance of this Chamber in his proposed inquiry into the causes which prevent an increased growth of cotton in India.

"That the secretary be instructed to draft a letter in reply to that of Mr. Bazley, informing him of this resolution; and that the committee of this Chamber will hold themselves in readiness to meet Mr. Mackay, and to forward his views in any way that he may think proper to suggest; and should it be thought desirable, this Chamber will be prepared to give their opinion on any points or principles connected with this question that may be brought under their notice by the Manchester Chamber, or by Mr. Mackay, at any time.

"That a letter be addressed by the Chamber to the local Government, informing them of Mr. Mackay's arrival in this country, and of the objects of his mission, and expressing a hope that the Government will afford him every facility in the prosecution of his researches, whether at Bombay or throughout the Presidency.

* * * * *

"On the suggestion of the chairman, it was agreed unanimously to elect Mr. Mackay an honorary member of the Chamber; the meeting dispensing with the ballot customary on such occasions."

(True extract.)

Bombay, Chamber of Commerce,
19 February 1851.

(signed) *John Connon*, Secretary.

MINUTE by the Right Honourable the Governor, dated 19th February 1851, subscribed to by the Honourable Board.

V. 2485.

THE Chamber of Commerce to be informed that we shall have much pleasure in affording Mr. Mackay every facility in our power, and any information of a description likely to be

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1019

be useful that our records afford, and that instructions to assist that gentleman will be sent to the several collectors and political officers.

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(signed) *Falkland.*
J. Grey.
J. P. Willoughby.
D. A. Blanc.

19 February 1851.

(No. 1517 of 1851.)

From Mr. Secretary *Goldsmid* to *John Cannon, Esq.*, Secretary Chamber of Commerce.

Sir,

I HAVE laid before the Right Honourable the Governor in Council your letter, dated 19th instant, and its accompaniments.

V. 2486.

2. Government will have much pleasure in affording Mr. Mackay every facility in their power, and any information of a description likely to be useful that their records afford. Instructions to assist that gentleman will also be sent to the several collectors and political officers.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 20 February 1851.

(CIRCULAR.)

(No. 1704 of 1851.)

To all the Collectors, the Commissioner at Sattara, and Agent at Colaba.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to forward you copy of a letter, and its accompaniments from the secretary to the Chamber of Commerce, dated 19th instant, and to request that you will assist Mr. Mackay in the prosecution of his researches should he visit your collectorate.*

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 25 February 1851.

(No. 1705 of 1851.)

RESOLUTION, dated 25th February 1851.

ORDERED, that copy of the above letter, and its enclosures, be transferred to the Political Department, with a request that similar instructions may thence be issued to the officers subordinate to that department.

(signed) *H. E. Goldsmid,*
Secretary to Government.

COPY of Revenue Letter from the Honourable the Court of Directors, dated 30th November, No. 17 of 1853.

Our Governor in Council at Bombay.

1. WE transmit in the packet 20 copies of a work just published, entitled "Western India Reports, addressed to the Chambers of Commerce of Manchester, Liverpool, Blackburn, and Glasgow, by their Commissioner, the late Alexander Mackay, Esq."

2. We desire that you will furnish the collectors of land revenue, whose districts are particularly referred to, as well as such other public officers as you may think fit, with copies of these Reports, and with instructions to submit to you, through the Revenue Commissioners, and with as little delay as possible, such remarks as they may have to offer on the statements contained in them.

Surat, Broach,
Kaira, Ahmedabad,
Dharwar, Bel-
gaum.

3. You

* "District" to be substituted in circular to Agent at Colaba and Commissioner of Sattara.

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3. You will forward to us copies of these remarks as they are received by you; and you will subsequently, after duly considering the reports of the local officers, submit, for our information, any observations or suggestions which you may deem it expedient to make on the subjects discussed in the work in question.

London, 30 November 1853.

We have, &c.
(signed) *R. Ellice,*
(And other Directors).

EXTRACT Para. 42 of Revenue Letter to the Honourable the Court of Directors, dated 2 January, No. 2 of 1855.

42. THESE copies were, on receipt, distributed to the Revenue Commissioners, Northern and Southern Divisions, the collectors of the districts named by your Honourable Court, superintendents of revenue survey and assessment, Goozerat and Southern Mahratta country, &c., with directions to attend immediately and carefully to the instructions contained in the 2d para. of your despatch.*

COPY of Revenue Letter from the Government of Bombay, dated 29 August, No. 79, of 1855.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

FROM para. 42 of our letter, No. 2, dated the 2d January last, your Honourable Court will have learnt the instructions we caused to be issued, consequent on your despatch, No. 17, dated the 30th November 1853, and the manner in which the 20 copies of the late Mr. Mackay's work, entitled "Western India," therewith forwarded, were distributed.

2. As yet we have received in this department only the reports noted in the margin.†

3. We beg to forward copies of these papers, in accordance with the instructions contained in the 3d para. of your despatch, above quoted, and to inform your Honourable Court that we shall hereafter do ourselves the honour of offering such observations and suggestions as may occur to us on the subjects discussed in the work in question.

We have, &c.
(signed) *Elphinstone.*
J. G. Lumsden.
A. Malet.

Bombay Castle, 29 August 1855.

No. 1325 of 1855.—Territorial Department, Revenue.

From *H. W. Reeves, Esq.*, Revenue Commissioner, Southern Division, to *H. Young, Esq.*, Officiating Chief Secretary to Government.

Sir,

IN compliance with the orders issued to me in Mr. Goldsmid's letter, No. 598, of 28th January 1854, I have the honour to hand up, for the information of the Right Honourable the Governor in Council, three letters from Captain W. C. Anderson, Superintendent Revenue Survey, Southern Mahratta Country, Mr. M. J. M. Stewart, First Assistant Collector of Dharwar, and Mr. Havelock, First Assistant and Acting Collector of Belgaum, containing remarks on the work entitled, "Western India, Mackay."

2. Captain

* Letter No. 17, dated 30th November 1853, paras. 1 to 3. Transmission by the Honourable Court of 20 copies of a work entitled "Western India Reports, addressed to the Chambers of Commerce of Manchester, Liverpool, Blackburn, and Glasgow, by their Commissioner, the late Alexander Mackay, esq."

† Letter from the Revenue Commissioner, Southern Division, No. 1325, of the 14th May 1855, and enclosures, being reports from Captain W. C. Anderson, Superintendent Revenue Survey, Southern Mahratta Country; Mr. M. J. M. Stewart, First Assistant Collector of Dharwar; and Mr. Havelock, First Assistant and Acting Collector of Belgaum, enclosure, No. 1.

2. Captain Anderson addresses himself, in the first place, to a review of Mr. Mackay's statements on the subject of the revenue survey in the Southern Mahratta country.* He notices, next, those on the cultivation of cotton; then those on roads in the same province, as they are set forth in Chapter II. of that gentleman's Report; and concludes with some remarks on the Preface. Attached to Captain Anderson's Letter is an Appendix, in which are pointed out a number of inaccuracies relating to the old and new land assessment contained in the early part of the chapter.

3. I held the offices of Collector of Belgaum and Political Agent, Southern Mahratta country, from the commencement of 1844 to the end of 1846, and again from the latter end of 1849 to the end of 1851, having been absent on sick leave during two intermediate years, 1847 and 1848, and during 1849, having been detained on duty at Poona; and as Mr. Inverarity, the late Collector and Political Agent, has left India without giving me his opinion of Mr. Mackay's Report, I propose to add to the comments of Captain Anderson and the other two gentlemen such remarks on that work as are suggested by my own experience in the Southern Mahratta country.

4. At pages 268 and 269 Mr. Mackay observes that the jagheerdars of the Southern Mahratta country "have no longer the privileges accorded to them under the Mahratta regime, being reduced almost to the condition of simple landlords, their estates for all municipal purposes being virtually under the control of the British authorities. The Collector of Belgaum is Political Agent for the management of their estates; there the whole of the Southern Division may be regarded as exclusively under British control. The same cannot be said of the Northern Division. It is important to bear in mind the position, in this respect, in which the Southern Division is placed, as it gets rid, here at least, of the excuse so readily preferred by the partisans of Government †, that its inaction, as regards internal improvement, is to be attributed to the want of co-operation on the part of native States. The whole country and its resources, with the single exception of the incomes arising from the jagheerदार estates, are our own, to do with them as we like."

5. As remarked by Captain Anderson, in his Appendix, on these words, the position of the jagheerdars with respect to the British Government is very much misrepresented. It is strange that Mr. Mackay should have reported what anybody could have told him is directly opposed to fact. The Political Agent of the Southern Mahratta country has no power to interfere in any manner in the internal management of the Jagheer States; he may give his advice, and take cognizance by inquiry, by disapprobation, and report to Government of any instances of gross misrule, but he is not permitted to alter existing customs in a single particular. The policy observed by Government towards these States has always been that of non-interference, except in cases of flagrant injustice and mismanagement or disputes. Thus the Moodhole Rajah has been several times threatened with some severe mark of displeasure, in consequence of his shameful police and his injustice; the late Jasgaum Chief Bhow, Sahib Putwurdhun, was often blamed for his revenue and financial embarrassments, and neglect of the interests of his subjects; the debts of Madhow Roa Sahib Patwurdhun, of Meeritch, became such a crying evil, that the Political Agent was obliged to take them in hand, and settle them; the disputes between the Chief of Koorundwar and his brothers have attained to that degree of inveteracy, owing to the dissolute life of the former, that the latter prayed for a partition of the family property, which Government have assented to. But the Political Agent does not superintend the assessment or the collection of the revenue, or the affairs of the towns and villages; all this has been very jealously retained in their own hands by the jagheerdars, as a privilege accorded to them under the Mahratta rule, and guaranteed to them by treaty by the British Government. They are not simple landlords, but rather sovereigns in their own territories, having power to inflict any punishment, except capital, without reference to the Political Agent.

6. The Jagheer States as they stand at present may be valued at 14½ lacs rupees per annum; their extent is not just now ascertainable; but their population is 4,95,700 souls. In other words, a tract of territory is occupied by them in the Southern Mahratta country equal to a collectorate, into which Government have not been able to introduce any works of internal improvement, owing to an entire want of co-operation. Until these estates lapse, for instance, the survey cannot be extended to them.

7. Mr. Mackay, during his stay at Belgaum, was supplied by me with every kind of information he desired. I remember one day sending him 15 files of correspondence connected with the revenue; he questioned me freely, day after day, on all subjects. I withheld from him nothing that was in my power to communicate; and I am at a loss to conceive where he obtained the above information, to which he has attached, I observe, a considerable degree of importance.

✓ 8. There can be no doubt that the Commissioner very greatly underrated the extent of land available for cotton cultivation in Sattara, at 40,000 acres (page 269); Captain Anderson's estimate ‡ is, I should think, much nearer the truth.

9. In

* Book 2d, Southern Mahratta Country.

† Understood by the Revenue Commissioner.

✓ ‡ From 3,50,000 to 4,00,000 acres, of which one-third, or 1,25,000, will be under cotton annually.

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9. In his account of the old tenures, page 274, Mr Mackay has some remarks which I must notice. He observes that the general opinion seems to "be that the meerasdar was only liable for the rent of so much land as he actually cultivated, being exempt from any payment in respect of the uncultivated portion." My experience leads me to hold the contrary. The meerasdar was liable, just as an oopree or common cultivator, for the assessment (fixed, it should be remembered) of all the lands set against his name in the village accounts. Before the survey he often obtained remissions, it is true, for various reasons, such as bad seasons, unsound lands; and these were freely granted under the British Government by the Collectors; because it was allowed on all hands that the assessment was oppressively high. But I have never heard the liability of the meerasdar to the full extent of his holding, questioned. It is of importance to bear this in mind, since Mr. Mackay argues at page 304, that the revenue survey has placed the meerasdar in a less favourable position than he was before, since he is now called upon to pay for the uncultivated portion of his holding.

Page 275.

10. Captain Anderson points out in his Appendix another mistake connected with the subject of tenures, into which Mr. Mackay has fallen. "Jodee" does not resemble "Kharbundee" in the least; and with respect to Chalee tenants, noticed at page 277, it may be remarked that they are confined to the Canarese talookas, of Sholapoor, and a few talookas of Belgaum, and also that, although not recognised as meerasdars, they were never dispossessed.

By village.

11. Mr. Mackay informs the public that the old system of assessment was different in the Northern Deccan and Southern Mahratta country. Here again he has fallen into another very palpable error, in consequence of his failure to ascertain that the land assessment, both in the Northern Deccan and in the Southern Mahratta country, was actually fixed under the late Government; and therefore that a ryot was never at any loss to know what amount of assessment he was liable for. It was, however, necessary for the prevention of fraud to inspect the lands; this was done as soon as practicable after the crops were above the ground. If remissions were required for damage sustained by the crops, or for unsown lands, another inspection became necessary, when the grain was ripe, or nearly so. The annual settlement had nothing to do with the assessment, strictly speaking; that being already fixed, it took account of abatements from the assessment. Under the former Government, previous to the reign of Bajee Row, the "Mouzawar" settlement prevailed in the Deccan and Southern Mahratta country. The mamledar, after an examination of the accounts of the cultivation, settled annually with the village officers; and as the latter were responsible for the correctness of the papers submitted by them to the head of the district, they were of course obliged, for their own satisfaction and that of the Government, to inspect the holdings of most of the ryots. But there was one settlement only; Mr. Mackay appears to have confused assessment with settlement and inspection.

12. The observations of Mr. Mackay, at page 276: "The individual assessment was then made, when it was determined according to his means of payment, chiefly from the character of his crop, what proportion of the aggregate village rent each ryot had to pay. The better his crop, it might be from superior industry, the greater his ability, and consequently the more he had to pay. The poorer his crop, it might be from indolence, the less his ability, and consequently the less he had to pay. This was assessing by crop with a vengeance, visiting industry with a fine, whilst indolence was let off with a drawback." And again, page 278, "Towards the close of the Mahratta rule, the districts were farmed out," &c. &c. &c. Again, page 324, "Such was the condition of the ryots in the Deccan, not only anterior to the establishment of British rule, but between the period," &c. &c. &c.; these and similar observations to be found not sparingly scattered about this portion of Western India, convey a correct idea of the working of the farming system introduced by Bajee Row, when the demands of the numerous mamludars who farmed the revenue were, generally speaking, limited only by the means of the ryot to satisfy them. But in telling his employers that such was the state of things in the Deccan anterior to Mr. Fringle's survey, and in suggesting that the British authorities advisedly adopted and continued that system in the Southern Mahratta country, which he describes as "admirably adapted for keeping the cultivator constantly in the toils, by enabling his landlord to deprive him at all times, and under all circumstances, of his entire surplus means," the author has again left himself open to the charge of misrepresentation. The Deccan and Southern Mahratta districts came into our hands in a state of exhaustion and confusion, owing to war and mismanagement, and it may be freely conceded that in our ignorance of the country, and former systems, we at first committed many errors in dealing with the revenue which very much embarrassed us afterwards; but I very fearlessly assert that we soon found out and acknowledged that the assessment was unequal, as well as too high, and that we did all we could to alleviate it by permanent reductions, by allowing liberal annual remissions on every imaginable account to all ryots, and by frequently wiping off the outstanding balances which unavoidably accumulated. The Collectors were constantly instructed by Government to practise forbearance; they were told that it was far better at once to excuse a ryot the whole or portion of his assessment, when his crops failed, than by insisting on the full amount, run the risk of having afterwards to deal with it as an outstanding balance, crippling the ryot's means, and encumbering the books. I held charge of the Nassick Sub-Collectorate, and of the Belgaum Collectorate, each for about five years before the introduction of the revenue survey, and I never experienced the slightest difficulty,

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difficulty in getting in the whole of the annual revenue, which I invariably settled on the indulgent principles laid down by Government. What little remained unrealised at the end of the year rarely amounted to 500 rupees.

13. The observations of Mr. Mackay, therefore, are quite inapplicable to the principles and practice of the British authorities, and I am surprised to find him so incorrectly informed on a subject which it behoved him to place before the public in its true light.

14. I also assert that Mr. Mackay conveys a most incorrect idea of the revenue system of the Mahratta Government anterior to the reign of Bajee Row, which we have every reason to believe, on the whole, wise and forbearing.

15. Proceeding with Mr. Mackay's statements, I shall refer Government for replies to the strictures on the revenue survey and assessment to Captain Anderson's and Mr. Steward's letters, where they will be found very fully and ably given under the following heads:

1. Page 279. Prolongation of "abuses in districts," which but for the promised advent of the survey might have been removed years ago.

2. Want of permanency and security of tenure consequent on the assessment being fixed, but for a period of 30 years.

3. The rates of assessment may become inappropriate in consequence of changes in position of markets, seats of trade, consequent on the extension of roads, and facilitation of the transport of produce.

4. The new survey does not dispense with the necessity for annual inspections.

5. The new rates of assessment are not sufficiently low.

16. To the refutations of these officers I will add that, as appears to me, Mr. Mackay must have brought to his inquiry into the merits of the new survey a mind unwilling to receive anything as good, except in so far as it coincided with English practice, and that before coming to a decision on the several points which came under review he omitted to ascertain the sentiments or the actual condition of the ryots themselves.

17. For instance, he concludes that as the tenure conferred by the survey is only for a limited period, the ryot has not a proprietary right in the soil, and he insinuates that in limiting their claim to a mere tax or rent, and conferring great benefits on the people, Government have merely acted up to their past policy, that of screwing out of the ryot his very last mite, "leaving him his farm, with just life enough in him to till it," page 325. It may be admitted freely that Government has not resigned its power over the assessment, but there is still the fact that Government has limited its right to the assessment, and that so long as he pays the assessment, the title of the occupant to the possession of the field is indestructible, he may do just as he likes with it; he may cultivate it, or he may convert it into a tank; he may build a house on it, or even a temple. In the words of Captain Wingate:—

"The only way in which the title of a cultivator to any field can be vitiated is through his failing to pay the assessment laid upon it. And he will be called upon to pay this assessment upon every field entered in his name in the village books, without reference at all to the circumstance of its being waste or cultivated. So long as he pays the assessment, no field can, under any circumstances, be struck or left out of his holding except upon his own written application to that effect, under the provisions of Rule 20 (Joint Report), and it will thus be evident that no rival or other party could, by possibility, step in and supplant him * * * *. It seems to me difficult to imagine a more secure title to occupancy than this: it is absolutely free from all conditions except the one of discharging the Government land tax, and this condition, it is evident, could not be dispensed with under any plan of management whatever.

"The payment of the assessment affords a valid and sufficient answer to all objections."†

It is well known that holders of dry crop land in the Deccan, rated at one or one-and-a-half rupee per acre, raise embankments which cost them from 50 to 100 rupees, for the purpose of converting it into rice beds. There are numerous instances of men who have not more than half of the 30 years' lease to run digging wells in their fields, which cost them nearly as much as, or more than, the aggregate assessment of the whole term of their lease. This is more or less the case wherever the revenue survey has been introduced, and it shows that whatever may be the opinion of Mr. Mackay, security of tenure is a truth thoroughly believed in by the Deccanee and Southern Mahratta country ryot. The fact is that the ryots never had a doubt about the matter; they can count their forefathers in the lands they now hold by the dozens, if not by the hundreds; they were never rejected by the even the avaricious farmers of Bajee Row Peishwa, and they have the firmest trust in the parental benevolence and goodness of our Government; they never dream of insecurity of tenure. If a ryot had it to spend, and a necessity presented itself, he would spend 2,000 rupees

* Para. 5, letter to the Revenue Commissioner, No. 239 of 1848.

† Para. 6 of above letter.

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rupees on his land just as soon as 200 rupees. Facts are stronger than theory, and if Mr. Mackay could have placed English estates out of sight for a moment, and taken the trouble to inquire fairly of the ryots themselves whether they consider their holdings insecure or otherwise, he would have got an answer that would have cleared up all his doubts on this score.

18. The public feeling of the cultivators in the surveyed districts is further most decidedly marked by the earnestness and determination with which they maintain their rights whenever they are assailed. The occupant now looks upon himself as "maluk" (owner) of his field, which he knows to be both heritable and saleable; sales are frequent in the flourishing districts of Dharwar, and the neighbourhood of all large stations. At Poona, where the Government assessment is sometimes as low as one-tenth of the produce, sales have been effected of survey fields by meerasdars at 35 rupees, 50 rupees, 100 rupees, 110 rupees per acre, the assessment being at one rupee or Rs. 1. 8. per acre.

19. But it is argued, at the end of thirty years the terms of Government may be altered, therefore there is no certainty that the ryot's tenure will not be destroyed. The meaning of this is that Government, by tyrannically raising the assessment at the end of the first leases, may force the holder out of his land. But so also might it be urged that the House of Commons may assess the income tax or the road rates so highly as to compel proprietors in England to give up their estates and houses. But are the holders of those estates considered a whit less the proprietors of them because it is barely possible for a man to entertain notions like those expressed by Daniel O'Connell, and to say that Government is absurd enough to contemplate the aggrandizement of itself by the systematic impoverishment of its subjects?

20. In Mr. Mackay's opinion it would have been extremely easy to have transformed the present measure (the survey rates, with a 30 years' lease), into a permanent settlement, in which, among other things, due regard could be had to the occupiers of smaller holdings, whose liability to a sudden diminution of stock ought, he says, to reduce their rent to a lower point than it might otherwise be brought to. In venturing this opinion, which is likely to be very readily adopted by English readers, it behoved the writer to explain how he proposed to carry it out. The impropriety of a permanent assessment is fully exposed in the early portion of the joint Survey Report, and in Captain Anderson's and Mr. Stewart's letters. And how, I would ask, is the assessment to be adapted to a man's stock or means, to the liability here spoken of? By what process are we to find out whether a man who holds a field of 20 acres only can pay five rupees or 30 rupees? Numbers of rentpayers cultivate one or two fields only from sheer convenience, and not from want of means; they combine trade, or other business, with agriculture; part of the year they are cultivators of their land, and part of it they become carriers, or grain and timber merchants; they sometimes have extensive herds and very little land. A man with 20 acres may, for aught we know, have more property than another man who has 200.

21. Far wiser, in my opinion, has been the principle laid down by Government for regulating the assessment, which is, to avoid all inquisitorial interference with the ryots; to ignore the ever-varying distinctions which present themselves in estimating liability with reference to individual means, and to fix the rates on circumstances of a permanent nature. The measure adopted by the survey of regulating the ordinary size of fields by the quantity of land capable of being cultivated with the smallest amount of stock, is one of obvious propriety, as explained very fully in the joint Report; it had nothing to do with the classification of the soil or the assessment, but it affords every reasonable opportunity for ryots to accommodate their holdings to their means; and this is all that can or need be done.

22. Supposing for a moment, however, that the Bombay Government, of whom Mr. Mackay, "judging from past experience," expresses so very low an opinion, were to act on his advice, and at once declare the survey rates permanent, it is not explained how the ryots would find themselves better off than they are now. We are given plainly to understand, in "Western India," that Government are not honest (in the abdication of their proprietary right) in the land; and, if this is true, landholders would certainly be just as uncomfortable under permanent rates as under a 30 years; for a selfish, dishonest administration may render the tenure of land quite as insecure, in the former case, by the reimposition of burthensome cesses on grain cattle, lately abandoned, as they may in the latter by directly increasing the land-tax. But Mr. Mackay's misrepresentations and errors are too numerous to allow of his gaining credit among sober-minded men in the endeavour to represent the Bombay Government as animated by feelings of mere selfishness in dealing with the cultivators. The truth is that, to some persons, the realization by Government of so considerable a portion of the revenue direct from the land sounds strange; the hostility of Mr. Mackay is a plain proof of this; it ought not, however, to be forgotten that, in India, the land-tax is by far the most popular, and the best understood mode of raising a revenue.

23. In opposition, then, to Mr. Mackay's accounts to his employers, I maintain that the tenure of the cultivator is secure, and not only that, but that the cultivator always was secure; this is now more so than ever. That in spending an enormous sum of money in carrying through the revenue survey, Government gave a proof of its benevolence and honesty of purpose towards the cultivators, which none but a prejudiced mind can question.

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To which if further proof were wanted, it might be added that the relief of the cultivator from a variety of vexatious imposts, has greatly enlarged his means and promoted his comfort and security.

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24. I may here revert to the subject of "meeras," touched upon in the 9th para. of this letter. It is well known that the privilege of this tenure, consists in the power of resuming possession of land after many years' abandonment. The best authorities differ as to the number of years to which this privilege is confined. Some saying 60 years, and others 30 years. The liability of meeras defaulters for the revenue of their lands has however never been doubted, though it has been declared by competent native authority that the meeras tenure is liable to be extinguished in default of payment of the "kumal" or maximum native assessment.* It is obvious that this privilege of resumption of abandoned land is a great evil, meerasdars who left their homes in extreme poverty, return penniless after many years of absence, and claim the fields which have been intermediately occupied and cultivated by others. This is insecurity; the courts of law now as heretofore reinstate these bankrupt claimants, so that the revenue survey has in no respect diminished the unreasonable advantages possessed by meerasdars, who owing to the moderate assessment at which their lands have been rated, and the comfort and security now diffused throughout the country have shown themselves most eager to regain possession.

25. It is however in the contemplation of Government to pass an Act for the purpose of defining and limiting the privileges of meerasdars, not in possession at the introduction of the survey, and abolishing the right as regards all future bankrupts, of re-entering on possession of lands once abandoned by them, when this shall have been done, meerasdars will differ in no respect from the ordinary ryot of whom I have been speaking above, both will have a secure title to the land in their occupancy.

26. Thus it may be affirmed that the revenue survey has raised the ordinary cultivation to a level with the meerasdar, but so far from doing the latter any injury, it has very greatly increased the value of his possession, and rendered abandoned meeras' holdings worth reclaiming and going to law about.

27. With the cultivator then secure in his holding, and spending money freely upon it, and with the Government demand restricted to the payment of the assessment, there seems very little use in agitating the question of who is the proprietor of the soil. The present occupant has the fullest use of it, and whenever he is wealthy enough to make such an offer, there can be little doubt of his being allowed by Government to redeem the land[†] rent on reasonable terms. The future development of private property may be very well left to the progress of improvement and prosperity, which as it appears to me will deal with it in a much more satisfactory manner than Government can now by any direct method.

28. Wherever the survey has been introduced, a marked improvement is perceptible. In the Nassick sub-collectorate where it has had a trial from eight to 14 years; I recently found the towns and villages very much better built than they were 10 years ago, when I last saw them, and the cultivators much wealthier. In some villages there is an unsatisfied demand for land which is not to be had by those who are in want of it in their own villages, recourse is therefore had to others. Debt still hangs about many of them no doubt, but the circumstances of all are considerably improved, and a large number of them are free from debt, and becoming wealthy. The foundation has been laid for future progress in a manner that to me promises well, and I have no doubt that the introduction of railways and the extension of good roads, accompanied by those facilities for the attainment of knowledge at present confined to a few, which all have a right to look for, will give to the cultivating class a stimulus calculated to result in a revolution most beneficial to agriculture.

29. The chapter on roads calls for some remarks. No one in Bombay denies that roads are indispensable to the improvement of the country, that without them indeed the survey rates will confer but a temporary and partial benefit. The direction of the new metalled or made roads ought, in the Deccan and Southern Mahratta country, to be principally east and west, this also has long been acknowledged. The author of "Western India" came out as an inquirer into the shortcomings of the Bombay Government. He expected to find the ryots oppressed, and the land-tax and revenue in a state of confusion, whereas in the Deccan and Southern Mahratta country he found quite the contrary; he found the assessment moderate, and cultivation everywhere on the increase, he was obliged, therefore, to exert himself to prove that what has been done in this respect for the improvement of the country, has been done grudgingly, and might have been done better.

So here also we find him constrained to admit that there are roads, and good roads too, in the Deccan, and reduced to the necessity of arguing that they have been made with a wrong motive.

"Considerable

* *Vide* Report of the Commissioner at Sattara, No. 214 of 1852, dated 7th June, paras. 8, 9, 10.

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"Considerable sums have been expended in their construction, but to what purpose? They have been inspected, planned, and executed with a view to other objects than the development of the resources of the country, so that it is rare to find them affording the slightest facilities to commerce."

The object has, according to Mr. Mackay, been the facilitation of military movements, not the extension of commerce. This has struck him apparently from the circumstance of many of the British stations being connected by made roads; but it ought not to have escaped Mr. Mackay's notice, that the following military stations have not been connected by roads.

Ahmednuggur	has not been connected with	Malligaum.
Ahmednuggur	- - ditto	Nassik.
Ditto	- - ditto	Sholapoor.
Sholapoor	- - ditto	Belgaum.
Ditto	- - ditto	Kulladghee.
Kulladghee	- - ditto	Dharwar.

i. e. much more has been left undone for our military security than has been done.

Page 385.

30. "The next order of made roads is that leading northward from Poona to Ioonere. It is obviously one of almost exclusively military importance, and is designed either to proceed by the Alleh Pass, across several streams, and over several spurs of the ghâts to the Sinnur road at Sinnur leading to Nassik, with a view to uniting Poona with Malligaum, the great military station of Khandeish, or to take the more direct route from the pass to Malligaum, avoiding Nassick, and flanking the spurs of the hills."

31. Again, page 394, "The southern system is certainly more calculated to be of benefit to trade; but that such was not the object in planning or constructing it, is evident from the fact that, for the same cost, roads more serviceable, in a commercial sense, might have been constructed in the same neighbourhood. Had the object in the construction of the Kulladghee road, for instance, been to open up the rich country around, but particularly behind it, the more obvious line of road to have been selected for such a purpose would have been one direct from Kulladghee to Neepanee, and thence by the Phonda Ghât to Viziadroog; or it might have been led to the large and industrious town of Sunkeshwur, a little to the south of Neepanee, from which it might have been continued westward until it joined the road laid down on the map as being under construction from Belgaum to the Phonda Ghât. It is certainly suspicious to find that the point on which all the roads in the system converge is that which is the head-quarters of the military division."

No. 197 of 15 June
1840.

32. In imputing motives to others, detractors generally err, and Mr. Mackay is no exception to this rule. In the first place, the Bombay Government would have been very much wanting in wisdom if it had neglected the duty of facilitating its military movements. In the second place, since our great military stations constitute very excellent and convenient markets for the produce of the interior, the approaches to them have properly occupied much attention; in my opinion, not sufficient, considering their importance. In the third place, Mr. Mackay is singularly unhappy in the instances which he has chosen for illustrating the military predilection of our Government. The Joonere road was at first a mere cleared track, undertaken for the sole purpose of opening up the rich valley of Joonere and Narrayengaon. It has been gradually improved, but was only carried as far as the latter place; there it stopped for years. I, myself, as Sub-collector of Nassick, and just before the Afghan war, first proposed the connexion of Narrayengaon with Nassick, and my proposal was based upon commercial considerations. There are nine paragraphs in my letter to the Assistant Superintendent of Roads on this subject, devoted to the advantages of the new piece of road in stimulating industry; and only one very short one, of eight lines, contains an allusion to the military expediency of it.

33. Equally at fault is this gentleman when he points out how much Government has neglected its duty to commerce in failing to carry the Kulladghee road to the Phonda Ghat *viâ* Sunkeshwur and Neepanee; a very little inquiry during his stay at Kolapoor, Neepanee, or Belgaum, would certainly have prevented him from falling into this error, the notorious fact being, that until the year 1845, the jealousy of the Kolapoor Raja would never have permitted a road through his territories, which intervene between Neepanee and Phonda. Even if he had allowed of the road, the heavy transit duties would have completely nullified the use of it. The truth is, the ghâts west of Neepanee attracted attention the very moment it was seen during the Kolapoor insurrection, that Government would probably be able to make use of them for the benefit of commerce. The Phonda Ghât was pitched upon and commenced in the course of a year or two, with the intention of connecting it with Belgaum *viâ* Azray; but on my return from sick certificate to the Cape of Good Hope, I pitched upon Neepanee as a better place than Azray for conducting the traffic of Bagulcotta and the surrounding country to the sea coast. It thus appears that the line which Mr. Mackay thought so highly of, was actually adopted as soon as it possibly could have been.

34. In his eagerness to detract from the proceedings of Government, the author of "Western India," has greatly underrated the value of the road from Belgaum to Vin-
goorla.

goorla. The Ram Ghât is decidedly very steep, but it is a mere figure of speech to say it renders the road almost useless for the purpose of "commercial traffic" (page 391), the truth being that a continuous and very rich traffic is carried on by means of it between Vingoorla and Belgaum throughout the fair season.

35. Mr. Mackay has ignored the road from Bombay to Nassick and Khandeish, *viâ* the Thull Ghât, and yet the traffic conveyed to and from Bombay by this road is enormous. The Thull Ghât itself is well known to be a very fine specimen of road-making.

36. Mr. Mackay would have been duly informed, if he had inquired about it, that the road between Belgaum and Poona was undertaken solely with the object of enabling the ryots in the neighbourhood of Sunkeshwur and Chickodee to convey their produce to Belgaum by any easy track, the former one being utterly impracticable always for carts, and very often for horses and bullocks, owing to a dense jungle and deep morasses. Its cost was defrayed, for the first 20 or 30 miles, chiefly by contributions from the enamdars and the Government townspeople, through whose limits it passed. Where else than they have been, would Mr. Mackay have spent the subscriptions thus received? and the road having been made with the aid of contributions as far as Meeritch, what objection can be made to its completion with the aid of the Prittinudhee as far as the Neera Bridge.

37. I may here observe that although, as a general rule, we should for commercial purposes, look to an east and west direction for metalled or made roads, Government ought certainly not to forget that the ryots of this country have to dispose of other things besides cotton, hides, horns, wool, and indigo. Every village depends for its sales and purchases, upon some market town, which is thus an emporium to a large circle of little communities situated around it; it is thus of great consequence to connect as many of these towns as possible with one another and with our large stations; and these fair-weather roads become eminently useful in increasing trade, and generally improving the country, though they make but an insignificant show on paper; and even a well-made road will often become advisable when the towns are numerous, and more than ordinarily large, or cultivation is rich.

38. The Belgaum and Kolapoor road cannot fail of being most useful as a feeder to the Neepanee and Phonda line; but it is further most serviceable as a post line; and of this Mr. Mackay must have been aware, otherwise we should have had another chapter in "Western India" devoted to the neglect of the north and south line, and the difficulties thrown in the way of postal communication.

39. Captain Anderson, at paras. 48 and 49 of his letter, shows that 64 miles of fair-weather roads were complete and in use at the time of Mr. Mackay's visit, and that now they extend to 229 miles. When Mr. Mackay was at Belgaum the Neepanee Ghât was connected with the town of Gokak, *viâ* Sunkeshwar and Hookurree, the intention being to carry it on to Kulladghee or Bagulcotta. There are now upwards of 230 miles of road completed in this collectorate, besides those noticed by Mr. Mackay, while more than 90 miles are in progress or about to be taken in hand.

40. Mr. Stewart's remarks in paragraph 29 to 31 inclusive, on the roads of Dharwar, are worthy of attention, and I need scarcely say that the zeal of this officer, in the particular department of planning roads, has been remarkable, and has quite kept pace with his diligence and ability in every other portion of his duty. In my report as Collector of Belgaum, dated 3 May 1851, I proposed a road from Belgaum to the Tulleywaree Ghât, with the view of opening up the road to Goa; and in my remarks on the survey report of Captain Anderson, dated 23 January 1854, I seconded the opinion of that officer for the same useful work. If Goa is to be had, it could scarcely be paid for too highly.

No. 277, paras. 16
and 17.

41. To say that the construction of roads has been carried to the extent which its importance deserved would, of course, be untrue. Compared with what the country requires "road-making in the Deccan has little more than commenced," as Mr. Mackay observes. But it should be remembered that the wars in which the Government of India have been engaged have had a baneful influence in the Deccan and Southern Mahratta country. Costly works of utility were stopped by the protracted Cabul campaigns. The same remark applies to works of irrigation.

42. The multiplication of good roads, and the extension of irrigation are, however, fully acknowledged by Government as objects of paramount importance, and every available opportunity has been seized for forwarding them.

43. I would draw attention to Captain Anderson's remarks at paragraphs 52 to 54 on the preface to "Western India." Mr. Bazly, the president of the Chamber of Commerce, Manchester, (page xi), while "recording the attention bestowed upon Mr. Mackay by those in India who welcomed his arrival among them, and cheerfully and kindly promoted his object," evidently limits his acknowledgments to the merchants and other residents of Bombay. But the terms in which Mr. Mackay speaks of Mr. Davies show that the servants of Government were forward to welcome him, and ready to afford him all the information he sought for. As regards myself, I have already said, that I placed in Mr. Mackay's hands all the records he required; I shall now add, that if it had not been for me, that gentleman never would have had the materials for writing page 279 of the work

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work before us. While questioning me one night about the assessment, he mentioned Mr. Prideaux's statement before the Committee of 1848, and I immediately told him of the Chikodee villages mentioned by Captain Anderson in paragraphs 4 to 7. The next day I sent him the file of reports containing the passage which he has extracted, ready marked for his notice; and I am quite convinced, from the rapidity with which he hurried through the numerous compilations which I supplied to him, that he never would have hit upon the passage himself. I recollect perfectly well at the same time informing Mr. Mackay that the crop assessment in the Southern Mahratta country was confined entirely to the garden lands of these few villages, and that as far as my experience went, it was not to be met with anywhere in the Deccan. When I further state that Mr. Mackay was introduced by the Secretary to Government in the Revenue Department, to Mr. W. Hart, Inam Commissioner, of whose house I was an inmate at Belgaum, it will be manifest that there was no backwardness on the part of the civil service to afford information to the commissioner of the Manchester Chamber of Commerce.

44. It may be expected that I should notice the opinions expressed by Mr. Mackay on the prospects of India in regard to cotton.

Introduction, p. 34. 45. The object which that gentleman inquires into is, "Whether the cotton cultivation of India cannot be put upon such a basis as to enable it to compete successfully with the superior soils of America, in which case England will derive her supplies at the lowest price at which it can be raised on the superior instead of the inferior soils of America."

46. It is stated by Mr. Mackay, in the foregoing part of the introduction, that the cotton of America has already been produced on the lands best adapted to its growth: "The most productive tracts have been reached; no lands of more productive qualities than those are now available for cultivation; the downward career of prices in America has come to a close." The lowest price at which cotton can be raised at a profit has been ascertained. There are abundance of superior soils yet to be covered with cotton, but the moment these are covered, and inferior soils are resorted to, the price of cotton must rise unless labour does not fall. Mr. Mackay says, there is little probability of the value of labour undergoing such a change in the descending scale, as will materially affect the price of cotton.

47. All this goes to show that India cannot be put, in regard to prices, to any greater disadvantages than she has already experienced in grappling with her chief competitor, and is certainly a subject of congratulation.

48. As regards soil, however, the cotton of the Deccan and Southern Mahratta country may be said to be now produced from the best available soil; there is a great abundance of the same soil to be had, as Captain Anderson shows, but no richer than that already under cotton. In this respect the two countries are in the same situation.

49. The American farmer, besides the advantages he enjoys in skilled labour and climate, has the greatest possible facilities for bringing his produce to market, in which last particular, it is said, he can possess no greater advantage than he has.

50. In India, on the contrary, skill has yet to be applied to the production of cotton, and we know that the communication between the cotton-growing fields and England is yet beset with many obstructions to trade.

51. It is evident that, such being the condition of the two countries, the application of skilled labour in the cultivation and preparation of cotton, and the improvement of the communications between the cotton-growing districts and the English market, will tell on the prices of India cotton in the descending scale, and so bring it nearer to those of America.

52. Mr. Mackay has laboured much to show that the assessment in the Deccan and Southern Mahratta country is too high, and the tenure of the cultivator is insecure; but his assertions have been shown to be unfounded.

53. I am convinced that the improvement of our communications by the introduction of railways or, by straightening and making good metalled roads, and the application of skilled industry, will, by reducing the cost of production and raising the value of Indian cotton, place the Deccan and Southern Mahratta country in the best condition possible for competing successfully with America in this trade.

54. After the Indian cotton has been laid down on the coast in the most perfect possible condition, one disadvantage, and that an insurmountable one, it will still have to contend with, and that is the great length of the sea voyage; but this will be the only one.

55. It does not occur to me to be necessary to offer any lengthened comments on Mr. Havelock's report; that officer has been very recently transferred from Khandeish to Belgaum, and has therefore yet little local knowledge. I concur generally in the observations which he has made, excepting that contained in the 8th para. on the correctness of Mr. Mackay's description of the tenure of land in the Deccan and Southern Mahratta country; and I differ from Mr. Havelock in the opinion which he expresses in para. 17, that it should be a condition in making recommendations for commercial roads, that the banyans and villagers on or near the route should defray a portion of the expense.

56. Wherever

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56. Wherever the natives come forward, as they often do in Dharwar and Belgaum, with such recommendations and offers of assistance, the propriety of the work proposed will be very satisfactorily indicated; but Government must, I conceive, always undertake roads without the assistance of the native community, whenever they are well convinced of their utility.

I have, &c.
(signed) *H. W. Reeves,*
Poona, Revenue Commissioner's Office, Revenue Commissioner, S. D.
14 May, 1855.

(No. 256 of 1854.)

From Captain *W. C. Anderson*, Superintendent Revenue Survey and Assessment, S. M. C.,
to *H. W. Reeves*, Esq., Acting Revenue Commissioner, S. D.

Sir,

I must apologise for the delay which has occurred in sending in the present report.* During the latter half of the fair season and commencement of the monsoon, my time was entirely occupied with the current duties of my office, visiting establishments in the field, and the settlement of one whole and portions of two other talookas.

I have, &c.
(signed) *W. C. Anderson,*
Superintendent's Office, Dharwar, Superintendent Revenue Survey and
5 September 1854. Assessment, S. M. C.

(No. 255 of 1854.)

From Captain *W. C. Anderson*, Superintendent Revenue Survey and Assessment, S. M. C.,
to *H. W. Reeves*, Esq., Acting Revenue Commissioner, S. D.

Sir,

As requested by Government letter, No. 595 of 1854, dated 28 January, I have the honour to forward a report on the statements contained in a work entitled "Western India," by the late Alexander Mackay, Esq.

2. I will confine myself to Book II., which relates to the districts with which I am more particularly acquainted, namely, what is commonly called the Southern Mahratta Country, principally composed of the collectorates of Dharwar and Belgaum, and in which book also the advantages and disadvantages of the revenue survey and assessment are discussed. In the early part of the first chapter of Book II., relating to the old system of assessments and to the details of the new, there are many apparent inaccuracies of greater or less value: the most prominent of these, as the most convenient course, I will notice in the order in which they come, in an appendix to this report.

Appendix (A).

3. Taking the author's opinions and statements as a whole, it is evident that he intends to convey the impression that the new settlement is a very inadequate measure towards the establishment of the prosperity of the country, and tends rather to the benefit of the Government than to that of the people. The objections raised to it are various, and somewhat inconsistent with one another. They may be conveniently summed up and discussed under the following heads:—

1. The revenue survey has caused the prolongation of abuses in districts which, but for its promised advent, might have been removed years ago.

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2. Want of permanency and security of tenure, consequent on the assessment being fixed but for a period of 30 years.

Page 305.

3. The rates of assessment now fixed may become inappropriate, in consequence of changes in position of markets, seats of trade, &c., consequent on the extension of the made roads and facilitation of transport of produce.

Page 313 to 315.

4. The new settlement does not dispense with the necessity for annual inspections.

Page 309.

5. The new rates of assessment are not sufficiently low.

Page 303.

4. The first objection is, that "The revenue survey has caused the prolongation of abuses in districts which, but for its promised advent, might have been removed years ago." This objection is introduced incidentally in allusion to a practice of assessing land with reference to its crop, asserted to prevail to some extent to this day in the Belgaum Collectorate, though its existence was denied before the Committee of 1848. As this practice is stated to exist to

* No. 255, dated 2d September 1854.

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to some extent, and as a kind of specimen of prevailing abuses, it may be well, in the first instance, to show to what extent it really does prevail.

✓ 5. In nine villages of the Chickodee talooka, the system of assessment on garden lands inherited from the former Government was as follows: A certain sum was fixed in the old accounts as the dry land assessment per beega; on this, in two villages, was superimposed an additional assessment where two crops were grown in one year; and in the whole of the nine villages a special extra cess, in some per beega, in others per acre, where sugar-cane was grown, which in six of the villages was exorbitantly high; since 1850-51, however, this high cess has been yearly remitted in these villages, thereby reducing the remaining assessment to a sum of from five rupees to Rs. 13. 6. per acre, instead of from five rupees to Rs. 31. 12. per acre, the old standard assessment where sugar-cane was grown. The whole land subject to this system of assessment amounted to, according to the present survey, 1,344 acres. The revised settlement has been introduced during the current year in the Chickodee talooka, and every vestige of the above-mentioned practice has disappeared.

6. It appears that Mr. Mackay, in raising the objection now under discussion, intended to impute blame to the present rulers of this country for not having discerned, or, if discerning, for not having earlier removed the evils and abuses inseparable from the native revenue system. We have held this province for a considerable time, some 30 years, a long period in the life of an individual, but not a long period in the existence of a country. We acquired it in a state of the most extreme disorder, consequent on constant change of rulers and intestine troubles for more than a century: every thing was in the greatest confusion during the late rule; systematic falsification and fabrication of accounts was the rule rather than the exception, and nothing trustworthy could be gained from the history of the past, towards the ascertainment of the scale of assessment likely to prove satisfactory for the future.

7. Almost from the day we acquired possession of the country, the defects of the old system were acknowledged, and the remedy perceived in a detailed survey and assessment, field by field. In the course of a few years this was undertaken by Mr. Thackeray, shortly before his death, by means of native agency, unchecked, but by what general superintendence he could spare from his other numerous and important duties. The country was measured, on the average, with a moderate degree of accuracy; in some places a revision of the assessment was attempted, with very indifferent success; generally the old unequal native assessment remained in force. In a very few years, however, the value of the work, as regarded even the mere measurement, was almost gone. Nothing in the shape of permanent boundary marks had been constructed, and the verification of the limits of most fields depended on the bare statement of interested parties; in fact, this and other attempts at surveys in the first few years of our possession of the country, merely serve to show the desire of Government to remodel the assessment, and as examples of failure for the instruction of future attempts of a similar kind.

8. Though the details in the present system of survey are conducted by native agency, a close and minute European supervision and check is provided on every part of the work, and boundary marks of a permanent description are erected simultaneously with the measurement. It may fairly be doubted whether (20) twenty years ago it would have been possible to have complied with either of the above requisites, setting aside entirely the difficulties interposed, from the fact that the people were then new to us and our ways, and we had little knowledge of the country and its capabilities. The acquisition of the dialects of the country was then among the European servants of Government far more rare than at present, and it would have been almost impossible to have obtained a sufficient number of officers to superintend the work qualified in this important particular. The erection of boundary marks when we commenced operations here eleven years ago, was enforced with considerable difficulty, it being a measure far from popular among the leaders of the native community; those least likely to benefit by any exact definition of holdings, great delay and inconvenience was occasioned, and eventually a legislative enactment was obtained which removed all difficulty. It may very reasonably be doubted if the Government of twenty years earlier, that is of 1826, when our rule was comparatively strange to the people, would have attempted such a measure of coercion on a point regarding which the natives of this country are so very tenacious, namely, interference of any kind with their boundaries. Could the Government have commanded an instantaneous, infallibly correct, and equitable adjustment of the assessment on their first acquisition of the country, and failed to do so, Mr. Mackay's observations might have been just, putting out of sight, as he does, that experience is necessary to devise, and time to carry into execution, a work like the detailed survey and assessment of most extensive tracts of country. The reform of abuses in all countries is slow, not excepting our own, where the difficulties do not exist, consequent on having to deal with a people alien in race, and doubly so in institutions and ideas.

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9. The second objection is want of permanency and security of tenure, consequent on the assessment being fixed but for a period of thirty years. Mr. Mackay's opinion is, that annual settlements, as regards the ryot, should have been done away with; that as Government binds itself not to increase the assessment for thirty years, so the ryot should be compelled to cultivate and pay that assessment for the whole period guaranteed by Government; I presume it is not intended that the cultivator should be debarred from adding to

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to his holding by taking up waste, but merely that he should not be allowed to resign land he had once taken. It is not specified how the cultivator should be bound to retain his land, and what should be the penalty in case of neglect, and probably Mr. Mackay found it very difficult to make any reasonable suggestion on these points; it may be said, give no land except under these terms. This would be quite unappreciated by, and incomprehensible to the people; it would be very justly considered by them an interference with ancient rights, and in the lapse of time, and in enforcing or attempting to enforce it. A return to the old native system, of which compulsory cultivation formed one of the worst features, the more respectable portions of the ryots would probably emigrate before they would enter into such an engagement as that proposed.

10. Such a binding down of the holders of land is, however, in fact quite superfluous; a natural feeling of pride deters the ryot, except when driven by the most extreme distress, from throwing up the land which he or his family have held for any length of time. Under the revised assessment, such an occurrence I believe to be next to impossible; if unable to cultivate himself any portion of his lands, he will always be able to sublet them to others; it is true that in the scramble for waste, which takes place about the time of the introduction of the revised assessment, a ryot, to ensure a selection, out of mere greediness, or as a speculation, frequently takes up more land than he requires; or he afterwards may find a particular field or fields inconvenient to cultivate, or for some of many imaginable reasons by no means desirable for him to retain. Such land he would throw up, and it would be very impolitic to deny him the option of doing so.

11. From the above causes, about the second or third year after an introduction of the revised assessment, a slight recession or check in the tide of advancing cultivation, generally takes place; it is, however, but temporary, and, with this exception, the steady and sustained increase of cultivation in the settled districts is the best proof that nothing in the shape of compulsion, direct or indirect, is requisite to bind the ryot to his land where the assessment is moderate.

12. It is further objected, that the cultivator, under a sense of the responsibility incurred by an engagement for 30 years, would be more apt to turn his capital, his skill, and his industry to good account, and by such means improve the value of his holding. This seems very much on a par with the argument, that there is nothing like high rates to make the people exert themselves. Misfortune, in various shapes and in spite of his best exertions, frequently overtakes the ryot, and in a more sudden form than commonly is the case in our own country, whence Mr. Mackay seems to have imported most of his ideas as to what is fit for the people of this country. Death by cholera, fluctuations in the seasons, murrain among cattle, from these or other causes it may be desirable for him to contract his holding and so reduce his responsibilities; the above extraordinary causes might throw many of his neighbours more or less into similar difficulties; if, therefore, present relief, by subletting a portion of his land for a time, could not be obtained, the existing system affords instant relief, by allowing the ryot to resign any entire number or field that he chooses; the proposed alteration would only throw the people again into the hands of the village money lender, from whom they are now comparatively free, and could only be made tolerable by the granting of constant remissions, getting rid of which has been one of the aims and results of the revision of the assessment.

13. No extraneous spur in the shape of the proposed imposition of an undesired responsibility is required to make the cultivators of the soil exert themselves: the love of gain inherent in human nature will, if a moderate assessment insures a fair share of the profits, induce him to exert himself to till his land well in his own way, and thereby get as large a profit as possible: the old adage of hope being stronger than fear, is very applicable in the present instance.

14. Mr. Mackay states that the result of the revision of assessment will be seen rather in an extended than in an improved cultivation; this, from my observation, I can say is certainly not the case in the Dharwar Collectorate, whereof in the Southern Mahratta country the new rates have been longest in operation. I was employed in both the Nowlgoond and Dumul talookas in the very first operations of this survey in 1843, 1844, and 1845. I again was employed in these talookas in surveying lapsed and service tenure villages in 1849-50, and the change was very striking, both in the way of extension and improvement. In the first place, the large tracts of waste land of good quality formerly to be seen, were all under cultivation; and the cultivation everywhere distinctly indicated the bestowal of greater labour upon it than was previously the case. In cotton and juwarree fields formerly there was frequently as much of the grass,* which is so destructive to those crops, as the crops sown themselves; the sides of the ill-defined roads and the corners of the fields were invariably fringed by some feet wide of the above-mentioned grass. In 1850 this had very generally disappeared, and careful cultivation was carried up to the very limits of each field.

15. It is further urged that nothing in the shape of a proprietary right in the soil is conferred: by the new settlement Government retains the power of making any alteration in the

* Called "Nutt" in Canarese; "Meyalee" in Hindoostanee.

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the land assessment at the end of 30 years; and, therefore, the position of the cultivator is not of such security as to induce him to expend capital on the improvement of the land. Improvements may be divided into two kinds; first, those consisting merely of improved culture and slight works of a permanent nature, involving no great expense, such as fencing, ditching, digging small water-courses, &c.; and, secondly, those of a more permanent and expensive nature, such as wells, tanks, and water-courses of some size. In the instance of the first or minor class of improvements, assuming that the original assessment was moderate, the increased returns up to the close of the 30 guaranteed years, would form a very adequate remuneration. I have never heard the possibility of the assessment being raised at some future time, urged as an objection to undertaking improvements by the people; and, in fact, they do undertake improvements without asking any more favourable terms. I may mention one of the most common, the conversion of dry land into rice or irrigated land. This has been done, and is still being done, to a very considerable extent all over the suitable parts of the settled districts; it is a work involving considerable labour and expense, as it entails the perfect levelling of the land, by dividing it into a series of terraces or steps; and the provision of some supply of water in aid of the natural fall of rain, by means of a small tank or water-course leading from higher ground.

16. In the case of large and more expensive works, it can hardly be doubted that if asked for a guarantee of the present assessment for a time proportioned to the expenditure to be incurred and the permanency of the work, would be readily granted by Government, since in the case of works of public utility executed by private individuals, land is now frequently, as a reward, conferred in *enam*, that is, free of assessment for ever. The cultivators are, I think, very generally aware that the new settlement was undertaken by Government spontaneously, almost invariably, at a considerable present, and frequently at some permanent, sacrifice of revenue. As a body, they fully appreciate the liberality with which they have been treated, and I do not think it at all enters into their calculations that Government will turn round, and treat them with a harshness inconsistent with its present conduct towards them.

17. The third objection, is that the rates of assessment now fixed may become inappropriate, in consequence of changes in position of markets, seats of trade, &c. consequent on the extension of made roads and facilitation of the transport of produce. There is no doubt of the truth of the premise with which Mr. Mackay starts,—that the artificial advantages possessed by different groups of villages variously assessed in consequence of these advantages, will undergo very material changes on the extension and change of markets, &c. This would be an objection of great weight were the assessment of different groups raised above the minimum level, principally on account of what may be called artificial advantages, and were the additional assessment imposed equivalent to the whole of the benefit derived from such artificial advantages; but this is by no means the case; there are many points considered in fixing the future assessment of a district, or part of a district; first comes its past revenue history, as exhibited from the statements prepared from the accounts, for as many years as they can be obtained for, which is at present, in most cases, from 30 to 35 years. Here is seen the proportion under cultivation every year, and the proportion remaining waste, the standard assessment on the cultivation; of which what part was realised and what remitted; for what years the remissions were large and for what small, and with what effect on the cultivation of the succeeding year. In each case observation and information, obtained from all available sources, give an idea of the present condition of the cultivators, which is again contrasted with that of the people in adjacent or similarly circumstanced districts; from the above inquiries is ascertained whether the district in question has been labouring under an assessment, generally or partially, high or excessive, in proportion to its capabilities; after this comes the question, to what extent shall the assessment be lowered? and as a district is never found of which every part has equal or corresponding advantages, it has to be decided how the villages shall be divided into groups, with varying maximum rates of assessment.

18. To this end the natural advantages, such as climate, as evidenced by the supply of rain, which in the vicinity of the ghats varies every few miles; and vicinity to the coast, affording facilities for the exportation of produce, are the chief points to be considered; vicinity to trading or manufacturing towns and military stations is also taken into account, and some additional assessment sometimes imposed; this, however, except in rare and extraordinary cases, does not exceed 10 to 15 per cent. of the whole, while the benefit derived is very many times greater than the increase of assessment, such as the ready and profitable sale of articles which fetch next to no price in the agricultural villages, such as straw, vegetables, &c., but for which a great demand exists in the vicinity of towns.

19. The assessment is thus, in the main, fixed on reasons of a permanent and indestructible nature; and, for a long time to come, those districts which have been higher assessed than their neighbours, on account of advantages partaking in some measure of an artificial character, will retain a large portion of those superior advantages as new markets arise, facilities of transport are extended, and population increases; the demand for land may be expected to continue increasing everywhere; districts now lowly assessed, in consequence of unfavourable situation, will rise to a par with districts now more highly assessed on account of advantages of position; these latter again will share in the general prosperity, and the capital accumulated during the time of their exclusive possession of advantages will for a long time enable them to keep the start then gained. No one supposes that

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that the present trade of this country has by any means approached to its maximum, and as internal improvements will cause, for years to come, the extension rather than the diversion of traffic, though the worst parts of the country may gradually approach, or even exceed, the present prosperity of the best, it is by no means probable that the best will within 30 years descend to the present level of the worst.

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20. There can, however, be no doubt that in the lapse of time, as the resources of the country are fully developed, the circumstances of different tracts may become so changed as to render the pressure of the present assessment unequal, and therefore unfair, and a readjustment of the revenue required by the State would be in justice required: were Mr. Mackay's proposition of a permanent settlement adopted, it would not be open to Government anywhere at any time to raise the assessment, and the pressure could only be made equal by reductions, a very unnecessary wasting of the ancient resources of the State; and as a certain revenue must be obtained, the loss would require to be made up from some other source. A guarantee for some fixed time was of course necessary, and 30 years is surely a very reasonable period; it affords the cultivator full time to remunerate himself by increased returns for any ordinary expenditure he may incur, and at the same time reserves to Government the power of readjusting the assessment to the capabilities of the country at no very distant time. In the meantime Government is not debarred from reducing the assessment wherever such a measure is necessary, and the frequent sacrifice of revenue, and general liberality of the present settlement, is sufficient proof that any sacrifice demanded by extraordinary circumstances would not be grudging.

21. Mr. Mackay says, "The measuring and classifying admit of a degree of exactness which it is to be feared can hardly be carried into the absolute valuation of the soil, as conducted by survey officers." The above remarks are somewhat unintelligible; he does not appear, when writing the above passage, to have borne in mind what he elsewhere explains, namely, the inseparable proportional connexion between the classification and assessment, or valuation. No fault is found with the system of classification when giving a detailed description of it, and it is allowed to admit of some degree of exactness in the passage above quoted. If the classer's value of a field is half a rupee, and two rupees per acre is the maximum assessment of that tract, the assessment of that particular field will be one rupee per acre; if the classer's value of another field is 10 annas, and the maximum assessment is Rs. 1. 8., the assessment of that field will be 15 annas per acre, whatever the maximum rate or that fixed on a 16 anna field may be; the assessment of any other field of the same group of villages bears the same proportion to the maximum rate as its classer's rate bears to one rupee; so admitting the classification to be correct, the rates in the same group cannot possibly be incorrect. Mr. Mackay, however, doubts whether, even under the most able supervision, inequalities do not exist in the new assessment as originally imposed; absolute perfection and infallible freedom from error has never been claimed for the new settlement; it would be very strange if, in spite of all care, inequalities did not exist in a work the difficulty of which is admitted, even under the most favourable circumstances. These inequalities would be of very great importance, and vitiate the whole work, were the Government demand always pitched at the highest figure that is considered could, with any probability, be paid; such, however, is by no means the case. I will here quote paragraph 61 of Captain Wingate's first report on the revision of assessment in the Southern Mahratta country, in which the principles by which we are guided in revising the assessment of a district are laid down:

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"61. The amount of assessment to be placed on a district, or any division of territory, at a revenue survey, with the view of securing at the same time its progressive prosperity, and a fair revenue to the State, must in all cases be matter of conjecture, in consequence of there being no unchangeable data from which such a result could be deduced. It is evident that our only data must be drawn from the past, and though we may be of opinion that from these the course of the future may be indicated, who will venture to say that our fairest conclusions may not be falsified by the event? Lord Auckland, in his despatch to the Honourable Court of Directors, of 18th August, 1838, describing the mode of settlement in the upper provinces of India, remarks most justly of this department of the operation, that 'the assessment is assumed to be only a matter of conjecture, on which the greatest danger lies on the side of excess. Let the conjecture be too high, and the country is ruined; let it be rather lower than it might be, and there is a small sacrifice of present income to the Government; but the foundations are laid deep of present happiness to the people, and of future enlarged resources to the Government.' The all-important point to be satisfied of is, that the proposed assessment is not too high. The circumstance of its being lower than necessary is of comparatively trifling moment; and it must be recollected that we cannot attempt to define with much nicety the *via media* between these two without incurring the danger of losing all our labour by erring on the side of excess. To be safe, we must pitch our rental somewhat below what we think the district might bear without danger."

22. The next objection made is, "that the new system does not dispense with the necessity for annual inspections." Here, again, Mr. Mackay cannot have very clearly comprehended the nature of what he was objecting to. The evils of the annual inspections, rendered necessary by the old revenue system, are even under-rated by him; the old inspection of crops was made by an agency of the lowest description, with very imperfect and insufficient means of check; it affected the land actually in cultivation, and formed the principal data

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Page 310, line 3.

on which remissions were given; it would be impossible to denounce any remains of a system like this too strongly. The present annual inspections are however totally different, and affect only the waste land. Provision is made in the rules, an abstract of which is given in pages 296, 297, for nothing but entire survey fields, as defined by the boundary marks, being in cultivation; and at the introduction of the settlement this rule is rigidly enforced. A ryot cultivating a portion of a survey number or field, must either take up the waste portion, or, resigning that part cultivated, leave the whole waste. No one can therefore hold anything but entire survey fields; there may be two or more sharers in one field, but no part can be waste, as might be inferred from Mr. Mackay's words: "The chief object of the inspection, as it will in future exist, is to ascertain the extent to which land is cultivated or otherwise made use of for the year." What inspection is retained is confined to the state of the boundary marks, to see that they are of the regulated size, and in their proper places, according to the village map, and to ascertain that no entire survey fields, entered as waste, are, notwithstanding, cultivated; what the ryot has is not interfered with; precautions are merely taken to see that he does not appropriate what belongs not to him, but to Government; that this is the real case would never be inferred from Mr. Mackay's description of the present annual inspections.

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23. The last and most important objection is, that the new rates of assessment are not sufficiently low. This objection is suggested or left to be inferred, rather than any where directly affirmed; it is stated that the rent or Government demand is estimated at one fifth of the gross returns. Afterwards, Mr. Mackay is at some pains to show that the assessment is within a fraction of one fourth of the gross returns. To this end, he begins by assuming that the average rent of cotton land is Rs. 1. 6. per acre; this, it will be presently shown, is very much in excess of the true rate. His other data, however, expenses of cultivation and the average quantity of cotton raised on an acre, are, as far as I can ascertain, about correct, except, perhaps, the estimate of the produce of New Orleans cotton per acre, eight maunds, which is certainly low.

24. Mr. Mackay, as above noticed, estimates the average assessment of the cotton land of the Dharwar Collectorate at Rs. 1. 6. per acre: the true average assessment of cotton land is capable of being ascertained without much difficulty. From my own observation, corroborated by information received from the gentlemen employed in charge of the classification establishments, I should estimate the average classer's rate of cotton soil to be 12 annas. With a view of checking this estimate, I selected the following (9) nine villages in the Nowlgoond and Dumul talookas, with which I am personally well acquainted, and, with the exception of within 150 acres in Nowlgoond, known not to contain a particle of soil but black, of a superior description, every bit well suited for cotton. The villages are widely separated from one another; their fertility is certainly somewhat above the average; and any general conclusions drawn from the data afforded by them are likely to be above rather than below the mark:

TALOOKAS.	N A M E of V I L L A G E.	Acres.	Classer's Total Rate of the whole Lands of the Village.	Average Classer's Rate, per Acre.	Maximum Dry Crop Assessment, per Acre, viz., that on Classer's 16 Anna Rate.	Average Assessment per Acre.	TOTAL Assessment of whole Lands of Villages.
1.	2.	3.	4.	5.	6.	7.	8.
			Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Nowlgoond	1. Morub - -	14,051	10,976	- 12 6	1 - -	- 12 6	10,377 5 6
	2. Nowlgoond - -	16,319	12,627	- 12 5	1 2 -	- 13 11½	14,236 10 -
	3. Naiknoor - -	3,042	2,224	- 11 8	1 2 -	- 13 1½	2,653 13 3
	4. Hunsee - -	5,705	4,505	- 12 8	1 5 -	1 - 7½	5,922 10 3
	5. Nalowdee - -	2,897	2,317	- 13 11	1 5 -	1 2 3	3,304 6 3
Dumal	6. Bandwar - -	4,056	3,024	- 11 11	1 5 -	- 15 7½	3,966 3 6
	7. Ingulhullee - -	7,672	5,798	- 11 11	1 5 -	- 15 7½	7,502 2 10
	8. Homball - -	17,697	12,953	- 11 9	1 - -	- 11 9	12,996 3 11
	9. Hullikerree - -	5,752	4,005	- 11 1	1 - -	- 11 1	3,984 7 4
		77,191	58,639	- 12 2	- - -	- 13 7	65,543 14 10

25. From column 5 of this tabular statement, Rs. 0. 12. 2. appear as the average classer's rate of cotton land in the nine villages. As these villages are, as before stated, above the average. there will be, probably, no risk of error in taking 12 annas as the average classer's rate

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rate of cotton land in the Southern Mahratta country: then, in any district, the average assessment of such land will be ascertained by the following simple Rule-of-Three sum:

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Maximum Classer's Rate.	Average Classer's Rate of Cotton Soil.	Maximum Rate of Assessment, i. e. that on 16 Anna Classer's Rate.	Average Assessment of Cotton Land.
Rs. a. 1 -	a. p. 12 -	.	

26. In the nine villages referred to in the table Rs. 0. 13. 7. is the average assessment; and the average assessment of cotton land in the whole of the Nowlgoond and Dumul talookas will not exceed this. From the statement below, it will be seen that these two talookas have more than half the cotton cultivation of the whole collectorate.

27. The Table, which follows, gives the average assessment of cotton lands in each group of each talooka. I have excluded those parts in which cotton is an unusual crop. In some the soil and climate are unsuitable, and in one group the highest assessed of the Dharwar talooka, the vicinity of Dharwar, and demand for fodder for cattle, render grain crops more profitable. I have included in the statement the number of acres under cotton cultivation in the current year in each talooka, in order to show the relation which district bears to district in the production of cotton. The average cotton land assessment in Raneebednoor, Bunkapoor, and Dharwar, will be somewhat higher than in Nowlgoond and Dumul. In the former it will be about Rs. 0. 15. 6., and in the two last, about Rs. 1. 0. 6.; considering that the quantity of land under cotton in Nowlgoond and Dumul so much exceeds that of the remainder of the collectorate, and that the average assessment there does not exceed, as above shown, Rs. 0. 13. 7. per acre, it is not probable that the average of the whole collectorate will exceed Rs. 0. 14. 6. per acre, instead of Rs. 1. 6., as stated by Mr. Mackay.

TALOOKA.	Class.	No. of Villages.	Maximum Rate of Assessment on Dry Land, namely, that on Land bearing 16 Annas, Classer's Rate.	Average Assessment of Cotton Soil, shown to have an average Classer's Rate of 12 Annas.	Acres under Cotton Cultivation in 1853 and 1854.
	2.	3.	4.	5.	6.
			Rs. a. p.	Rs. a. p.	
1. Nowlgoond - - - -	1	25	1 5 -	- 15 9	} 84,714
	2	-	1 2 -	- 13 6	
	3	-	1 - -	- 12 -	
2. Dumul - - - -	1	60	1 2 -	- 13 6	-
	2	26	1 - -	- 12 -	-
3. Bunkapoor - - - -	1	15	This group consists principally of rice villages.		} 40,721
	2	55	1 8 -	1 2 -	
	3	36	1 6 -	1 - 6	
	4	31	1 4 -	- 15 -	
4. Raneebednoor - - - -	1	44	1 6 -	1 - 6	} 32,252
	2	86	1 4 -	- 15 -	
5. Dharwar - - - -	2	53	2 - -	1 8 -	} 16,390
	3	3	1 12 -	1 5 -	
6. Hooblee - - - -			I am unable to ascertain exactly in which group of these talookas the cotton cultivation principally is. Most of the Hooblee cotton villages were assessed in Bunkapoor, and transferred from that talooka since. The quantity in the other talookas is trifling in proportion to the whole, and therefore this omission is of little consequence.		19,208
7. Hangul - - - -					9,749
8. Kode - - - -					9,278

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See Note (B).
Appendix.

28. At page 335 Mr. Mackay estimates the average produce of an acre of cotton land at Rs. 5. 6. ; taking the average assessment at Rs. 0. 14. 6. , as above shown, the assessment is a fraction under 17 per cent., instead of nearly 25 per cent. It will appear strange how Mr. Mackay could have fallen into an error of such importance as stating the assessment to be 25 per cent. of the gross produce, instead of 17 per cent., as it is now shown to be. I can only account for this by supposing that he confounded the average assessment with the maximum, or the highest possible assessment on the land in any group of villages. An average of the maximum assessment, struck on all the groups of the collectorate, shown in the Table at page 332, will give Rs. 1. 3. 7½. per acre, and excluding the lowly-assessed groups bordering on the jungles in the talookas of Dharwar, Hooblee, Hangul, and Kode, in which no cotton is grown, the average maximum will fall at Rs. 1. 6. 7., and thus I imagine Mr. Mackay must have confounded with the average actual assessment. There can be no connexion between the average assessment of the collectorate and the average assessment of the cotton lands. The highest assessed dry land will not be devoted to cotton, as truly stated at the end of page 335. The average assessment of cotton, always here a dry crop, will not probably be very much in excess of the average assessment of the dry land of the collectorates. What that average is I have not the means of ascertaining at hand. The averages of the whole land of the entire collectorate must be very much in excess of the average of the dry land alone, the maximum assessment of which nowhere exceeds Rs. 2. 4. per acre, while in the former is included the rice and garden lands of the collectorate. The rice lands amount to upwards of 70,000 acres, assessed at rates varying from 1½ to 7 rupees, and the garden lands to upwards of 3,000 acres, assessed at rates varying from 3 rupees to 12 rupees per acre, though Rs. 1. 6. may be the average of the whole collectorate, taking wet and dry land together; yet the average dry land alone must fall somewhat below the average of the cotton lands, as there is far more dry land, from its inferior quality, unfit for cotton, than there is dry land highly assessed on account of vicinity to town, and on which it is consequently more profitable to grow gram than cotton crops. Now, an average fixed assessment of only 17 per cent. of the gross produce cannot be considered otherwise than very low, and when the rot exerts himself, far larger returns than those assumed by Mr. Mackay are obtained. I know that in the Bunkapoor talooka ryots have owned to having got 18 maunds of New Orleans cotton per acre. This is, of course, a very good crop; but 12 and 14 maunds per acre is by no means unusual. The average proportion of the assessment to gross produce is within one-fifth, and the greater the labour and skill are exerted, the more does the proportion of the assessment to the produce diminish. I may here notice that Mr. Mackay very unduly depreciates the husbandry of the natives, at any rate of the Southern Mahratta country. At page 301 he says, "It is not often that Indian husbandry soars so high as the use of manure." Where he obtained this information I cannot imagine. With the exception of the Uthnee talooka, where the absence of wood causes nearly all the dung of the cattle to be consumed for fuel, the use of manure is universal, as far as the supply will admit; in fact, in red soils, and garden and rice lands, no returns would be obtained were not manure very freely used. In some parts, even, crops are planted for the sole purpose of affording manure to the soil; they are allowed to grow to a certain height, and then ploughed in green.

Appendix.
Note (C).

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29. The competition which Government has to meet in the article of land is entirely ignored, or rather denied. It is flatly asserted that the Government has a huge and overpowering monopoly of the land. Let the Dharwar Collectorate be taken as a specimen. The area of the alienated and Government lands in the Government villages is as follows:—

Government Land.	Joodee Enam, i. e. paying Quit-rent.	Surwa Enam, i. e. Rent free.
<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
1,412,008	288,909	396,532

Thus the aggregate of the alienated lands in the Government villages is nearly equal to one-half of the whole Government lands; then, in addition, there are the villages entirely alienated to be taken into account; these contain an area of about 1,21,000 acres. There are also included within the limits of the collectorate the Putwurdun Jagheers, divided into the three talookas of Seerhuttee, Koondgool, and Luxmeshwur. These have never been measured; but they certainly do not contain less than three hundred thousand acres (3,00,000) entirely out of the control of Government. Reckoning up the whole, it will be found that very nearly one-half of the entire land within the collectorate is alienated from Government. These remarks, more or less, apply to the Belgaum and Sholapoor Collectorates and Sattara territory.

30. There is still one other objection to the new rates of assessment touched on by Mr. Mackay at page 311 and other places, namely, that the increase of production consequent on the extension of cultivation will glut the markets, and so lower prices that the cultivator will find himself no better off than before. Facts, however, will refute this prophecy. I have obtained from the records of the Nowlgoond talooka the appended statement of prices, year by year, in the town of Nowlgoond since 1841-42. Nowlgoond is situated about 22 miles east of Dharwar, in the middle of a great grain and cotton country. At the time of the introduction of the revised assessment in this talooka, upwards of one-third of the Government land was waste. At present the waste does not amount to more than one per cent. of the whole. I have also obtained returns for the year since 1841-42, from several other bazars in the Dharwar Collectorate. A statement showing the average of the whole is appended.

In 1845.

Appendix,
Note (D).

STATEMENT

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1037

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✓ STATEMENT of Average Prices in the Town of Nowlgoond in the under-mentioned Years.

1. Y E A R S.	Company's Seers per Rupee.						8. Clean Cotton per Nug of 300 lbs. Rs.
	2. Rice.	3. Red Juarree.	4. White Juarree.	5. Bajree.	6. Wheat.	7. Grain.	
1841-42 - - - -	44	100	96	- -	80	40	24
1842-43 - - - -	46	104	96	- -	80	68	18
1843-44 - - - -	46	96	92	- -	92	60	24
1844-45 - - - -	48	100	96	- -	96	38	15
1845-46 - - - -	24	62	60	62	48	20	17
1846-47 - - - -	34	82	78	66	64	40	19
1847-48 - - - -	30	64	62	56	66	40	19½
1848-49 - - - -	38	110	108	80	94	56	15½
1849-50 - - - -	42	70	68	64	72	56	23
1850-51 - - - -	33	65	63	63	60	42	20
1851-52 - - - -	39	92	88	65	84	48	19
1852-53 - - - -	40	84	81	72	88	48	24
1853-54 - - - -	28	66	64	34	56	36	20

31. From the above Table it is seen that prices, instead of falling, have risen since the revision of the assessment; this may, I think, be accounted for in many ways. In the first place, the pressure of the old assessment was removed off the ryots, and they were freed, to a great extent, from the necessity of resorting to the money-lender and taking advances on their crops on ruinous terms, whereby the produce of the country was thrown on the market at a depreciated value. It will be seen that a further rise in prices took place about 1849-50; about this time the alteration in the time of paying the instalments of revenue came into operation, whereby the first instalment becomes due after a portion of the crops have been realised, and the other instalments at such intervals after as to allow the ryot to pay his assessment, not by taking advances up from the village shroff, but by the sale of a portion of the produce. A man of average prudence can therefore dispense with borrowing altogether for the purpose of paying his assessment. Produce comes into the market gradually, and if prices happen to be low, is reserved for better times; for instance, the present year, when all the hoards of back years will go to supply the scarcity in the districts to the east and south of the Southern Mahratta country. Increase of population and extension of export trade in grain keep up prices in spite of the greatly increased production; the yearly increasing growth of cotton also, a large portion of which is exported, renders money more plentiful in the country, and prevents the production of less exportable commodities increasing in the same proportion as the cultivated area.

32. In spite of Mr. Mackay's condemnation, I trust that the new settlement will not be considered so entirely inadequate to the present necessities of the country and people as he would have his readers imagine. The development of the resources of the country is yet in its infancy, and Government, in reserving to itself the power of re-adjusting the assessment at a future period, have avoided the mistake into which Mr. Mackay would have had them fall without the power of reparation, namely, of making a suit of clothes for the child, and expecting it to fit the full-grown man. Mr. Mackay's employers, the editor of his work, and all those who agree with him, all these I would refer to the opinion of one of the greatest authorities on Indian revenue subjects, and whose opinions will perhaps be allowed to be honest and sound, if these attributes are conceded to the evidence of any servant of the Indian Government regarding the internal administration of the country. I find the following extract from a minute of Sir T. Munro, dated 31st December 1824, quoted

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quoted at page 124 of the second volume of his life. It must be remembered that, in 1824, our tenures of the greater part of the Madras Presidency, to which I presume Sir T. Munro particularly alluded, was of as long a date as that of the south of the Bombay Presidency is at present:

"We are now masters of a very extensive empire, and we should endeavour to secure and improve it by a good internal administration. Our experience is too short to judge what rules are best calculated for this purpose. It is only within the last 30 years we have begun to acquire any practical knowledge, a longer period must probably elapse before we can ascertain what is best; such a period is as nothing in the existence of a people, but we act as if this were as limited as the life of an individual. We proceed, in a country of which we know little or nothing, as if we knew everything, and as if everything must be done now, and nothing hereafter; we feel our ignorance of Indian revenue and the difficulties arising from it, and instead of seeking to remedy it by acquiring more knowledge, we endeavour to get rid of the difficulty by precipitately making permanent settlements, which relieve us from the troublesome task of a minute or accurate investigation, and which are better adapted to perpetuate our ignorance than to protect the people. We must not be led away by fanciful theories founded on European models, which will inevitably end in disappointment. We must not too hastily declare any rights permanent, lest we give to one class what belongs to another. We must proceed patiently, and as our knowledge of the manners and customs of the people, and the nature and resources of the country increases, frame gradually from the existing institutions such a system as may advance the prosperity of the country and be satisfactory to the people. The knowledge most necessary for this end is that of the landed property and its assessment; for the land is not only the great source of the public revenue, but on its fair and moderate assessment depend the comfort and happiness of the people."

Page 320.

33. It may be well to advert to the conclusions arrived at by Mr. Mackay on the main subject of his mission, the ascertainment of the best means of procuring a larger supply of cotton from India. At pages 319 and 320 he appears to consider, that in 1850-51, the year in which he was writing, the area under cotton had attained its maximum; none was unoccupied, and, in fact, the stimulus of high prices induced the ryots to devote more land to cotton than in the observance of proper rotation of crops they should have done. But this could not be long continued, and nothing is more likely to check it than the low prices which now rule. Mr. Mackay considers, that from an improved cultivation alone can any increase in the supply of cotton from the Southern Mahratta country be obtained. I have alone, in para. 28, stated that the cultivation is by no means as slovenly as he would lead his readers to suppose, though it certainly does not approach high farming. Unless cotton fields are well and cleanly tilled, they become overrun with grass, which chokes the cotton, and entirely destroys the chance of any but the fraction of a crop.

34. We have now the additional experience of three years since Mr. Mackay wrote. Prices, it is true, have fallen, on the average, below what they were in 1849-1850, the years of high prices, which he considers had stimulated cotton cultivation beyond its sustainable limits. The following return will prove whether his speculations were correct or not. The figures from 1842-1843, to 1850-1851, it will be seen, are the same as those appearing at page 319, and the returns for the subsequent years apply to precisely the same districts, without addition or subtraction:

YEARS.	Acres under Cotton Cultivation.	YEARS.	Acres under Cotton Cultivation.
1842-43 - - - -	184,264	1848-49 - - - -	204,516
1843-44 - - - -	178,956	1849-50 - - - -	241,250
1844-45 - - - -	185,186	1850-51 - - - -	254,982
1845-46 - - - -	175,767	1851-52 - - - -	264,323
1846-47 - - - -	190,825	1852-53 - - - -	271,124
1847-48 - - - -	199,405	1853-54 - - - -	293,409

In 18a

Appendix,
Note (D).

35. In 1850-51 Mr. Mackay considered that the acres under cultivation, 254,982, had exceeded the natural limits; and yet, with falling prices, they have continued to increase year by year. The increase in the last year is particularly marked; and if the ryots find cotton the most remunerative crop, there is still a good deal of room for a farther increase. In the Dharwar Collectorate, in the Government and Enam villages, there are not less than 1,300,000 acres suitable for cotton cultivation; and making all allowance for the lands in the vicinity of large towns in which grain is a more profitable crop, and allowing also that land in general bears a cotton crop but one year in three, there is nothing to prevent from 400,000 to 420,000 acres being under cotton every year in the Dharwar collectorate, should the

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the ryots find it profitable to cultivate to that extent. In the jagheer land, included in the Dharwar Collectorate, the lands yearly available for cotton may be estimated from 60,000 to 80,000 acres.

36. Mr. Mackay does not advert to the cotton cultivation of the Belgaum Collectorate. I have obtained returns of the yearly cultivation of this collectorate also. Since 1841-42, the increase, it will be seen, is even greater than in Dharwar during late years.

✓ NUMBER of Acres under Cotton in the Belgaum Collectorate in the under-mentioned Years :

YEARS.	ACRES.	YEARS.	ACRES.
1841-42 - - - -	69,832	1848-49 - - - -	111,982
1842-43 - - - -	69,757	1849-50 - - - -	119,942
1843-44 - - - -	62,754	1850-51 - - - -	184,051
1844-45 - - - -	65,829	1851-52 - - - -	160,584
1845-46 - - - -	54,190	1852-53 - - - -	170,376
1846-47 - - - -	112,119	1853-54 - - - -	193,669
1847-48 - - - -	118,504		

37. It is worthy of notice that the new assessment was introduced into the first portion of the Belgaum Collectorate in 1849, into the talookas of Gokak and Purusghur. The high prices of 1849-50 doubtless had much to do with the immense increase of cotton cultivation appearing in the ensuing year, an increase which could not be sustained in the next year, though the ground then lost has since been more than regained. In 1844-45 the first revised assessment was made in Dharwar, and from that time also there is a marked steady increase of cultivation: is it therefore too much to assume, that the revision of the assessment is a direct means of increasing the production of cotton? It is more difficult to make an estimate of the quantity of land suitable for cotton in the Belgaum Collectorate than in Dharwar, owing to the country being generally of a more diversified character than the even black soil plain which composes the greater part of the cotton districts in Dharwar; the line of demarcation between the black and red soil is generally very plainly marked; not so in many parts of Belgaum, where black and red soil will frequently be found in most of the fields of the same village. On the whole, though it may be estimated that not less than twelve hundred thousand (1,200,000) acres suitable for cotton exist in the Belgaum Collectorate, and of this three hundred and fifty thousand (350,000) to three hundred and eighty thousand (380,000) acres might be under cotton every year, these estimates, both as regards Belgaum and Dharwar, are well within the mark. The following statement will bring the present and past extent of cotton cultivation clearly in view:

Cotton Cultivation in the Belgaum and Dharwar Collectorates :

	Acres.
Cultivation in 1842-43 - - - - -	254,021
Ditto - in 1849-50, the year of high prices - - - - -	361,192
Ditto - in 1853-54 - - - - -	487,078

38. I have above estimated the available land of the two collectorates at from seven hundred and fifty thousand (750,000) to eight hundred thousand (800,000) acres every year, excluding the jagheers, which will probably afford an additional one hundred and fifty thousand (150,000) to two hundred thousand (200,000) acres; it appears that out of the lowest estimate, seven hundred and fifty thousand (750,000) acres of Government land available, something less than two-thirds, four hundred and eighty-seven thousand (487,000) acres are under cotton in the current year. If cotton cultivation continues increasing, as it has done during the last five years, every suitable acre will be under cotton in another five years; and the only thing that can prevent this result will be the want of profit on the part of the cultivator, sufficient to induce them to prefer cotton to other descriptions of cultivation. Higher prices cannot probably be looked for; there is little cotton land waste; and as capital accumulates, as it must do, a portion will be employed in improved means of cultivation, and the profit from increased returns will more than meet the additional cost of production. The expense of carriage to market also may be reduced, and the cultivator's profit thereby increased. If, however, after all, the production of cotton should not continue increasing, the fault cannot be laid on excessive assessment; for I have above shown that the average assessment on cotton land does not on an average exceed 17 per cent. of the gross produce, and this under the present ordinary cultivation, which, though by no means deserving the bad character given of it by Mr. Mackay, is doubtless capable of a very considerable

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considerable degree of improvement, the result of which will still further diminish the present proportion between the assessment and gross returns.

39. Improvements in the means of communication with the coast now in process of execution will materially facilitate means of transport between the coast and the cotton districts in the north of Dharwar and south of Belgaum. To refer to Mr. Mackay's map of the Bombay Presidency, the Ghat near Singawarree, on the Suddasewghur River, is now being made, together with the road, 75 miles in length, connecting Mullapoor, a tidal port on the river 18 miles above Suddasewghur, with Dharwar. The whole of the portion falling within the Bombay Presidency is already made; this will at once effect a communication between the town of Dharwar and water-carriage shorter by about 40 miles than that hitherto used *via* Moondagode and Sircy to Koompta; and also to a more favourable point on the coast, Suddasewghur being thirty (30) miles further north, and therefore by that distance nearer Bombay. The screws lately brought into use in the Dharwar Collectorate, by rendering the packages of cotton less bulky, will lessen the expenses of transport, and afford the means of guarding against the damages, both wilful and accidental, which causes Koompta cotton to occupy so low a station in the price lists of the Bombay market.

40. Taking two rupees as the cost of one maund of 28 lbs. of cotton at the place of growth, the cost of one ton amounts to 160 rupees; and the average rate for carriage of cotton to the coast by cart roads, gives 21 rupees for the carriage of one ton to the port from a point 120 miles distant, which is about the average distance of the central portion of the Dharwar and Belgaum cotton districts, or a little more than 13 per cent. on the prime cost. Then from the port to Bombay the charge may be estimated at eight to nine rupees, or between five and six per cent.; so the total charges amount to close on 20 per cent. on the prime cost of cotton grown in districts at about 120 miles from the coast: on that grown at double that distance, the cost of transport would amount to 33 per cent. on the prime cost: at the above rates, the land carriage alone costs at the rate of (4½*d.*) four-pence three farthings per mile per ton.

41. At page 296 of "Chapman's Cotton and Commerce of India," it is shown that, "If a railway cost 10,000 *l.* per mile, if its cost of draught and management were 0·9 *d.* per ton per mile, and its charge were 2½ *d.* per ton per mile, a goods traffic only of 130,000 tons per annum would give a profit of 10 per cent. Half that traffic would give less than half the profit, and double that traffic would give more than double that profit, for obvious reasons." Assuming the above calculations to be correct, a railroad passing through the cotton districts would not only secure a large profit, but also materially reduce the expense of carriage to market of all cotton but that situated on the western edge of the cotton field, for instance, in the case of districts 350 miles from Bombay, and 200 miles from the coast, at the present rate above mentioned—

1 Ton prime cost - - - - -	£.	160	-	-
Carriage to coast - - - - -		42	-	-
By water to Bombay - - - - -		8	8	-
	£.	210	8	-
<hr/>				
By Railroad, at 2½ <i>d.</i> per ton per mile:				
1 Ton prime cost - - - - -		160	-	-
Carriage 350 miles - - - - -		40	-	-
	£.	200	2	-

42. The ordinary amount of insurance on cotton sent by the coast to Bombay I am not aware of; but this, whatever it may be, will go to swell the expense in the first estimate. The damage that must infallibly occur during many days of land carriage, in shipping and relanding, and during the passage up the coast, the cost of housing in the monsoon, and loss of interest on money consequent on the coast being closed for four months of the year, would all be saved by the rail. The estimated per-centage of profit is founded on the supposition that the railroad would cost 10,000 *l.* per mile. Since the greater part of the country which would be traversed when once the Ghats are ascended is very free from difficulty, it is not probable that the expenditure would attain to near this figure, as the line from Bombay to Tanna, through a much more difficult country, has cost even less per mile than this.

43. The amount of cotton that would be available for carriage by a railroad is hardly ascertainable. At pages 46, 47 of the "Cotton and Commerce of India," on the Report of 1848, the exports from Kompta, Viziadroog and Malwan, which may be considered ports fed from the Southern Mahratta country, amount to bales of 300 lbs., 49,791. This Report could not refer to a crop later than that of 1846-47, when there were in the Belgaum and Dharwar Collectorates 302,944 acres under cotton; while in 1853-54 there were 487,078 acres under cotton. As the internal consumption is owing to the extending substitution of English for indigenous cotton manufactures, to say the least, not increased in the last five years, the entire produce of the above additional cultivation since 1846-47 is available for exportation;

exportation; and, making every allowance for some small portion of the 48,791 bales of 1846-47 being produced elsewhere than in Dharwar and Belgaum, and, where no corresponding extension of cotton cultivation may have occurred, it may be estimated that the total exportable cotton of the Southern Mahratta country has increased by one-half, or to the total amount of 73,186 bales, or, taking seven bales to a ton, to 10,455 tons, which, it will be presently shown, is capable of increase to upwards of 25,000 tons in the course of the next five years, and this is the contribution of the Belgaum and Dharwar Collectorates and included jagheers only. The cotton of Mysore and of the districts lately ceded from the Nizam does not enter into the calculation; much is not exported thence. Now, it is true the expenses of the long land carriage swallow up too large a share of the profits, and, in the case of the last-mentioned districts at any rate, the state of the country and assessment has not for many years back been favourable to traffic of any kind: an estimate will be presently shown of the quantity of cotton the Southern Mahratta country alone is capable of producing and exporting.

44. Taking all circumstances into consideration, it appears by no means unreasonable to expect that a railroad between Bombay and Madras, five years from the present time, would, from the 400 miles of its course nearest the former place, pick up 40,000 to 50,000 tons of cotton: this is but a small portion of the 130,000 tons required by Mr. Chapman; but passengers' traffic and other goods are not included. 10,000*l.* per mile is, judging from what experience we have of Indian railroads, a very high estimate, and 10 per cent. a much higher dividend than would be requisite to ensure the railroad being held in good estimation as a paying speculation.

45. But a great step in the progress of the improvement of the cotton trade must come from the merchants of Bombay themselves by the establishment of direct European agencies in the districts, thereby dispensing with the host of native middlemen who eat up so large a portion of the profits, a share of which would otherwise fall to the cultivator. At present a little of the Southern Mahratta country, known as Kompta cotton in the market, finds its way to Bombay before the rains, undergoing very considerable deterioration from defective storing during the monsoon; a large portion of the crop is picked by the middle of March; there can therefore be no reason why much should not be ready for despatch to the coast by the middle of April: the dilatoriness of the natives, who have no idea of the value of time, is the chief obstacle to be overcome, and the application of European capital, energy, and, above all, competition, will alone effect this. Dharwar will at last enjoy these advantages; a European agent of one Bombay firm has been stationed there for the last four years, and a partner of a Madras firm has also recently established himself there.

46. After all has been done both by Government and the merchants to encourage the production of cotton, the question is, to what extent can the Southern Mahratta country and adjacent districts afford a supply of cotton for exportation in excess of that required for internal consumption? I have above shown that seven hundred and fifty thousand (750,000) acres are yearly available for the production of cotton in the two collectorates, and one hundred and fifty thousand acres in the included jagheers: taking Mr. Mackay's moderate estimate of 66 lbs. of clean cotton per acre, this area will give 198,000 bales of 300 lbs. each. Dharwar and Belgaum though merely include a portion of the great cotton plain, which is to a greater extent comprised in the contiguous districts to the eastward, lately placed under British management by the Nizam. These districts have for many years been in a state of the greatest anarchy and insecurity; for the present, there can be no alternative but to continue the native system of management; this, the experience of the little progress made by our territories, as long as they were under a similar system, shows to be ill calculated to develop the resources of these newly acquired districts, which possess natural advantages of the highest order.

47. The revised settlement is perfectly applicable to the customs and tenures of the country: were it introduced, as suggested by Mr. Mackay at page 320, and some facilities in the means of transport effected, there can be no reason why these districts should not share in the present prosperity of the Belgaum and Dharwar Collectorates, and the production of cotton increase in the same degree.

I should estimate that the quantity of land there available for cotton, must at any rate equal that of Dharwar and Belgaum together, which would increase the total production to from 198,000 bales to 350,000 or 400,000 bales, of which 300,000 would probably be available for exportation. If these calculations be correct, the single province of the Southern Mahratta country and adjacent districts is capable of furnishing in excess of its internal consumption more than one-sixth part of the entire importation of Great Britain from America in 1852-53, stated at 1,736,860 bales at the close of the chapter of contents of Mr. Mackay's book: the above amount excludes what may be produced in the Sattara territory and in Sholapoor, where there is much land suitable for cotton, but the precise amount of which I have no means of estimating.

48. At page 406, Mr. Mackay states that there is but 50 miles of made road through the entire length and breadth of the Dharwar Collectorate. It is true that there is but 50 miles of first-class made road, bridged and drained, and in all respects equal to an English high road. There are, however, in addition, upwards of 200 miles of what is called fair-weather road cleared, and made so as to be available for cart traffic during ten months of the

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the year; the whole year, with the exception of the two months during which the monsoon is at its height, and, let the roads be what they would, the constant heavy rain interdicts all traffic. The following is a list of the roads alluded to:

	Miles.
1. Dharwar towards Hullihal - - - - -	16
2. Dharwar to Kulghutgee - - - - -	20
3. Hooblee towards Singutteekop - - - - -	25
4. Turrus to Tumboor and Kalgode - - - - -	14
5. Beetegeeree to Kittoor - - - - -	12
6. Turrus to Seegaum - - - - -	13
7. Seegaum to Bunkapoor - - - - -	6
8. Bunkapoor through Hangul to Sumujgee - - - - -	25
9. Kode to Teleewulee and Sumujgee - - - - -	29
10. Dewurgheree from Moteebednoor and Raneebednoor to Hurihur - - - - -	38
11. From Reetee through Kuruggee, Deweegeeree, Nurregul, and Adoor to above - - - - -	28
TOTAL - - - - -	229

49. The whole of the above are entirely unnoticed by Mr. Mackay, though Nos. 6, 7 and 9 were entirely completed and in use at the time of his visit to Dharwar in the monsoon of 1851. No. 1 was also very nearly completed, and so far in use: the others have been sanctioned since. Nearly all the above roads fall in the western or hilly portion of the collectorate.

50. This total amount of made road may not appear much for a district more than 100 miles north and south, and from 40 to 70 miles east and west; but it must be remembered that in the cotton plains the existing native roads offer no serious obstacle to cart traffic during the whole year, except at the time of heavy rains, and are capable of supplying the necessities of the country very efficiently, with some little expenditure of labour on occasional difficult places, steep banks of nullas, &c., an expenditure of labour on any one spot so trifling as to be quite within the compass of the powers of 15 or 20 men working for a single day. In most other countries the removal of trifling obstacles of this kind would not be left to Government; but in India combination for the public good, it appears, is not to be looked for at present.

51. In the Belgaum Collectorate Mr. Mackay only notices the Kolapoor, Kuludgee, and Dharwar lines of road, which were, in fact, all that existed at the time of his visit, though the construction of several others was in process of execution. There are upwards of 230 miles of road now completed in the Belgaum Collectorate, besides those noticed by Mr. Mackay, and upwards of 90 miles in progress, or sanctioned and about to be taken in hand.

52. In the editor's preface, and in newspaper reviews of the work in question, it is suggested that Mr. Mackay's death alone prevented very important disclosures being made regarding Indian administration. It may be some consolation to Mr. Mackay's late employers to know that there is very little stated in the book with reference to India which could not have been learnt from a consultation of the records of the India House, where doubtless may be found information regarding the Bengal and Madras Presidencies quite as ample as that given by Mr. Mackay with reference to Bombay, with the exception of from the Government records, and from the servants of Government. From what other source was information procurable by him? The merchants, &c. of the Presidency derive their knowledge of the interior only from hearsay, their personal observation being in 99 cases out of 100 confined to Bombay itself, or the roads to Mahableshwur and Poona. Mr. Mackay was totally ignorant of any of the languages of the country, even had his hurried dak journeys permitted him the opportunity of accurate investigation; his journeys were hurried by necessity, since he proposed to complete the tour of the three Presidencies, the Punjab, and Sind, in little more than a year, and thoroughly examine what the Manchester Chamber of Commerce term "the system of economical misrule in India, and to investigate in person the impeding causes which retarded the improvement of India." Besides pointing out existing evils, the discovery of remedial measures was also, it is to be presumed, looked for from Mr. Mackay's mission.

53. From the natives themselves he would obtain little information: those of the Presidency of the class who generally speak English are as ignorant of the state of the interior of India as of the interior of Tartary, while the very few of the interior who can speak English belong to the very class who benefited by the old system, and would be the first to decry the new; and even if their prejudices did not cause them to give untrustworthy evidence, the narrow turn of the native mind interferes with the formation of correct views, and leads them to state almost in the same breath facts the most inconsistent with one another, and this without the slightest idea of wilful deception.

54. There seems in England to be an idea current that the servants or the Indian Government would be deterred by fear of the consequences from giving any information or evidence likely to tell against the present administration of Government. "Sir James Hogg, indeed,

is

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is perfectly aware that no servant of the Company who cherished his prospects, or had aers, prospects to cherish, would venture to assist in his inquiries any Englishman who was not perfectly satisfied with things as they are."* The freedom with which the most various opinions on all subjects are given by the servants of Government in their official correspondence is of itself sufficient to disprove an existence of any such enforced secrecy. Mr. Mackay's editor thanks all bodies, except the Government, for information and assistance; though I believe the fullest access to the records of Government was allowed Mr. Mackay; and, in fact, his writings regarding the Southern Mahratta country contain the most complete internal evidence of his having, as far as suited him, made use of different reports of Captain Wingate on the records of this office. Such assistance on the part of Government it is somewhat strange to find nowhere acknowledged; it is impossible to believe that he kept his employers in ignorance on this point, though it may not have suited their purpose to make any special mention of it; very different is the evidence borne by Mr. Chapman, who visited India under somewhat similar circumstances to Mr. Mackay; he states most clearly that every aid and every information was afforded him on the part of Government and its servants, and specially refutes the charge of secrecy being zealously desired.

Preface and page 346
of Cotton and Com-
merce of India.

55. There is, finally, one other point noticed incidentally in the preface to the work in question, and continually brought forward in the publications of the day, and by all those dissatisfied with the present rule both in India and in England,—I allude to the extended employment of native agency in places of trust and emolument. It may seem very hard to deny a people any prominent share in their own government. To those wholly unacquainted with India, such a system must appear to arise from a jealousy of letting any power out of the hands of ourselves, the foreign conquerors; the assertion of the untrustworthiness and general want of principle prevalent among the natives of this country, would be looked upon as a mere excuse; others again, with some acquaintance with the people of this country, advise their extended employment, from having conceived a better idea of the native character. Without at all entering into the question as to which is the correct view, all must concede that the ideas of the people of the country are entitled to some respect. I say the people, in entire opposition to the Brahmins, who, with one or two cognate castes, are the only class among whom at present any degree of education is common, and have consequently almost an entire monopoly of Government situations in this part of India, and also probably pretty generally elsewhere; these are just as much foreigners as ourselves, and are held in the deepest detestation by the cultivators of the soil, the bulk of the people; a detestation, the fruit of the bitter oppressions suffered from their class under the preceding Governments, the remembrance of which is kept up by their admitted constant resort to oppressive and dishonest proceedings when unchecked by a close supervision, and there appears a fair chance of escaping detection. Whatever a complainant may think regarding the degree of attention which his case has received, he will not in his inmost heart, I believe, impute dishonesty to any of the European servants of Government. Such an occurrence is so rare as to be almost unknown; while, on the contrary, the fairest and most obvious decision of a native official is commonly believed and frequently stated in so many words to be the effect of his opponent having the longest purse. So long, however, as the present monopoly of education remains, though unavoidably with a particular class, and that, too, a class borne in no agreeable remembrance, any extension of their employment cannot fail to be exceedingly distasteful to the bulk of the population, the extension of education among all classes giving a wider field for selection and making one class a check on another, will be the first step towards counteracting the habitual want of principle, which is notoriously the great deficiency of the native character. Much too may be done to elevate the character of our native officials, by increasing their emoluments without increasing their trust or responsibilities, which at present, in many cases, are entirely disproportionate to one another; so that if not led to be honest from principle, they may become more habituated to honesty from motives of policy.

I have, &c.
(signed) *W. C. Anderson,*
Superintendent Revenue Survey and Assessment,
Southern Mahratta Country.

APPENDIX.

NOTE (A.)

Pages 268-9. "The whole country and its resources, with the single exception of the incomes arising from the jagheerdar estates, are our own, to do with them as we like."

In the above words, and the preceding portion of the same paragraph, the position of the jagheerdars with respect to the British Government is very much misrepresented; in fact they deal with their ryots as they choose, and without interference on our part: the jagheerdars

* Leading article in "London Times" of 13th July 1854, on debate regarding land tenure in Madras.

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jagheerdars occupy a position very much more favourable than that of the zemindars of Bengal; and if the zemindaree system were capable of doing the great things for the country which its advocates represent, the jagheer states should be flourishing in the highest degree, since they are held to a great extent free, certainly on far less onerous terms than those which any ordinary zemindars could expect to obtain, and consequently a much greater proportion of the revenues should be available for the improvement of the country. In reality, though we find most of the jagheerdars deeply in debt, and their revenues, instead of being devoted to the improvement of their estates, wasted in debauchery and in keeping up a crowd of useless retainers, the good intentions of any occasional well-disposed incumbent are rendered of no avail through the incumbrances on the estate bequeathed to him by his predecessors: anything like fixity of tenure is unknown; the standard assessment is so high as to be absolutely incapable of realisation in all but extraordinary years; the un-realisable balance is kept hanging over the unhappy cultivator, and used as an engine to screw as much as possible out of him in the case of the occurrence of an extraordinarily good season: land is very generally given out on a special bargain at rates below the standard agreed upon between the ryot and the jagheerdar's officials, but still not at rates sufficiently liberal to dispense with the necessity for remissions: the holder in these cases, and practically in all cases, is ousted at the close of any year if a higher bid is made for his land. It is not necessary to depict the consequence of such a system on the condition of the people.

Page 269, lines 26, 27. "The Commissioner is of opinion that about 40,000 acres are available in Sattara for its culture." This estimate is certainly much under the mark. The two talookas of Beejapoor and Punderpoor cannot at the lowest estimate contain less than from 2,00,000 to 2,50,000 acres of land capable of producing cotton; the remaining nine talookas must contain at any rate nearly as much. In estimating the total land in the Sattara territory capable of producing cotton at from three hundred and fifty thousand (3,50,000) to four hundred thousand (4,00,000) acres, we shall not err on the side of excess; one-third of this, according to the usual rotation of crops, may be under cotton every year.

Page 275, lines 19, 20 and 21. "In the Canarese districts of the Southern Collectorate, a tenure somewhat similar to this was known as Joodee." What is here described as khasbundee, a term which is unknown in these districts, in no way resembles the joodee of the Southern Mahratta country, which is land held at a quit-rent, supposed to be less than the kumal or standard assessment, generally in remuneration for service, the difference between the joodee and the kumal forming the remuneration of the holder.

Page 275, lines 22 and the following, gives a very erroneous account of the old revenue system under the British Government, at any rate as far as regards the Southern Mahratta country:

"The assessment was made at two distinct periods, and on two distinct principles. The mouzawaror village assessment, determining the aggregate sum which the village was to pay, was made shortly after the crops made their appearance above the surface. When the crops were ripening, a second circuit was made by the local revenue officers, to ascertain in what proportion each ryot should share the aggregate burden of the village. The individual assessment was then made, when it was determined according to his means of payment, judging, chiefly from the character of his crop, what proportion of the aggregate village rent each ryot should pay." The existence of an ancient standard assessment is here entirely ignored, the real practice being that the assessment on every man's land was fixed according to the old kumal or standard. When the crops were standing, an inspection was made of the fields of all those desiring remissions, which were given according to the proportion which the actual crop was stated by the inspecting karkoon to bear to what would be the maximum crop on the same land.

Page 277. The account here specially given of the old revenue system of the Southern Mahratta country in particular is incorrect. Mr. Mackay has evidently derived his information from Captain Wingate's first assessment report on the Southern Mahratta country (No. 445 of 1844), in the para. 25 and the following paras., describing the revenue system under the Mahratta government. The system under our Government previous to the revised settlement is described above.

Page 283, lines 11 to 14. "The quantity cultivatable by one pair of bullocks is, with certain exceptions, the least that a field can contain. When a ryot has but one bullock, he must enter into partnership with a neighbour who has another." The plain meaning of this sentence is entirely contrary to fact. When a holding is of less area than the limit laid down in Rule 1, and there are other holdings on the same tenure contiguous to it, and also of less area than the rule prescribes, so many of these are to be clubbed together to form a new field as may be requisite to bring the acres of the latter within the limit, but no more. This clubbing together of small holdings involves no partnership; the area of these respective shares forming the one revenue survey "number," with defined boundary marks, is separately shown in the accounts; and each individual is responsible for his share only. The rule following the one above quoted has special reference to the point in question, but is not noticed by Mr. Mackay. "When a holding of less area than required by Rule 1 does not adjoin another holding similarly circumstanced, it should be made a separate field, notwithstanding its deficient size."

Page 285, lines 10 to 15. "As a check upon the correctness of the measurements, the superintendent of the survey, Captain Wingate, under whose able, vigilant, and energetic direction

Rule 7, para. 17, of the joint Report.

The amount of land cultivatable by a single pair of bullocks.

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direction everything is done, visits the different districts after the departure of the measurers, subjecting any field or fields he pleases to remeasurement."

This gives a very inadequate idea of the degree of supervision over the execution of the details of the measurement and classification. Each measuring and classifying establishment, of which there are ordinarily eight in the Southern Mahratta country survey, is composed of from 12 to 20 measurers and classers, each under the direct supervision of an Assistant Superintendent, who may be either a military officer or an uncovenanted servant. During the fair season, when only field operations are conducted, the assistant is always with his men in the district in which they are employed, keeping a continual watch over all their proceedings, and finally from 5 to 15 per cent. of the work of each individual measurer or classer, taken at hazard, is done over again by the Assistant himself, as a test of the accuracy of the whole. The duties of the superintendent are confined to a general supervision over the assistants: to his share specially falls the conduct of everything connected with the re-assessment after the measurement and classification have been completed, and also the introduction of the revised settlement after the Government sanction has been obtained.

Page 294, line 5. Agricultural skill is mentioned as one of the items taken into account in fixing varying rates of assessment for different groups of villages, according to their capabilities and advantages. The word "husbandry," used in para. 67 of the joint report, Mr. Mackay has erroneously supposed to mean agricultural skill; had he noted the remainder of this para., he must have been disabused of this error, it being distinctly stated that the assessment is based on considerations of a durable character, and not on those which are uncertain and liable to change. "Husbandry," as interpreted *in extenso* by the context, can only mean natural facilities for different degrees of husbandry, of a more or less productive nature.

Page 294, lines 18 to 23. "The survey does not determine what the district has to pay in the aggregate, leaving the proportions to be borne by the ryots to be determined by the heads of villages, which was the old plan, but the rates to be imposed upon the several classes of soil within the district." It may be well to repeat that the whole system under our Government was not as here stated; the separate fixing of each individual's assessment is no novelty introduced by the survey, which merely aims at the purification of the old system, and at substituting an assessment of the land proportioned to its intrinsic capabilities for the unequal assessment bequeathed to us by native government.

Page 295, lines 18 to 20. "The introduction of the new settlement does not necessarily occasion any disturbance of possession, although it frequently changes a man's relation to the land." What is the meaning intended to be conveyed I am unable to comprehend; some innovation in the new settlement is evidently hinted at. No man's possession is anywhere interfered with: beyond all doubt it has always been the practice to enter tracts of land by the local names, with numbers superadded; a holding of 10 of such old numbers may now be included in five, or fewer revenue survey numbers, or a holding composed of one old number may now be only a portion of a revenue survey number; this certainly does not constitute an alteration of the relation of the cultivator to his land.

Page 302. It is stated that the superior description of carts, which are occasionally seen traversing the roads of the Deccan, are built by Government at factories established for the purpose. In districts where a good description of cart has not been in use, a few, say 50 or 100, have been built by Government in some of the existing suitable establishments, not in factories established for the purpose; these are bought by the people, who very soon discover what advantages they may possess, and the fabrication of similar is quickly taken up by the native artisans, whose work, probably, were twenty (20) out of 30 of the carts Mr. Mackay saw.

NOTE (B.)

This confusing the maximum and average assessment of land is by no means so uncommon as might be supposed. Mr. Shaw, the Collector of Dharwar at that time, has evidently fallen into this error in the statement of the assessment of cotton land in his report to Government of 2d February 1847.

Captain Wingate stated the average new cotton land rates in the Nowlgoond talooka to be 14 a. 6 p. per acre, in Dumul 12 a. 6 p., in Bunkapoor one rupee; the average for the whole collectorate under the new rates varying from 14 annas to one rupee per acre on cotton lands. This estimate was made when the survey of the collectorate was still only partially completed; it however very exactly coincides with that made in para. 27, from the new rates of the whole collectorate.

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Page 15.

Summary of proceedings connected with cotton experiments printed by Government of Bombay in 1849, page 16.

Page 22.

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NOTE (C).

THERE is a point which appears to have escaped Mr. Mackay in his description of the new settlement, and consequent reduction of assessment, though deserving a very particular notice. The village and district hereditary officials, and several of the village community, were entitled by prescriptive right to levy from every ryot, in kind, a certain portion of grain or other produce, proportioned to the size of his holding. The payment of this cess has been, under our Government, an increasing bone of contention, and the handle afforded by the existence of this right for interference with every man's affairs on the part of the officials may be easily conceived. (Under the revised settlement these direct levies on the part of the native officials have been done away with, due compensation being given from the Government treasury.) It may be likened to a commutation of tithes, the commutation, though, being paid by Government, instead of by the former tithe payer. The direct levies of the servants of the village community are not interfered with by the new settlement being not similarly subject to abuse.

(signed) *W. C. Anderson,*
Superintendent Revenue Survey and Assessment,
Southern Mahratta Country.

NOTE (D).

STATEMENT of Average Prices prevailing in Fifteen principal Bazaars of the Dharwar Collectorate, from 1841-42 to 1853-54, derived from Records of the several Mamlutdars.

Y E A R.	COMPANY'S SEERS, PER RUPEE.						Clean Cotton, per Nug of 300 lbs.
	Rice.	Red Jowaree.	White Jowaree.	Bajree.	Wheat.	Grain.	
1841-42 - - - -	44	88	84	88	58	45	Rs. 25
1842-43 - - - -	44	89	81	84	59	44	24
1843-44 - - - -	44	84	87	82	59	40	25
1844-45 - - - -	45	86	95	88	58	35	25
1845-46 - - - -	29	61	64	59	41	22	22 ½
1846-47 - - - -	35	75	74	69	49	30	23
1847-48 - - - -	33	67	54	63	53	31	24
1848-49 - - - -	38	84	94	81	56	41	22 ½
1849-50 - - - -	42	84	82	81	54	40	27 ½
1850-51 - - - -	41	84	84	84	48	35	26 ½
1851-52 - - - -	42	99	108	88	60	38	25
1852-53 - - - -	43	83	85	75	58	36	28
1853-54 - - - -	35	69	64	57	50	32	26 ½

(signed) *W. C. Anderson,*
Superintendent Revenue Survey and Assessment,
Southern Mahratta Country.

(No. 2103 of 1854.)

In forwarding copy of the accompanying report on Mr. Mackay's Western India, the Acting First Assistant Collector in Charge begs to make the following remarks:

2. The statement in para. 26, that Mr. Mackay has over-rated the average assessment of cotton land, is correct. The extent of land planted with cotton in 1852-53 is 1,62,093 acres 32 goontas, assessed at Rs. 1,47,877. 12., being an average assessment of 14 a. 7 p. per acre.

3. He would solicit attention to the scheme proposed in the 24th and 25th paragraphs, for enabling ryots to purchase their fields.

4. He

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4. He does not consider it requisite to go into details on the subject of the roads noticed in paras. 31, 32, and 33, as he has learned that a proposal for a system of roads on a large scale, embracing the minor works alluded to, has been submitted by Major Hebbert, Executive Engineer,

(signed) *M. J. M. Stewart*,
Acting First Assistant Collector in Charge.

Dharwar, Collector's Office,
Camp Kulghutgee, 8 December 1854.

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(No. 18.)

From *M. J. M. Stewart*, Esq., Acting First Assistant Collector, to *J. S. Law*, Esq.,
Collector of Dharwar,

Sir,

I HAVE the honour to acknowledge your endorsement, No. 237, of the 20th ultimo, received from Mr. Pelly on the 13th instant, forwarding copy of the despatch of the Court of Directors, regarding the late Mr. Mackay's reports on Western India, with a copy of that work, and I beg to offer the following remarks on that portion of it which relates to the Southern Mahratta country.

2. Mr. Mackay treats of three points in his description of the Southern Mahratta country, and these are, 1st, the Revenue System, as it bears on the condition of the people, and the production of cotton; 2d, the Roads; and, 3d, the Irrigation.

3. It will be observed, that in the second book no reference is made to the preparation and adulteration of cotton, to which, as relating to Guzerat, the first chapter of the first book is devoted.

4. The pith of Mr. Mackay's remarks on the revenue system and new assessment, in the first chapter of the second book, may be stated to be that he considers the revenue survey has been, on the whole, an improvement, both in facilitating the collection of the Government revenue, and in ameliorating the condition of the ryots, though in two important respects it falls short of what Mr. Mackay considers the laws of political economy and the wants of the country required in such a measure.

5. It is contended that the land should have been let out on leases to the ryots for terms of years, instead of allowing them to extend or retrench their holding according to circumstances, and that the settlement should have been permanent, and not liable to be changed after 30 years.

6. I refer to page 299 *et seq.* for the reasons from which the former inference is deduced, which may be summed up thus: the promoters of the "annual settlement" advocate it on the ground of its being favourable to the ryots; but the past policy of Government leads Mr. Mackay to consider it improbable that any sacrifice will be made, and he looks for the counterbalancing advantage in Government being able to exact a larger revenue than the cultivators could pay under a lease.

7. But supposing Government has really made a sacrifice, without any counter-advantage of the kind hinted at, Mr. Mackay condemns the system on the score of the impolicy of neglecting to avail ourselves of the stimulating effects of a 30 years' lease, and considers that the natural tendency of the annual system is to perpetuate that carelessness and thoughtlessness on the part of the farmer which will go far to prevent the accumulation of capital to any great extent.

8. Mr. Mackay himself regards the former explanation, viz., that Government, being aware that the rents are too high for the tenants under a long lease to pay, adopted the system of annual settlements, to be the most satisfactory one (*vide* page 303); but as this is totally unsupported by proof, and as good reasons may be given for the adoption of the annual leases without resorting to such an improbable conjecture, this statement may be passed over without remark.

9. For a full and clear refutation of the objection raised on the score of policy, I can only refer to the opening paragraphs of Captain Wingate's letter to the Revenue Commissioner, No. 239, of 23d December 1848, particularly the 10th para.; to which I would add, that a lease for a term of years, if so strictly worded as to have a tendency to stimulate the energy of the farmer, would entirely do away with the saleable value of the occupancies the creation of which is one of the happiest results of the revenue survey.

10. For a lease which would "stimulate the energy of the ryot" must be one which binds him to continue to hold a certain quantity of land for a term of years, and to pay an annual rent, thus placing him very much in the position of an English farmer, among whom sales of land are out of the question; and it is evident that if the tenant were to be allowed to dispose of any portion of his land to others, the lease would no longer be directly useful as promoting in him economy, energy, and habits of foresight.

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11. In order, then, that the land may have a market value, as between ryot and ryot, the system of the Bombay settlement, namely, 30 years' tenure, with right of sale, transfer, or resignation, must be adopted, or else the ryots must be made the proprietors of the land.

12. If it can be shown that Mr. Mackay's favourite scheme of a "permanent settlement, founded on peasant proprietorship," would not have been necessary or politic in Bombay, I think it may be concluded that the ryotwar system, as adopted here, and which combines security of tenure and freedom from the interference of the Government officers, with every consideration for the condition and customs of the peasantry whom it enables to accumulate capital and increase their holdings if prosperous, or to reduce their holdings, either by sale or resignation, if the reverse, is the form of the revenue settlement which was the best adapted for the Southern Mahratta country.

13. Mr. Mackay alleges the following reasons for preferring the system of permanent settlement:

1st. He contends that such a system would be free from the "difficulties which beset the new survey and assessment," which (page 316) he considers to be the want of sufficient encouragement to agricultural energy and the employment of capital, the necessity of annual inspections, and the confusion which will be caused in the classification of lands and villages, when new roads are made and new markets are created.

2d. Land would then have a much higher market value, as the purchaser would know that he was buying a perpetuity.

3d. The ryot would then be placed in his proper position as regards the land, in the improvement of which, it would be his interest to use his best energy.

14. I would briefly examine each of Mr. Mackay's reasons for preferring his favourite system, which are, I think, fairly stated above, as gathered from pages 316, 318, and elsewhere in his work.

15. As to the difficulties which, in his first reason, he says beset the Bombay settlement, the first is merely a question of the comparative benefit of the different systems, and I have in paragraph 9 given reasons to show that the Bombay settlement is not without its advantages. The second difficulty is, that these annual inspections required to be made offer temptations to the native officials; but as the objects of these inspections are the examination of the boundary marks, and the prevention of surreptitious cultivation of Government waste land, it is evident that for neither of these purposes would the necessity of an annual inspection be obviated under Mr. Mackay's proposed system; for it would still be necessary to examine the boundary marks, and the ryots would be as apt to cultivate Government waste land as they are now. It is therefore obvious that this difficulty, if it be one, would not be removed by Mr. Mackay's proposal.

16. I am at a loss to know by what reasoning Mr. Mackay inferred that the other difficulty which he considered to beset the Bombay settlement, namely, the confusion which would hereafter be caused in the classification of villages by new roads and markets, would be better met by a permanent and perpetual settlement than by one which admits of revision after a period of years. It is to be hoped that had Mr. Mackay lived to superintend the publication of his reports, he would either have explained his views more clearly, or else have cancelled these pages (310-315) devoted to such special pleading. It is evident that one of the advantages which the Bombay revenue settlement has, is that it admits of a revision and readjustment, about the year 1875, of any inequalities which may have arisen from these and other causes.

17. The second reason alleged by Mr. Mackay for considering a permanent settlement to have been called for, is that land would then have had a higher market value, as purchasers would pay higher for a lasting property than for an unexpired lease; and it appears to me doubtful that this would be the case to any great extent. For the purchase would include the right of renewing the lease on the terms proposed by Government; and if the people have confidence in us, they will be sure that these terms will not be exorbitant; while if they have not confidence in our Government, they will be very chary of laying out money in the purchase of landed property, whether in perpetuity or for a limited period.

18. The same answer applies to the third reason given by Mr. Mackay; for I think there is no doubt that the ryots have sufficient confidence in our Government to be sure that the terms offered them at the expiring of the 30 years' period will not be so hard as to require them to throw up the fields on which they have expended capital.

19. I would therefore venture to express my opinion that Mr. Mackay has failed to show any intrinsic advantages in a permanent peasant proprietorship which would recommend its adoption as a revenue system for Bombay; and I would go further, and say that there were actual disadvantages which would have made a permanent settlement of the revenue an unpolitic and unwise measure.

20. For there were the most imperfect data on which to base the assessment, and the survey settlement being an untried experiment, it would have been very rash to have declared it perpetual. Though the expectations of a largely increased cultivation have been borne

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borne out, yet the extent to which the cultivation would increase could not be certainly known beforehand, and had the cultivation not increased, the deficiency in the revenue would have been serious.

21. And Mr. Mackay seems not to have sufficiently considered that the Indian Government cannot afford to try hazardous experiments with the land tax, which is the main source of revenue. There is no substitute which could be made to compensate for a deficiency in that part of the revenue, and if the defective scale of taxation had been declared permanent, the consequences would have been very serious.

22. Should it be found in the 30 years' experiment that the revenues of the Presidency, or of any collectorate in particular, are deficient, and insufficient for the public service, there will be an opportunity, when the period expires, of raising the revenue by a uniform percentage on the survey rates, which opportunity would not have been offered by a permanent settlement.

23. It is not for me to suggest, that after the expiry of the period for which the survey assessment has been declared permanent, it would be advantageous to declare the assessment as then re-adjusted and settled to be perpetual; but I may conclude this part of the subject with the self-evident remark, that while a permanent settlement neither can be changed into a limited settlement, nor admit of its terms being altered, a settlement for a limited period may at any time be declared permanent, or on the expiration of the period may, if necessary, be re-adjusted.

24. I have one suggestion to make which might be thought worthy of being taken into consideration, and that is to the effect that some provision should be made for allowing a ryot to become proprietor of his holding, by purchasing it from Government. A sum equal to 20 or 25 years' tax on the field might be fixed as the price, on payment of which to Government the farmer would be considered to have become the proprietor, and to be exempt from the land tax. This would tend to make the natives of this country understand the saleable value of land more than anything else, and would enable them to become proprietors in a much fuller sense of the word than that used by Mr. Mackay.

25. It seems probable that ages would elapse before the annual revenue derived from the land tax would be materially diminished, and in the meantime the purchase-money would have sufficed to pay off so much debt as would, in interest, stand against the abolished revenue; and when so much land has been purchased as to affect the revenue sensibly, it may be expected that the country will be so far altered as to admit of other and more equitable modes of taxation being adopted.

26. I beg to direct your attention to Mr. Mackay's calculations (pages 329 and 338) of the average rate of assessment at which cotton-growing land is taxed, which he supposes to be Rs. 1. 6., which, I am almost certain, is six annas too high. I have no certain grounds on which to base my opinion, further than that I remember having ascertained the average rate per acre in the Nowlgoond talooka to be less than one rupee; and it is not worth while applying to the district officers for returns, which the records of your office would easily furnish.

27. Should my supposition be correct, the table in page 340 would be as follows:—

	Rs.	a.	p.
Yield of 11 $\frac{1}{2}$ acres - - - - -	63	-	-
Deduct wages of labour and wear and tear of stock - -	26	-	-
	37	-	-
Tax on rent - - - - -	11	12	-
Profit - - - - -	25	4	-

or the Government land-tax is equal to 45 per cent. on the farmer's profit, instead of 75 per cent., as Mr. Mackay states it to be.

28. But the yield of 63 rupees from 11 $\frac{1}{2}$ acres is only that of inferior land, which would be taxed at 14 annas per acre. Mr. Shaw, in paras. 98, 99, of his annual report for 1844, calculates the yield per acre on land assessed at one rupee (1) per acre to be Rs. 11. 6. for New Orleans, and Rs. 5. 10. for native cotton.

ROADS.

29. The second chapter of the second book is devoted to the roads of the Southern Mahratta country; and, with regard to Mr. Mackay's remarks on this subject, I beg to state my opinion, that, so far as external commerce is concerned, the Southern Mahratta country is, comparatively speaking, very well off for roads. There are two outlets for the exports of the country, the Vingorla road for the districts north of the Mulpurba, and the Coompta road for the southern districts.

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30. It is true that there are not many cross roads in the Dharwar Collectorate; but this, as it affects the cotton-growing districts, may be thus explained, that the only work which is called for in the black plains, is of the most expensive and difficult description. The tracks, as they now exist, are quite passable for more than seven months in the year, including the time when it is necessary to get the cotton on to the made road leading to the coast. During the rainy months they are almost impassable. It would be difficult to form an idea of the state of the country alluded to after a heavy fall of rain. Both roads and fields are equally affected; the mud is everywhere knee-deep, often more, and all traffic is stopped for many days.

31. At the same time the difficulty of constructing a road in the black plain is almost incalculable; for distances of 10 or 20 miles together there is no material for road-making obtainable, except the granular limestone, which is very indifferent metalling. Stones for bridges and drains would have to be brought from great distances. Of this description of road, the one of greatest importance is the line from Hooblee to Gudug, regarding which, I have already addressed you; and I hope that whatever the expense of the line may be, that it will soon be undertaken if the revenues will bear it.

32. I hope that in the course of a few years several cross-roads will be constructed throughout the districts, some of them leading to the coast, and some either affording access to such roads, or for the convenience of traders attending some of the large markets. Sanction has already been obtained for some, and has been applied for for others, the sum applied for being about 150 rupees, or 180 rupees per mile.

33. Among these, I have applied for funds to repair the Turus and Bunkapoor Road, and if the proposed repairs be carried out, I would remark, that there would only remain the interval from Bunkapoor to Hurryhurr, which is about 36 miles, to complete the road from the Deccan and Belgaum to Hurryhurr, Bangalore and Madras. Though this road is not of primary importance to commerce, yet it would not be altogether useless, as there is a considerable traffic between Hooble and Hurryhurr and the Mysore country in cloth, silk, and other commodities, and it appears desirable that such an important line should be completed.

34. While on the subject of roads, I will allude to a point which would have come with much more weight from Mr. Mackay than from me; but as he has not adverted to it, I will bring it forward in the hope that something may be done in the matter.

35. A glance at the map of the Malabar coast shows that the port provided by nature for the Southern Mahratta country is Goa. Considered as a port of connection with Bombay, it is admirably situated to receive the traffic of the Dharwar, Belgaum, and Bellary districts; while, if viewed in the light of a port for direct communication with Europe, its situation and excellent harbour appear to afford advantages which would divert great part of the trade of the Deccan to it.

36. I would suggest the only way by which we could obtain possession of Goa, would be by making it a part of all our diplomatic relations with the Court of Lisbon, to induce the Portuguese Government to sell us the Goa territory.

IRRIGATION.

37. The Dharwar Collectorate figures so well in Mr. Mackay's third chapter, that no remarks are called for on that head. I would merely remark, that it appears to me that it would be very desirable if the Dharwar system of entrusting all minor works (under 3,000 or 4,000 rupees) to the revenue officers were encouraged in the other collectorates, where there seems, comparatively speaking, to have been little progress in irrigation.

I have, &c.
(signed) *M. J. M. Stewart,*
Acting First Assistant Collector,

Hangul,
25 March 1854.

(No. 738 of 1854.)

From *W. H. Havelock, Esq.,* Acting Collector of Belgaum, to *H. W. Reeves, Esq.,*
Acting Revenue Commissioner, Southern Division.

Sir,

In reply to your letter, No. 2937, dated 14th September last, I have the honour to make some remarks on a few points discussed, as I think unfairly, by Mr. Mackay, the Commissioner of the Chamber of Commerce.

2. Mr. Mackay finds fault with the revenue survey assessment for 30 years, because he thinks it suspicious that the Government should grant the privilege to the ryots of undisturbed occupation for 30 years, without, on the other hand, binding the ryot to hold the land in lease for the whole period, and draws an inference that the new rates, though in general reduced, cannot be considered as fixed at so low a sum as to secure to the ryots such a profit as would warrant the Government in binding the ryots to pay the rent for 30 years.

3. I suppose,

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1051

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3. I suppose, however, Mr. Mackay and others of the same opinion, would at least admit that it is a more favourable bargain for the ryots to hold the land on the fixed rent for an assured period of years, with the option of throwing up the lease at the expiration of any year during the period, than to be bound down to pay the rent for 30 years.

4. I apprehend that if the Government had taken the course suggested by Mr. Mackay, and attempted suddenly to make such a great revolution in the system of occupancy in the Deccan, as to bind down cultivators to cultivate for 30 years, or to pay the rent, whether they cultivated or not, there would have been an outcry raised throughout the length and breadth of the land. Without attempting any such violent reform, the Government have expended large sums in obtaining an accurate survey and measurement of the land of every village, and have fixed a rent which competent officers, upon mature consideration, decided to be fair, and to have at least sufficient remuneration in all cases to induce the cultivation of the land, and in many cases to allow a large surplus over and above rent, and expense of tillage.

5. During the period of 30 years, for which the settlement is fixed, much information and data of increased accuracy may be obtained by which to be guided in a future settlement, and the Government is not intermediately precluded from making leases with cultivators, or, if it should seem fit, from selling the fee-simple of land, if people should be willing to purchase. As for reducing the rates to such a level that the binding down of all cultivators to a lease for 30 years would be popular, I am not at all convinced that much larger reduction of the rates would make Indian cultivators faithful observers of the terms of a lease imposed upon them, and though when private individuals make arrangements for their estates, they may expect to profit by judicious agreements of this kind, yet it does not follow that the same arrangement applied to an entire country will have the same effects.

6. It is all very well for the advocates of liberal measures to recommend relinquishment of a large portion of the land revenue in a country where the land is almost the only source of revenue; but it behoves those who do so, to indicate other sources from which upon emergency revenue can be obtained.

7. I believe the acknowledged object for which the Manchester Commissioner was appointed was in order to obtain information as to the possibility of cotton wool, better, cheaper, and in greater quantity, being procurable from the parts of the Bombay Presidency; and, as subjects intimately connected with their object, the land revenue system of Government, the state of cultivation, and the state of the roads, and means of traffic, are brought under discussion.

8. Mr. Mackay's remarks, as far as his description of the tenure of land by the natives, I think generally correct; but his view of the survey settlement appears unfair, as I have above stated.

9. Mr. Mackay's contempt for the native system of cultivation is, I think, also unwarranted by facts. No doubt the system of husbandry is slovenly, the machinery to all appearances inefficient, and the produce less than it might be under better management.

10. It must be, however, remembered, that the expenditure in seed, labour, cattle, and implements must be regulated by the value of the produce. With means at his hands, which cost little or no money, the ryot has no inducement to buy expensive machinery, or even to go to the expense of manure. The fluctuation of the seasons is also in this country a great drawback to expending money on the land. A ryot might by increased returns be able to obtain repayment for the expenditure made in a fine season; but if the season should be one of drought, the extra expenditure is an extra dead loss; for there is little or no return at all, after paying the expense of cultivation.

11. In the Deccan manure is certainly very little used; but in the west of Khandeish, where there is much cultivation in land irrigated by never-failing streams, manure is as much used as in the improved husbandry of England or Scotland; there the crops are valuable; sugar-cane, rice, and heavy crops of wheat; the return is nearly certain; and we find labour and expenditure applied accordingly. Where a result may be fairly anticipated, we do not find the means to obtain the result wanting.

12. I have been informed by an American cotton planter (Mr. Simpson), who was sent out on purpose to introduce American cotton, and superintend its cultivation, that he could teach little or nothing to the cultivators of cotton in the plain of the Taptee in Khandeish; that, in fact, the husbandry was very good, and the yield of indigenous (not American) cotton in a good season very heavy. The ploughing in particular is generally held up to ridicule by English writers on Indian husbandry; but I will engage to say, that an English settler in the plains of the Deccan would soon give up English ploughs for the native implements, because the light cattle of the country could not draw the English plough. The native ploughman could not hold the English plough; and the English cattle and ploughmen, if imported for the purpose, and applied to the purpose, would die in the first season.

13. With respect to roads again, I think Mr. Mackay is much too hard upon the Deccan, and the administrators of Deccan affairs; it is true that on the first occupation of the country, the attention of Government was naturally turned towards the construction of roads, connecting

necting the great military stations. Routes were soon established by which artillery could be conducted on emergency, and the frequent marches of horse and foot with their baggage be performed with ease and safety. Nor could a Government newly established by force of arms in a hostile country, and among a people only lately in arms against them, be blamed for first of all taking measures to preserve the English supremacy and the peace of the country. That attention has been made to commercial routes is shown by the grand road from Bombay to Agra, which has been comparatively little used for military purposes, and the great and expensive improvements upon which have certainly been sanctioned for civil and commercial purposes. If less has been done towards opening commercial routes in the Deccan than might have been expected, the natural difficulties of the country must be remembered, the smallness of the revenue, the deficiency of means at the disposal of the Government, and the entire want of assistance from the people whom it is proposed to benefit.

14. A road once constructed, requires constant vigilance in Europe to keep it in repair, and in this country there are circumstances which make it almost impossible to keep a road on which much cart traffic passes in repair as a good driving road.

15. The traffic, instead of continuing throughout the year, consists chiefly in carriage of the raw products of the country from November to June, a period of seven months, and during the same period European cotton fabrics and other imported goods to the interior, the traffic, instead of being carried on a variety of wheeled carriages of different sized wheels, and of different gauge, is carried entirely upon pack bullocks, or upon two-wheeled carts, drawn on an average about one mile and a half an hour, which, following each other in the same track, cut up a road of the best construction, leaving the entire space, except the ruts cut by the wheels, untouched, and even if metal were thrown during the season of traffic into these ruts it would, for want of rain, have no opportunity of binding, and be practically of little benefit.

16. The construction of branch roads is a subject to which Government turns a willing attention, and I fully agree with Mr. Mackay in the desirability of constructing such roads: still, while advocating expenditure for so valuable an object, I am strongly impressed with the necessity for the inhabitants bearing a part of the expense. Government are said to have made military roads for convenience and safety: let the people at least subscribe something to roads which are made for their benefit, for I confess I do not see how the Government coffers are to be filled by expending money upon routes which do not pay even a toll or a turnpike. The usual recommendation that an outlet for agricultural produce and manufactures will encourage extension of cultivation is reasonable enough; but this is only a distant and contingent advantage to Government; if there will be any real advantage from a road, the people on the line of road, and those near it, must reap the advantage.

17. Upon this view of the case, I would suggest that it should be a condition in making recommendations for commercial roads, that the banyans and villagers on the route, or near the route, should defray a portion of the expenses; if they know that Government will make the roads, these niggard natives will never subscribe a farthing. I do not say that the natives will ever make the roads if the Government do not, but I say that their subscribing for the purpose should be an assurance to Government of the advisability of the expenditure; and that their refusing to do so, should be considered an objection to the proposal, requiring strong reasons to be urged in explanation before such proposal could be admitted: these remarks do not, of course, refer to routes connecting great commercial "termini," but only to what may be called branch and district roads.

18. I regret that these few hurried remarks are all that occur to me to make at present. Mr. Mackay's work is, no doubt, a very valuable one, and contains many excellent suggestions, though bearing marks of a bias against the Government of the East India Company: to gather the best fruits of Mr. Mackay's labour, and to point out all the parts of the work on Western India which are open to correction and qualification, will, I feel convinced, require more time and attention than my other duties will allow me to devote to the purpose.

Belgaum, Collector's Office,
Camp Belwarre District, Sumpgaum,
6 November 1854.

I have, &c.
(signed) *W. H. Havelock*,
Acting Collector.

REVENUE LETTER from the Government of Bombay, dated 28 April (No. 40) 1856, to the Honourable the Court of Directors for the Affairs of the Honourable East India Company, London.

Honourable Sirs,

WITH reference to our letter, No. 79, dated the 29th August last, we beg to forward copies of reports from the officers named in the margin,* on the late Mr. Mackay's work entitled "Western India."

2. Transcripts

* Letter from the Revenue Commissioner, Northern Division, No. 1004, dated 11th April 1856, with enclosures, being reports from Mr. A. Elphinston, Collector of Kaira; Mr. E. L. Jenkins, Collector of Broach; Mr. L. Ashburner, Acting First Assistant Collector of Broach; Mr. H. Liddell, Collector of Surat; Captain F. Fanning, Superintendent Revenue Survey and Assessment, Goozerat; and Mr. A. Rogers, Settlement Officer in Goozerat, and Collector of Ahmedabad.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1853

2. Transcripts of Reports from Messrs. Hadow and Davies,* which are the only ones wanting, will be forwarded to your Honourable Court as soon as received, and our observations on the several subjects treated of in the work in question, communicated to you hereafter.

III.
Bombay:

We have, &c.
(signed) *Elphinstone.*
J. G. Lumsden.
A. Malet.

(No. 1004 of 1856, Territorial Department, Revenue.)

From *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division, to *Henry Young*, Esq., Officiating Chief Secretary to Government, Bombay.

Sir,

1. I HAVE the honour to acknowledge the receipt of Government letter, No. 597, of the 28th January 1854, with accompanying copy of a despatch from the Honourable the Court of Directors, No. 17, dated the 30th November 1853, requesting me to submit such remarks as I may have to offer on the statements contained in Mackay's Western India Reports, and now beg to submit the following observations, together with the reports mentioned in the margin.†

2. These would have been submitted long ago, but I was waiting for the report of Mr. Hadow, the Collector of Ahmedabad, as Government have already been informed. On my late visit to that collectorate, I found, on inquiring of Mr. Hadow, that the point on which he was waiting for information was merely the extent of grants by Government for the improvement of works of irrigation, &c. I do not think it worth while to wait longer, as it may be conceded at once that the amount is not very large, and Mr. Rogers and Captain Fanning supply remarks on almost all the points touched upon by Mr. Mackay. Vide Government Resolution, No. 4229, dated 10th October 1855.

3. To notice and discuss every shade of assertion, suggestion, and opinion in all the above-mentioned documents would render this letter as long as the whole of the documents put together. Some of these officers refer to particular points of correspondence, and make propositions for works, &c., which ought, if they think advisable to recommend them, to be brought forward separately for consideration on the particular merits of each. I shall therefore confine myself to the leading points discussed by Mr. Mackay.

4. I may refer *en passant* to an article which appeared in the "Bombay Quarterly Review" on the subject, and I think it ought to be mentioned that Mr. Rogers informed me he was the author of it, lest that able critique should be disregarded as an anonymous production.

5. A passage occurs in the preface to Mr. Mackay's work which would be liable to misconstruction if it were not noticed; it commences at the bottom of page xi, and goes on to page xii, where, in returning thanks to the commercial community for the important information given to him, total silence is maintained as to the countenance and information given to him by the Government and its officers. From this it might be inferred by those not informed on the point, that on the part of the latter he was coldly received. Nothing can be farther from the truth.

6. The Government sent a circular letter to all Collectors to assist Mr. Mackay in the prosecution of his researches, should he visit the collectorates. Nor was this a mere formality, for it was backed up by members of the Government giving him notes of introduction, at least I know I received one such, and believe that many others also were given to him. I met Mr. Mackay both at Surat and Poona, where he was living in the house of Mr. Shaw, Revenue Commissioner, Northern Division, and had full use of the records of that office, and many volumes of records were also sent to him from mine; in short, from what came under my own observation, I am confident that if he had seen the passage adverted to, he would never have permitted it to remain without alteration. No. 1705, dated 25th February 1851.

7. Any person who can appreciate the contents of the book will see at a glance that the mass of it is such as is gleaned from the records of Government, &c., and not material such as is likely to be supplied by the mercantile community; not that I mean in any way to say that he had not important information and assistance from the mercantile community, but simply that Government and its officers were by no means backward in assisting him, as might be inferred from the passage alluded to.

8. Notwithstanding, however, that Mr. Mackay had access to all the most authentic sources of information, he has fallen into many errors, which have been pointed out in the reports

* Now holding the appointment of First Assistant Collector at Surat.

† Kaira Collector's Report, No. 158 of 11th April 1854, with accompaniment. Broach Collector's Report, No. 1144 of 15th September 1854. Broach First Assistant Collector's Report, No. 15 of 24th July 1854. Surat Collector's Report, No. 926 of 5th July 1854. Captain Fanning's Report, No. 54 of 2d May 1854. Mr. Rogers' Report, No. 50 of 9th May 1854.

reports now submitted. That he should fall into such errors is not to be wondered at, considering the enormous and novel mass of material he had to work upon, and that he was new to the country.

9. The book throughout indicates strong preconceived opinions, and his experience of India was not sufficient to enable him to see through the weak points and inapplicability of much of his argument, which in some instances appears inconsistent with itself.

10. But I shall not stop to enter upon minor points, as what I have to say upon the more important will occupy much space.

11. Mr. Mackay lays his principal indictment, as it seems to me, at the door of the tenures and assessment in Goozerat. The general scope of his argument on this subject appears to be that proprietary right vesting in Government is adverse to the development of the resources of the people, which would be remedied by conferring on them the tenure of fee-simple, that the assessment of the land is so heavy as to leave the cultivator nothing but mere labourer's wages, which circumstance, combined with want of good internal communication, diminishes the produce of the country, especially cotton.

12. Remarks on and replies to much of Mr. Mackay's observations on the subject of the growth and adulteration of cotton, will be found in the accompanying reports, particularly in those of Mr. Rogers and Captain Fanning, which render further remark from me on details unnecessary.

13. I merely mention *en passant* that for many years past Government have expressed the greatest anxiety to improve the cotton of this country and prevent its adulteration, large sums have been expended on the former object, but unfortunately with but partial good results, and this failure, I think, presents a tolerably obvious inference that material improvement of the cotton is not to be looked for in anything that lies in the power of Government to do for it, but in the hands of private individuals of energy and capital.

14. The laws against adulteration are most stringent, and Government are constantly on the watch that they are duly enforced, and doubtless with some good effect. The difficulty, however, rests with the people, who prefer to risk passing on bad cotton to informing against those who have cheated them, and in their turn to cheat others.

15. The policy of appointing inspectors has been fully discussed in a separate correspondence, and the proposal finally negatived by Government Resolution No. 2606, dated 20th June 1855.

16. On the subject of roads I shall not say much; it is notorious that they are far from good roads, but nevertheless the whole of Goozerat is practicable for cart traffic. It is not at all a matter of surprise to me that much money has been laid out in the Deccan, and scarcely any in Goozerat for roads; I see very good reason why it should be so. It must be recollected that the Indian Government has all along suffered under financial pressure, and that the period during which Goozerat has been under British dominion has by no means been a period of peace and tranquillity, but one of constant struggle, in one quarter or another, to maintain our position or even our existence as a power.

17. Consequently it would be matter of consideration adverse to road-making in Goozerat that the want of material to make good roads would render them exceedingly expensive; that the country was practicable for cart traffic; that there was a long line of sea-coast available for transport, and that roads from west to east were but little called for, the country on the east being a pestilential jungle for a long distance, and when that tract was passed, the road from Khandeish to Bombay became preferable and nearer in a direct line.

18. On the other hand the Deccan is shut in by ghauts, is a rough, rugged, rocky country, and for the most part utterly impracticable for carts without roads and ghauts being made.

19. But without in any way underrating the advantages of good roads, I must say that the roads in Goozerat, as seen and represented by Mr. Mackay, are no material impediment to cotton reaching Bombay; the Goozerat cotton country is all within easy reach of the sea, and it probably would not make a difference of two or three days from any point whence cotton usually comes if the roads were ever so good.

20. But cotton, the picking of which ends in the commencement of March very often, does not reach Bombay before the monsoon, which commences in the beginning of June, and it thus loses the opportunity of shipment that season, and has to be stored in the interior.

21. This *contretemps*, however, for the most part is attributable to reasons other than the badness of the roads, which are, firstly want of sufficient coasting craft to take all the cotton down to Bombay before the southerly winds commence, which usually set in at the beginning of May, and secondly, when these winds get strong, as they very commonly do, increasing as the monsoon draws near, many boats make very long passages, and some are obliged, after much beating about, to return.

22. In discussing the subject of assessment, Mr. Mackay enters into a number of calculations of the cost of cultivation, &c., which are noticed in some detail by Mr. Rogers and Captain Fanning; I do not, myself, put much faith in such calculations, the amounts taken as data are for the most part assumptions and may be very erroneous, and such calculations are particularly

particularly open to doubt when they make out that the profit left is too small for a person to exist upon; he may well say that his paltry profits will scarce suffice to pay the inordinate interest owing to the money-lenders.

23. This latter point, however, I think presents a different conclusion to be drawn from the ryots' entanglement with the money-lenders, who are to be found in almost every village; these are well known to be as little inclined as any people on the face of the earth to be liberal, or to drive an unprofitable trade; the very frequency of the profession unerringly points out that the trade must be profitable; and the land is the security and the obvious source from which the profits are derived.

24. Whatever, then, may be the actual amount of the cultivator's profits, it appears to me quite clear that Mr. Mackay has very much underrated them; the assessment may be higher than it ought to be, but I cannot admit that it is responsible for the bad consequences to the extent ascribed to it.

25. Land is much more frequently sold than Mr. Mackay seems to have been aware of; but there are several reasons why land should not be very generally transferred by sale; in the first place, the people are excessively averse to selling lands that have been long in their possession, and also, there is generally a large quantity of unoccupied land to which those who wish to cultivate can resort. Sales of lands in the neighbourhood of large towns and populous localities are by no means uncommon, and there is nothing to prevent the people doing so on the part of Government unless it is to be understood that by their sale the right of the Government to revenue is to be sold also, a position obviously preposterous.

26. A difficulty in the way of sale exists in nurwa or bhagdaree villages, but this is an internal arrangement for the protection of their tenure. In these villages the interests of the sharers are analogous to those of a trading firm, and it is obvious that a share in a trading firm (not a joint-stock company) could not be sold without the consent of all the other sharers, the introduction of a stranger would be liable at once to upset the harmony of the community, and most probably lead to the breaking up of the tenure.

27. Mr. Mackay is, I think, decidedly at fault in considering the Government cultivator a tenant-at-will. There are tenants-at-will, but these are tenants under other occupants or proprietors. The Government tenants, properly so called, are legally entitled to hold their land as long as they pay the revenue demandable on it; and they do thus hold lands from generation to generation. An ejection for nonpayment is a rare case, for the Government must maintain its revenue, which it can only do by maintaining the permanency of its tenants; and they having an honourable, intelligent, and responsible Government to administer to them, have better guarantee that ejection will not be hastily resorted to than they can have from any private landlord.

28. The occupancy found among the tenants of those who hold lands free of demand from Government, is notoriously very precarious. These are really tenants-at-will, and the proprietors are very unscrupulous and short-sighted in the way they make use of their power of ejection, while they exact the highest possible rents.

29. The tenure of Government lands does not confessedly (and I do not know who ever said it did) amount to fee-simple, not even under the revised survey assessment; but the tenure is in all cases very far removed from that of tenant-at-will. Under the revised assessment, the tenant has a guarantee that the rent will not be raised for 30 years; so far the tenure is equal to a lease for that period; but he has greater advantages than an English lessee, for he can give up or maintain his right as he pleases at the close of each season. Even at the expiry of the 30 years he does not lose the right of occupancy; and here he has a decided advantage of the English lessee, for the latter has no right whatever to remain in occupancy any longer. The landlord may offer such terms as he can accept or otherwise, and the terms depend entirely on the landlord's personal character; but the Indian occupant has a right and cannot be ousted, if he agree to the new terms; and he has the guarantee above alluded to that they will not be exorbitant, which appears to me as good a one as could be given.

30. The ill effect of over-assessment is so well understood, that no Government of the most moderate ability that can be conceived in these days would ever knowingly and willingly allow it to exist. Much has existed, no doubt; but it has so happened for want of means to work upon so large a tract of country in detail, and of proper data to go upon; but this defect has to a great extent been remedied, and is still in course of rectification by the revenue surveyor; but over-assessment, or the exaction of too high rents, as it should more properly be called, is the rule rather than the exception in the case of lands which are (as it is here termed) alienated, and in the hands of private proprietors.

31. At page 87 I understand Mr. Mackay to say, that fee-simple has no existence even in enam lands; and if enam is not tenancy at will, it is at least its counterpart. I confess I am at a loss to discover how he makes this out, for, as he speaks of lands which pay nothing to Government, they would appear to be, if not identical, as near the tenure of fee-simple as possible. When there is a limit to assessment, that limit is maintained by law. I imagine that some confusion has taken place in his memoranda between ryots as tenants of Government lands, and as tenants of alienated lands. The proprietor of alienated land would never make such a speech as is supposed in page 88. If this speech is supposed to be

be spoken by a tenant of the latter description, it bears no reference to the Government; but to the manner in which land is administered under the nearest possible approximation to, if not actually, the fee-simple tenure.

32. I see nothing in which *enam*, or other tenure free from any demand from Government, differs from the lands of a proprietor in fee-simple. The proprietor is free by law from any demand by the State, and is certainly at liberty to manage his lands as he thinks best; and all other alienations approach the fee-simple to such extent, as the demand of Government is limited by law.

33. But the concession of the fee-simple, which appears to be the panacea prescribed for the evil that exists, is a scheme not to be entertained without deep consideration, and without some fair encouragement from the state of things as existent under the nearest approach to that tenure; for this concession must needs occasion a total *bouleversement* of all the existing taxation of India, and require a new system, either one alien to the habits and feelings of the people, or else one that would in all probability increase existing evils.

34. The advantages of tenure by fee-simple, it certainly must be allowed, have a great appearance of truth and probability; but if its effect in this country really would be more favourable to the development of the resources of the land, it will, I think, be admitted that as one is subject to a high assessment by Government and the other is not, it should follow that all such lands now held partially or wholly free, should be in a much better state of cultivation, improvement, and productiveness than those of Government which are not held in fee-simple, but are subjected to a direct demand of an assessment not unalterable.

35. The consideration of this point led me to doubt the soundness of the argument, for my own observation had not tended to the conclusion that such superiority existed, except in cases where lands were in the hands of wealthy parties, who treated them rather as pleasure-grounds than with a view to profit.

36. Not choosing to trust my individual impression on this point, I referred to the different Collectors the question whether the alienated lands in their collectorates presented any marked superiority over Government land, in point of cultivation or improvement; and if so, to what cause they attributed the same. They report as follows:—

37. The collector of Ahmedabad, Mr. Hadow, says, "I conceive it not unlikely that instances of superior culture of alienated lands, when the lands have been long in the occupancy of the same tenants on easy rentals, might be found in some villages, particularly in those that are well populated, and where the demand for land rather exceeds the supply. Such instances, however, I believe to be rare, and from the inquiries I have made, I am inclined to think that, generally speaking, when the assessment may not be excessive, and the cultivators are of the Coonbee castes, the Government lands are upon the whole as well cultivated as the alienated.

"2. Mr. Rogers tells me, in reply to a reference I made to him on the point, that he has not noticed any marked superiority in the style of cultivation or in improvements in alienated lands, and this he would attribute to the proprietors of the former being in a great measure non-resident, and partly to the apathy of the cultivating classes in general, who are more content with a moderate crop obtained with little labour, than the overflowing one they might reap as the reward of greater exertions.

"3. As regards the comparative extent of cultivation of the two descriptions of land, the returns show a larger per-centage of alienated lands under the plough; the difference being perhaps from 20 to 25 per cent. in some districts in favour of the alienated lands. This, I think is not more than might be expected, considering the extent of land in this collectorate wholly and partially exempt from assessment, and the heaviness of the assessment on Government lands in most of the districts."

38. The Collector of Kaira, Mr. Elphinston, says that "previously to the receipt of your letter, my attention was directed to the above subject of inquiry by the remarks in the late Mr. Mackay's work on Western India.

"2. The superiority of Government lands over the alienated lands in this collectorate is generally allowed, both in point of cultivation and of improvements, the causes assigned being as follows; namely, the large area of the Government lands, forming the bulk of that under cultivation and their proximity to the village, cause them to be in general request, and the Government cultivator is considered a person of more consequence than the cultivator of a private holder of land. More care and labour is bestowed by cultivators on Government, than on alienated land, and the former is most valued and improved, for Government do not increase the rents of their lands if improved; whereas there is no security against the increase of rents by the proprietors of alienated land.

"3. The tenures on which Government lands are held are mostly of a permanent character, whereas the tenants of alienated lands are liable to be ejected from the land at the will or caprice of the proprietors, and have therefore no permanent interest in such temporary holdings. They will only hold such lands as make-weights when they have not enough Government land conveniently situated, and even then they will only consent to hold such land on much cheaper terms than they pay to Government. As the proprietors of alienated lands raise their rents and eject their tenants at the termination of their leases, the cultivators extort reduced terms from the proprietors of alienated land by threatening to cultivate only Government lands; and as the all of the proprietors of alienated land is at stake, worsted in the

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the struggle, they are forced to concede to the cultivators; whereas the bulk of the land, belonging to the State, so extensive a landed proprietor is not affected by the individual efforts of cultivators.

"4. The owners of alienated lands are indolent Girassias, Varias, and Brahmins, who are not professional agriculturists, and generally let out their lands on lease, content with receiving a moiety of the produce of their fields from the cultivators. Sometimes service lands held by hereditary districts and village officers are found in as well cultivated a state as Government lands, but this is the exception to the rule.

"5. Improvements are at times made by pecuniary outlays on works of irrigation, &c., or to stop any damage or injury on Government lands; whereas private proprietors grudge the outlay of their money, which is seldom or never made at their expense, and the ryots are too poor to expend money on another man's property. Remissions are granted by Government if the crops fail; private landowners are reluctant and averse to be so liberal. This greater degree of liberality by Government renders the tenure of land under Government more preferred than being held on lease from the proprietors of alienated land.

"6. Under the above comparison, the superiority manifested by Government land, is dependent not on its original intrinsic superiority, but is due to the superior management it receives from the number of intelligent officers, beginning with those who reside in the village, the district, and the collectorate, up to Government, and the Court of Directors, who have their attention constantly directed to the removal of abuses, and the prosperous management of the land; whereas the native proprietors are ignorant, short-sighted, with no capital to spare to lay out on land, and in addition often apathetic, as in the case of Grassia proprietors, who so long as they get their daily quantum of opium are satisfied, and indifferent to everything else besides."

39. In Broach there is more demand for land for cultivation than in any other collectorate in the Presidency. The collector, Mr. Jenkins, refers to the report of his assistant, Mr. Ashburner, who has had considerable experience in this collectorate, and states that he has every reason to believe that the conclusion Mr. Ashburner has come to is correct, and that alienated lands do not present any marked superiority over Government lands in point of cultivation and improvement.

40. Mr. Ashburner reports as follows: "With regard to cultivation, alienated lands may be divided into two great classes; first, those held by dessaees, and muzmoodars, and wanta, and wuzerpa lands in general, which are for the most part of a superior description of soil; and secondly, those held as pussaita by the dñers, bhungees, vurtunias, and inferior village servants, which are usually of very inferior quality, and are cultivated in an extremely careless and slovenly manner.

"2. By far the greater portion of the first class of lands are not cultivated by the wuttundars themselves, but are let to cultivators; the mode of cultivation will depend on the class to which the cultivator belongs; Koonbies, Borahs, Sejedra Brahmins, and to the south of the Nerbuda many of the Tulubda coolies, are good and skilful cultivators, who cultivate their land according to the most approved native methods, which I am inclined to think are the best, for all attempts to improve them on the experimental farms in various parts of the country have resulted in failure, and have proved the superiority of the native mode of cultivation.

"3. Inasmuch, therefore, as the greater part of the better sort of alienated lands are occupied by the ordinary cultivators of Government land, and the inferior sorts by cultivators who are notoriously unskilful and careless, I am of opinion that the cultivation of alienated lands afford no marked feature of superiority."

41. The collector of Surat, Mr. Liddell says: "My inquiries lead me to believe that with few exceptions (in cases where the owners take great interest in improving the fertility of the soil) the alienated lands in this collectorate present no marked superiority over Government lands in point of cultivation or improvement; on the contrary, they are reported to be generally far inferior to Government lands, owing to the oppressive nature of the assessmen's leviable thereon, and owing to the tenants being removable at the pleasure of the landlords."

42. The question being one of general application was referred to the other collectors of the division also.

43. The collector of Tanna, Mr. Seton Karr, reports as follows: "In the Colaba sub-division of the zillah, the alienated lands are reported by the late acting sub-collector to present no marked superiority: this report I have no hesitation in saying is quite correct; I am moderately well acquainted with the sub-collectorate, and I think it would be more correct to say that the alienated lands there present no superiority whatever. At the same time, I must observe that as rice is the staple product of the sub-division, and as the cultivation of it after the embankments are once made cannot be very much varied or improved by the expenditure of capital, it can hardly be expected that much difference should be observable. The class of temporary alienees, called khotas or farmers of the revenue (though some of them pretend to hold as wuttundars), are to my knowledge most harsh and exacting landlords; and if the wishes of the ryots were complied with, I believe that almost every khote village in the sub-collectorate would be taken back under the direct management of Government.

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"3. In the talookas of Moorbar and Tuloja, the alienated land is very trifling, and is reported by my acting fist assistant, Mr. Forbes, in no respect to offer any marked difference from Government land. In the talookas of Bhowndee and Cullian there is a considerable extent of alienated land, and the same officer reports that it is decidedly inferior to that of Government, he describes the rates as being higher than in Government villages, and the enamdars are either very poor or deeply in debt, and as he has expressed it, only trying to screw as much as possible out of their tenants.

"4. The talookas of Panwell, Sunjan, Bassein and Mahim (the last of which contains but little alienated land) are reported to present no marked superiority over Government lands in point of cultivation or improvements; but in the Kolwan district the alienated land is said to be for the most part superior to that of Government, in point both of cultivation and improvements. The reasons ascribed for the superiority is, that the alienees cultivate their lands themselves. I doubt, however, the correctness of the assertion. I do not think that all the alienees farm their own lands, some of them I am pretty sure rent their lands to tenants, but in either case they have a greater interest than ordinary ryuts in the improvement of the land, inasmuch as no assessment is paid for it; and this fact, combined with the generally better means of alienees, is sufficient to account for the superiority that is said to be apparent.

"5. In the talooka of Salsette I am assured by the present mamlutdar, who has served in it during the astonishingly long period of five-and-forty years, that there is little or no difference in appearance between the lands of Government and those of alienees, and I think this opinion on the whole not incorrect; but there are some estates in Salsette which are marked exceptions to the general average, and in these cases the superiority has been produced by a very large expenditure of capital. I have been told on good authority (that is, by one of the gentlemen who possess estates in Salsette) that as a speculation the outlay has not been profitable; three per cent. was mentioned to me as about the average return that is obtained. The improvement in the landlord's property has not appeared however to produce any improvement in the condition of the persons who cultivate it.

"6. The Nusrapoor talooka only now remains for notice. The deputy collector informs me that the condition of the alienated land in Nusrapoor cannot stand comparison with that of the Government land; I greatly doubt the accuracy of this assertion. From all I hear, I am led to believe that the landholders in Nusrapoor pay great attention to their estates, and if so, there can be no doubt that corresponding benefit must accrue."

44. The Collector of Khandeish, Mr. Mansfield, reports, "that the proprietors of alienated land in Khandeish seldom, if ever, cultivate their own land; they let it to coonbees, the same class of persons who cultivate Government land, and the amount of rent realised by them is regulated by the demand for land and the rates of assessment in Government villages. In Khandeish, where something under 20 per cent. only of the Government arable land is under cultivation, owing to the scantiness of the population, the proprietors of alienated land, have great difficulty in getting tenants, and large portions of their estate are waste."

"3. In India, where the earth is exposed to a burning sun for eight months, and to heavy monsoon rains for the other four; few, if any, of the improvements introduced of late years into agriculture in Europe are applicable; but the fertility of the soil is such, that wherever irrigation can be applied to it, the most luxuriant crops are produced, and irrigational works therefore are the great desideratum, and, in our present knowledge of India soils and climates, are the only permanent improvements of which land is susceptible.

"4. Since Khandeish has come into our possession, in 1817 and 1818, the Government have expended on works of irrigation three lacs and 36,000 rupees, and the only instance I can ascertain of any irrigational work being executed in alienated land, is that of the bundara of the village of Esgaum, belonging to the late Raja Bahadoor, and which lapsed to Government three years ago. In this instance the raja expended no money of his own, nor did he remit the zerayet assessment; but allowed the villages to borrow money and mortgage the bagayet revenue raised from the bundara.

"5. When the village lapsed to the Government, the villagers were so overwhelmed with debt, incurred by them in repairing the bundara, that I reported the case to you, and Government have sanctioned the arrangement, I proposed, of relieving them of their liabilities and repaying the money due by them.

"6. From a return lately prepared, I find that 1,512 new wells have been sunk in Government villages, and only nine in alienated villages, since 1817-18.

"7. As to superiority in point of cultivation, I am unaware that alienated land is distinguished in any way from that of the Government land. The excellence, or otherwise, of cultivation depends entirely on the means of the individual cultivator, and as the rent assessed on Government land is generally lower than that taken by other proprietors, it follows that the Government ryots can accumulate more capital, and can afford to cultivate their fields better than those of other people; and I am convinced that the cultivators of alienated land are not to be compared in wealth and substance with those who cultivate Government land."

45. These reports extend over a large tract of country, and are very much to the same effect.

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46. I further obtained returns of the extent of cultivation in alienated lands in Guzerat, both those on which there is condition of service, and those without such condition, separated as bearing assessment and free. The latter distinction has not been fully attended to, and some lands are entered as free which should have been entered as bearing; but as it would be a work of time to make the separation, and the proportion is not so large as to affect the argument much, I have let it stand as it is in the accompanying abstract of the returns, with the exception of Rs. 8,062. 9. 9.; in Ahmedabad the amount is very small.

47. From the statement it appears that the total extent of alienated lands in Guzerat (exclusive of talookdaree villages, and villages entirely alienated), information regarding which is not on the collector's records, amounts to 14,46,102 beegas; the full assessment on which it is estimated would be 32,44,055 rupees, or an average of about 2½ rupees per beegha; but as the Government realisable revenue on it is only 6,18,974 rupees, Government has foregone, by the alienation, 26,25,081 rupees, rendering the average assessment on the aggregate a trifle less than 7 annas.

48. Of the total extent of land 12,79,165 beegas were cultivated in the year 1851-1852 (the last year for which the accounts were made up, when my reference was made to the collectors), leaving 1,66,937 beegas waste; of this quantity 63,387 beegas pertain to the lands bearing assessment, and 1,03,550 beegas to the free lands; and comparing this with the extent of cultivation, the waste is to the cultivated in bearing lands as 1 in about 11, and in free lands about one in seven. If this result were compared with waste and cultivation of Government lands, the extent of the former would probably be found in greater proportion.

49. Government lands are, no doubt, waste to a considerable extent; but there are reasons affecting Government lands which do not generally affect alienated land. Government lands comprise large tracts of cultivatable ground, which there are not people sufficient to take up; but in the case of alienated land, the very circumstance of alienation involves the existence of a person available to look after the land, who might be expected to profit by doing so.

50. It is not likely that a very large proportion of the alienated land is of bad quality, for it is not worth a person's while to acquire bad land. Those belonging to the district hereditary officers, as service lands, are probably the very best; but with regard to those that are bad, it might reasonably be expected that the difference between having and not having to pay assessment would render it worth while to improve them, so that they could compete to advantage with any assessed lands. I am rather inclined to the opinion that the badness of these lands, with very little exception, is owing to the neglect of them.

51. If the evils attributed to the tenure and assessment of Government land were really owing to that cause; those held on a free tenure, either wholly or in part, should be exempt from those evils, and exhibit a most decided superiority; but as they do not, and are for the most part in a worse state, I see no reason to doubt the conclusion that the evils existent are not attributable to the tenure or assessment of Government lands, as being inferior in applicability to the people with whom we have to deal.

52. I am not prepared to show how the case stands, with regard to those who hold entire villages as landlords, because the detail of their management does not appear on the Government records; but it is my impression that they will generally be found in much the same comparative state. It is notorious that the mass of holders of villages are so involved in debt that they have not the means now of properly managing their estates, and the state of their tenantry is that of a class utterly impoverished by the exactions of their landlords. By way of illustration, I may refer to the talookdars of Guzerat, the khotas of the Konkun, the jagheerdars of the Southern Mahratta country, who will all, with few exceptions, be found in this deplorable condition.

53. The principle of the fee simple looks very plausible, but on examination by its effects on the people of this part, at least, of the country, its inefficiency becomes abundantly apparent. The inference I draw is, that neither are the class of landlords, generally speaking, fit for their position, nor are the class of tenantry; their ignorance and improvidence rendering them quite incapable of holding their own, and that the more directly lands are held from Government, the better it is for the people.

54. The progress of education may, hereafter alter this state of things; but it is a remedy which cannot be expected to take effect for a long time to come, but so far from Government having any encouragement now to concede the fee simple, it appears, in my humble judgment, that it would be a most dangerous measure, and one likely to be highly mischievous.

I have, &c.

(signed) *E. G. Fawcett*,
Revenue Commissioner, N. D.

STATEMENT Showing the Extent of Alienated Land in the four Collectories, comprising Ahmedabad, Kaira, Broach, and Surat.

Collectories.	Description of Alienated Land.	Total Extent of Alienated Land.	Gross Revenue or Full Assessment thereon.	Quantity of Land Cultivated in 1851-52.	Amount of Revenue Payable to Government.	Average Assessment to the whole Land per Beega.	Average Assessment of the Portion Cultivated per Beega.	REMARKS.
Ahmedabad -		<i>Beegas w. ww.</i>	<i>Rs. a. p.</i>	<i>Beegas w. ww.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	A small amount of revenue is placed opposite the free lands, owing to some part being liable to cesses under certain circumstances. This statement does not include alienations on talookdaree villages or villages entirely enam.
	Service lands bearing Assessment - -	3,885 6 4	7,994 - 10	3,052 3 1	1,480 9 11	- 6 1 $\frac{1}{2}$	- 7 9 $\frac{1}{2}$	
	Ditto, free - -	39,790 4 5	63,918 1 2	32,458 12 15	20 5 9	- - - $\frac{1}{10}$	- - - $\frac{1}{10}$	
	Other alienated land bearing Assessment -	134,427 5 5	338,660 5 7	108,088 12 15	21,830 9 2	- 8 6 $\frac{1}{2}$	- 10 7 $\frac{1}{2}$	
	Ditto, free - -	229,117 4 15	403,430 11 10	166,557 18 10	8,032 14 3	- 6 - $\frac{3}{4}$	- 9 - $\frac{1}{4}$	
TOTAL - -	407,220 0 9	814,003 3 5	310,157 7 1	81,364 7 1	- 3 3 $\frac{1}{2}$	- 4 3 $\frac{1}{2}$		
Kaira -								'This also does not include enam, or entirely alienated villages, the yearly rental of which is estimated at Rs 53,964. 14.; the area is not known.
	Service lands bearing assessment - -	6,711 14 5	15,265 3 3	6,626 14 5	5,616 9 9	- 13 5	- 13 6 $\frac{1}{2}$	
	Ditto, free - -	29,963 18 13	61,301 5 7	29,508 16 3	-	-	-	
	Other alienated land bearing assessment -	315,327 0 6 $\frac{1}{2}$	773,005 1 3	296,798 11 14 $\frac{1}{2}$	362,897 8 10	1 2 4 $\frac{3}{4}$	1 3 6 $\frac{1}{2}$	
	Ditto, free - -	151,976 15 8	340,409 5 8	149,893 7 18	3 - -	-	-	
TOTAL - -	503,979 8 12 $\frac{1}{2}$	1,189,980 15 9	482,827 10 0 $\frac{1}{2}$	368,517 2 7	- 11 8 $\frac{1}{2}$	- 12 2 $\frac{1}{2}$		
Broach -								The total amount of alienated enam and wuzzeefa villages is <i>Beegas</i> 24,512. 11 w. 1 $\frac{1}{2}$ w.w., and gross revenue, Rs. 51,537. 4., which is not included in this statement.
	Service land bearing assessment - -	1,879 10 1	4,530 1 8	1,860 15 5	823 1 -	- 7 -	- 7 1	
	Ditto, free - -	82,378 8 17	149,587 - 2	80,043 17 18 $\frac{1}{2}$	97 2 2	-	-	
	Other alienated land bearing assessment -	174,828 8 5 $\frac{1}{4}$	335,471 3 2	170,588 15 17 $\frac{1}{2}$	106,071 1 9	- 9 8	- 9 11	
	Ditto, free - -	114,360 13 13 $\frac{1}{2}$	209,668 3 3	111,302 19 9 $\frac{1}{2}$	783 7 9	-	-	
TOTAL - -	373,437 0 16 $\frac{1}{2}$	699,256 8 3	363,794 8 10 $\frac{1}{2}$	107,774 12 8	- 4 7 $\frac{1}{2}$	- 4 9		
Surat -								
	Service lands bearing assessment - -	319 18 0	734 10 8	198 14 11	142 5 1	- 7 1	- 11 5	
	Ditto, free - -	36,989 11 18	132,422 1 8	29,012 10 10	21 2 4	-	-	
	Other alienated land bearing assessment -	69,479 10 0 $\frac{1}{4}$	200,988 8 2	56,259 16 5 $\frac{1}{4}$	61,053 3 3	- 14 -	1 1 4	
	Ditto, free - -	54,677 2 12	206,669 10 3	36,914 14 11 $\frac{1}{2}$	101 12 8	- - - $\frac{1}{4}$	- - - $\frac{1}{4}$	
TOTAL - -	161,466 2 10 $\frac{1}{4}$	540,814 14 9	122,385 15 17 $\frac{1}{2}$	61,318 7 4	- 6 1	- 8 -		

ABSTRACT.

Description of Alienated Land.	Total Extent of Alienated Land.	Gross Revenue or Full Assessment.	Quantity of Land Cultivated in 1851-52.	Amount of Revenue Payable to Government.
	<i>Beegas w. ww.</i>	<i>Rs. a. p.</i>	<i>Beegas w. ww.</i>	<i>Rs. a. p.</i>
Service lands bearing assessment - - -	12,796 8 10	28,524 - 5	11,738 7 2	8,062 9 9
Ditto, free - - - - -	189,122 3 13	407,228 8 7	171,023 17 6 $\frac{1}{2}$	138 10 3
Other alienated land bearing assessment - -	694,062 3 17 $\frac{1}{2}$	1,648,125 2 2	631,733 16 12 $\frac{1}{2}$	601,852 7 -
Ditto, free - - - - -	550,121 16 8 $\frac{1}{4}$	1,160,177 15 -	464,669 - 9 $\frac{1}{2}$	8,921 2 8
TOTAL - - -	1,446,102 12 8 $\frac{1}{2}$	3,244,055 10 2	1,279 165 1 10 $\frac{1}{2}$	618,974 13 8

Revenue Commissioner's Office,
Camp Allibagh, 11 April 1856.(signed) E. G. Fawcett,
Revenue Commissioner,
Northern Division.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1061

(No. 158 of 1854.—Territorial Department, Revenue.)

III:
Bombay.

From *Alexander Elphinston*, Esq., Collector of Kaira, to *Edward Gordon Fawcett*, Esq.,
Revenue Commissioner of the Northern Division, Dhoolia.

Sir,

In obedience to the instructions conveyed in the second paragraph of the despatch No. 17, dated the 30th of November 1853, from the Honourable the Court of Directors, a copy of which was transmitted to me with Mr. Secretary Goldsmid's letter, No. 590, dated the 28th of January 1854, I beg to submit the following remarks and observations on the points discussed in Mr. Mackay's work on "Western India."

2. The collectorate of Kaira was established in A. D. 1804-5, comprising the talookas of Neriad, Matur, Muhoonda, Kaira Jagheer, Bejapore, Napar, and the Chouth of Cambay, Dhalka, Dundooka, Ranpoor, and Gogo, * of which Beejapoor was subsequently exchanged to the Guicowar for the Kupperwunj talooka, and the last mentioned four districts now form a part of the Ahmedabad collectorate, which was established in (Sumwut 1874) A. D. 1817-18, on the acquisition by the Honourable Company of the Peishwa's districts in Guzerat, five of which, as per margin, † were added in 1817 to the Kaira collectorate. In the same year the tuppa of Oomrut was ceded by his Highness the Guicowar to the Honourable Company, in exchange for their rights to levy transit duties in the Guicowar's share of the Peitland purgunna.

3. The earlier acquired districts (namely the tuppa of Napar, the enam town of Kaira and its dependencies, Neriad, Matur, Muhoonda, 16 villages of Dholka, east of the Sahurmuttee, Dundooka, Ranpoor, Gogo, and Dholka, ceded between A. D. 1802 and 1803), were during the first two or three years after their cession placed under the management of the Resident at Baroda. In 1805 Kaira was selected and made both a military and a civil station, and a Revenue Collector and judge, with their complement of establishments, were, for the first time appointed; but the Kaira Adawlut as a separate establishment was abolished in 1828, being consolidated with the Ahmedabad Adawlut, since which both the Kaira and Ahmedabad collectorates have formed the territorial jurisdiction of the Ahmedabad court of Adawlut, under the term Ahmedabad Zilla. In 1830, Kaira was reuced to a sub-collectorate, forming a sub-division of the principal collectorate of Ahmedabad; during this period, the Kupperwunj purgunna was attached to the Ahmedabad collectorate. In 1833 Kaira and Ahmedabad were again made separate collectorates; previously, and even subsequently to this, the transfer and re-transfer of different villages from and to the sister collectorate of Ahmedabad, occurred frequently, and the transfer of 14 villages bordering on the Kharee River in this collectorate, has been recently sanctioned by Government. In consequence of these changes and alterations, a fair comparison of the present amount of revenue, &c. of the collectorate, with the amount realised at the earliest period of the cession, cannot be made.

4. The Kaira collectorate, as at present constituted, is bounded on the north by the Ahmedabad collectorate and his Highness the Guicowar's territories; on the west by the territories of the Nawaub of Cambay. The River Muhye runs on its south and eastern sides, but it is not at all points the boundary. From S. S. W. to N. N. E., the zilla extends about 68½ miles, and a line crossing this at right angles, about its middle, is about 42 miles.

5. The area of the collectorate is (as correctly stated by Mr. Mackay, page 41) above 1,375 miles, with a population of 422 inhabitants to the square mile, comprising at present the following seven talookas, namely, Matur, Muhoonda, Neriad, Boorsud, Napar, Thasra, and Kupperwunj; in addition to which, the territories of his Excellency the Nawaub of Cambay form a political dependency on this collectorate, the Collector being only the medium of political correspondence with the Nawaub. The principality of Balasinore, which for many years was placed under the political superintendence of the Collector of Kaira, has lately been transferred to the Political Agent in the Rewa Kantha. The aggregate revenue of the Kaira collectorate includes the annual tribute payable by the Nawaub of Cambay and the Bebee of Balasinore; but from the present year the amount payable by the Bebee will not appear in the accounts of this collectorate.

6. The above mentioned seven talookas of this collectorate were formerly subdivided into purgunnas or muhals, and turufs or tuppas, which of late years have become totally obsolete, they being consolidated with their respective talookas, of which they form a part. The Matur talooka is now made up of the Matur and Mehmoodabad purgunnas, and Puryuj and Sundana tuppas, with the enam of Kaira; the Neriad talooka comprises the Neriad purgunna and the tuppa of Bhaluj, together with the villages of the other purgunnas transferred subsequent to the cession; the purgunnas of Muhoonda and Aleena and the tuppa of Nurounda make up the Muhoonda talooka; the Thasra talooka consists of the Thasra purgunna and the tuppa of Oomrut, and the Kupperwunj talooka contains the Kupperwunj and Antrolee purgunnas.

7. Previously

* See para. 62 of the lithographed report, dated the 18th of June 1804, by Major Walker.

† 1. Mehmoodabad. 2. Antrolee. 3. Aleena. 4. Thasra. 5. Duskurohee. 6. Peishwa's share of the Peitland purgunna.

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7. Previously to the cession to the Honourable East India Company of these districts, the above mentioned purgunnas were subject to different powers (the Peishwa or the Guicowar), and had their own separate mamlutdars, and for every tuppa there was a thanadar.

8. The term muhal is sometimes used in this collectorate, as being identical with talooka, and the Kaira collectorate is still generally spoken of as containing nine muhals, namely, 1. Matur; 2. Mehmoodabad; 3. Muhoonda; 4. Aleena; 5. Neriad; 6. Borsud; 7. Napar; 8. Thasra; and 9. Kuppurwunj. There were formerly nine mamlutdars for each of these nine muhals, for many years subsequently to the cession, but two of the mahal kutcheries, namely at Mehmoodabad and Aleena, were abolished to effect reductions in the establishment (I think it is to be regretted that a mahalkuruy is not placed with a subordinate karcoon and treasurer at these towns, over these subdivisions, as in case of bad seasons more or less); and the ryots petitioning to have their crops examined to obtain remissions, it is impossible for the mamlutdar to examine every such field in his extensive charge-call at harvest time (even if the mamlutdar was always young and vigorous, and never sick in a sickly country). Thus these two large towns of Mehmoodabad and Aleena are left without any stipendiary establishment immediately over them on the spot, and the hereditary district officers of the Mehmoodabad and Aleena muhals, who are natives of these towns, have now to attend the mamlutdar's district kutcherry, at Matur, about seven to ten miles distant; and the inhabitants of those towns are left without any Government officer to hear or decide trifling cases on the spot. Both these towns are situated on the most frequented roads to Ahmedabad, Baroda, and Dakore, and from the number and superior classes of people residing therein, they appear to merit the consideration from Government of a Mahalkurree resident on the spot, which the people petitioned for; but Government answered, that the kharee villages of the talooka having been transferred to the Ahmedabad collectorate, the mamlutdar, in future, would have more leisure to attend to their business. But the hardship to the people of these two muhals, from being obliged on trifling occasions (perhaps in the rains) to undertake journies to the mamlutdar's kutcherry, is not alleviated. To grant their request would only entail a small additional expense to the State, and secure greater local supervision.

9. As regards the size or area of the Honourable Company's earlier acquisitions in this collectorate, by additions, a material alteration has taken place, as above stated. For instance, the Neriad Purgunna, originally consisting of only 35 villages, now contains more than double this number. The different purgunnas, tuppas, &c., formerly belonging to different sovereigns, having become subject to one paramount authority, admitted of villages being transferred from one talooka to another, with reference to their convenience and proximity, and no reasonable objection can be urged against that arrangement.

10. Under the above explanation the original ceded value of any particular district will hardly bear comparison with its present revenue, the contrast being so great, as is apparent in the following instance:

	Ceded Revenue.	Actual Jumma for the First Year of the Cession.	Revenue for A. D. 1852-3.
	<i>Babasye Rupees.</i>	<i>B. Rs.</i>	<i>Co.'s Rs. a. p.</i>
Neriad - -	2,25,000	2,31,976	3,12,661 3 8

Or a net apparent increase in 50 years of 34 per cent.

11. Besides the changes in the territorial divisions of the collectorate noticed above, there is another alteration which debars comparison of the present with former revenue of the collectorate or of any of its talookas, during the early period of our acquisition; because the land customs, town duties, and many objectionable taxes have been abolished by Government, since the country came into possession.

12. The accompanying statement No. 1, shows the area of the different talookas of this collectorate, the number of houses and population in each. It will be seen that the Matur talooka is the largest in size, occupying an area of 279 square miles; the reason of this is as mentioned above, viz. the absorption within it of the purgunna of Mehmoodabad, and the tuppas of Puryuj and Sundana. The next in size is the Muhoonda talooka, now comprising in its limits the purgunas of Muhoonda and Aleena, the total area of these two being 254 square miles. The Neriad purgunna, at the time of its cession by the Guicowar, contained only 35 villages, subsequently increased to 82, by the consolidation of the Bhaluj and Nursunda tuppas with it, and the transfer of villages from other purgunas. The area of the Neriad talooka, as at present constituted, is 219 square miles. The present purgunna of Borsud, together with a part of the Napar purgunna, formed the Peishwa's share of the Peitland purgunna, which for public convenience now forms two distinct talookas, namely, Borsud (176 square miles) and Napar (142 square miles in area). The tuppa of Napar originally contained only 20 villages, and was ceded in A. D. 1802, along with the Chouth of Cambay, by the treaty of Bassein. The Thasra talooka, including the tuppa of Oomrnt, is

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is 168 square miles in area, while the smallest talooka, Kuppurwunj, is only 137 square miles.

13. The Neriad talooka is the most populous, the number of souls per square mile being 541.

14. The population of the whole collectorate, according to the census taken in 1851, amounts to 580,631, about 14,000 souls more than the number obtained by the previous census of 1846;* the average yearly increase of population being a little below 3,000. This slow rate of increase appears attributable to the diseases of the country and absence of sanitary conditions for public health, as people are averse to lay out a farthing on sanitary improvements, which their total ignorance of their necessity and advantages prevent them from appreciating. Want of cleanliness, the filthy state of the streets, of towns and villages, and stagnant pools of water collecting around them, produce fever and other diseases, and cause mortality; but the apathy or predestinarianism of the natives prevent them from taking measures to remove these evils. Government, in creating the Municipal Improvement Act, have empowered the natives to make reforms, but they do not avail themselves of the opportunity to do so. Government, being in advance of the people in enlightenment, ought to leave no option on the subject with natives, but do what is necessary through its subordinate agents, charging the cost to town duties levied at the gates of towns; or by a tax on trades and shops in villages; and money collected for such a purpose, and so applied, would not be unpopular. After much trouble and persuasion the inhabitants of Kaira were induced to present a petition for the introduction of Act XXVI. of 1850 into their town, but since the publication of the notice in the Government Gazette they have not agitated the subject; and their silence implies their utter indifference to the beneficial provisions of the Act.

15. The town of Neriad suffers much from the collection of water around it during the monsoon and following months. Independent of its injurious effects on the health of the people, it operates as a serious inconvenience to the cultivators, interrupting their communication with their fields, to which they are obliged to wade through mud and water (above a man's breast) with their ploughs on their heads, at the risk of their lives. The upper classes, Banian Sowkars, Brahmins, &c., who are not agriculturists, having no occupation beyond the town nor fields to visit, are not inclined to subscribe for the removal of the evils, nor even to apply to Government for its aid to do so. The agricultural portion of the town have been making petitions to Government for the last 15 years, but no remedial measures have yet been adopted. The excavation of a dram was proposed by Mr. Collector Webb in 1845, when the people agreed to raise subscriptions amongst themselves to the amount of about 600 rupees, and applied to Government to sanction the grant of 500 rupees to make up the remainder of the required amount of Mr. Surveyor Spry's estimate; but, in consequence of a difference of opinion between him (the surveyor of this collectorate) and the executive engineer at Ahmedabad, as to the proposed line of excavation, the requisite sanction of Government could not be obtained till June 1850. But the Kaira surveyor and his establishment, being then engaged on other duties, the work could not be commenced, and the delay that occurred abated the avidity of the people to remove this nuisance and to supply the necessary contributions; and it is very recently, after renewed dunning, that the amount of the inhabitants' promised subscription has been collected; but as more than two years have elapsed since Government sanctioned the outlay, it will be necessary to apply for a renewed sanction.† Evils of the above nature are common to many villages and towns, more especially those in the southern division of the collectorate. Last rains some women were drowned in one village; in another the people petitioned that the streets were unsafe from alligators crawling out of the tank, which I brought to the notice of the Revenue Commissioner, asking permission to employ a surveyor and builder as formerly, but was told none could be spared,‡ though I could have found one if allowed to employ him. The people are often willing to contribute and Government ready to aid them, but the excavation of most needful drains for many years past has been postponed by the difficulty, in many cases, of obtaining the consent of the Guicowar, or the Nawaub of Cambay (whose villages are intermixed with ours), to allow drains to lead off surface water, flooding our villages, to be cut into their limits. After a lengthened correspondence there now seems to be some hope of securing the co-operation of both these chiefs; but the necessary preliminaries to such undertakings (the surveying of the lines, preparing plans and estimates, &c.), cannot be accomplished until Government allow me to entertain a qualified surveyor as formerly.

16. In connexion with this subject it may be remarked, that in almost all cases of works of public utility constructed at the expense of Government and the ryots, only the agricultural classes have been required to contribute, the Banians and Brahmuns being understood to enjoy exemption from payment, even when they are to be benefited by the projected schemes. This apparent injustice to the cultivators should no longer be countenanced, even on the plea of usage; and it should be an invariable rule that when a village community has agreed to contribute towards a particular work of general benefit, the amount should be

* 5,66,513. See page 41 of Mr. Mackay's report on Guzerat.

† Applied for on the 11th of April 1854, No. 152.

‡ No. 100, 12 January 1854, by the Revenue Commissioner, Northern Division.

be equally apportioned amongst all its members. Exception to this rule may be made when the proposed work is intended solely for agricultural purposes.

17. The return of population (No. 1) shows a remarkable disproportion between the sexes, and creates a doubt as to the reliability to be placed on the accuracy of the census taken by the village tulatees. The natives ascribe this result to the invariable law of nature, that the number of males over females should always preponderate, but this opinion is contradicted by the returns of other countries where the number of both sexes are nearly equal. Making due allowance for any accidental errors in the village returns, the disproportion is still so remarkable as to require explanation.

18. The Koonbee caste (whose principal occupation is to till the soil) is divided into two divisions, namely, the Lewa and Kurwa; it is to be regretted that the return does not show the number of each separately, but it is well known that the Lewa Koonbees predominate in numbers in this collectorate. The heavy expenses which, according to the inflexible custom of their caste and the promptings of their pride, attend the marriages of Lewa Koonbee daughters, impoverishes their parents, and almost renders the birth of a daughter to be looked upon as a family misfortune, unless the parent possesses ample means for providing the necessary dowry to secure a high matrimonial connexion; but this is seldom the case. Three successive grades of family distinction are recognised in the caste (as per margin),* and the amount of daughter's dowry (in this caste) is dependant on the rank and social position of the family into which she is received as wife (the higher the family, the higher the dowry expected); and as every parent inflamed by mad ambition is anxious to marry his daughter into the highest of these divisions, regardless of the expense and the inadequacy of his means, consequently this leads the fathers of daughters to the borrowing of money, the selling or mortgaging of their lands, which, with the unfortunate custom of sons (according to the Hindoo law) being answerable for their father's debts, reduces this industrious class of cultivators to poverty, and their diminished capital and ability to cultivate tends to lower the land revenue.

19. Hence has arisen a suspicion that the operation of these causes, as they affect the Lewa Koombee, has induced the murder of infant daughters through neglect, want of nourishment, or more active means; but no effective agency exists to establish the proof of this suspicion, to detect, or to prevent the crime, if it exists.

20. To repress this evil, the Guicowar in his districts, in co-operation with us in ours, induced assemblies of the caste voluntarily to fix a more moderate maximum amount, beyond which the expense of marriages should not reach; but as no penalty is affixed for the infringement of this rule, I fear it remains a dead letter, without efficacy.

21. The lower community of the caste do not like to render themselves obnoxious, despicable in it by breaking the ancient caste custom; and the leading men of the caste, though they profess to wish Government to impose a penalty for the infringement of the rule restraining marriage expenses to a limited amount, yet secretly do not desire such a law, because they are themselves the class who gain (at the expense of their poorer brethren) by the hitherto existing state of matters. I found the leading Lewa Koombee dessaees at Neriad ready in urging that a penalty ought to be fixed by Government for the infringement of the rule. To test their sincerity, I agreed to propose this to Government if they would petition for it; but after this they evinced no inclination to continue the discussion of the topic, and therefore it is evident to me that the leaders of the caste do not wish a penalty to be imposed by Government for making inordinate wedding expenses, and they consider Government to be unwilling to force a penalty on them. But if authorised by Government, the signatures of the caste at each village might be obtained, to ascertain the numbers pro and con for such a rule, and Government might legislate according to the desire of the majority.†

22. In the higher castes, such as Brahmins, Wania (amongst whom the prevalence of female infanticide has never been suspected), there is also a great disproportion, which may be ascribed to the general inattention of the Hindoo families in rearing their female infants, who it is feared are allowed to die from want of care or diseases at an early age. The joy evinced at the birth of a son is far greater than that on the occasion of a daughter, the general feeling being that the daughter robs her father's purse while the son increases it. Amongst the Toolukea Brahmins, who are numerous in this part of Guzerat, and also most of the Wania sects, the marriage expenses of their daughters are very heavy, and this is the chief cause why these people are less affectionate to their daughters, whom they moreover look upon as not being members of their families, but soon to be affianced to a stranger, and to become a member of another family.

23. In addition to the foregoing causes, I may be allowed to notice the general distrust with which the taking of the census is regarded by the natives. The majority of them do not

* 1st. Cusba Neriad, talooka Neriad, Kaira Collectorate, Sajeetra and Wusso in his Highness the Guicowar's share of the Peitland purgunna. 2d Class, Oare Oatur, Sunda talooka, Neriad, Bhadrin, Dhurmuj, Nar, Peehuj, Peitland purgunna, Kurrumsud purgunna, Napar, Sonar purgunna, Borsud, Ahendra, purgunna Matur.

† It is the interest of the State, with the ascertained consent of the people, to restrain by a fine the inordinate expenses of marriages as checking population, impoverishing the people, and rendering themselves unable to pay their fixed burthens to the State.

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not know that its object is to collect statistical information, but labour under an erroneous impression that it is the intention of Government to introduce a general taxation. Partly from this cause, and also partly from the known jealousy of the Rajpoots, Girasias, and Mussulmans to allow anything to be known regarding their females, it is probable that the tulatees of some villages may not have obtained correct information regarding the females of these castes. In some cases it may have happened through mistakes that girls under the age of puberty, residing in their parents' houses, may have been omitted to be entered in the return of the village where they resided, leaving them to be entered in the returns of those villages where they may have been betrothed, but where of course they were not entered, not being present. Although such mistakes were not generally committed, they must have occurred to some extent in particular villages. The accuracy of the last census return can only be tested by ordering a fresh one to be taken at an early date, after more minute inquiries made on the spot by some higher officers than village tulatees.

24. It will be seen from Statement No. 1, that the total number of houses in this collectorate are 1,56,811 giving somewhat between three and four inmates per house; of these the larger number are tiled houses, thatched hovels supplying accommodation only to the lowest and poorest classes.

25. The koonbees, koolees, and poorer Rajpoots and Mussulmans are almost exclusively cultivators, and form the majority of the population of this collectorate, as shown at the foot of the Statement, No. 1.

26. The higher castes among the Hindoos predominate only in large towns and villages; in all other villages, in general there are but a few houses of Brahmins and Banians, the former more resembling cultivators; and, unlike their brethren in the district towns, till the ground. But the Banians either keep shops for the retail of supplies, or practice as village usurers, or both. In the latter capacity they advance money at an exorbitant rate of interest to the cultivators, to enable them to meet the Government demand and their domestic expenses.

27. The subjoined Table shows the number of Government and alienated villages in the collectorate:

TALOOKAS.	Government.	Partially Alienated.	Entirely Alienated.	TOTAL.
Matur - - - - -	104	5	2	111
Muhoonda - - - - -	96	2	6	104
Napar - - - - -	43	13	-	56
Borsud - - - - -	47	7	4	58
Neriad - - - - -	71	9	2	82
Thasra - - - - -	78	2	7	87
Kuppurwunj - - - - -	68	2	6	76
TOTAL - - - - -	507	40	27	574

28. The number of hamlets in the collectorate are 446, most of which are to be found scattered in the Thasra and Kuppurwunj talookas; many of them are situated at a convenient distance from their parent villages. They are chiefly inhabited by Koollees. The origin of their establishment may be traced chiefly to extended cultivation, though sometimes petty coole chieftains are prompted by pride to establish mooaras, or hamlets; but when they are established by enterprising pateedars, or others commanding capital, it is done with the sole object of reclaiming waste lands. Some of the old mooaras or hamlets have now become distinct from their parent villages, and look more like villages than hamlets.

29. In the hamlets there are generally from 25 to 100 houses, containing a population of 100 to 300 souls. The number of inhabitants in the villages of this collectorate vary from 500 to 2,000. There are only five towns whose population exceed 10,000, namely, Kaira, 12,091; Muhoonda, 10,516; Neriad, 20,782; Oomrut, 13,652; and Kuppurwunj, 12,428; these being the only places noted for carrying on trade, and possessing capital.

30. The yearly rental of the 27 entirely alienated villages in this collectorate, is estimated at Rs. 54,547. 12. 1., the revenue of the different villages varying, according to their size and the extent of their cultivation, from 2,000 rupees to 12,000 rupees. Twenty-three of these villages were alienated by the preceding native governments, and four were granted by the British Government, as shown in the subjoined Table:

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TALOOKAS.	Number of Villages.	Names of Villages.	REMARKS.
1. Matur - - -	1	Gorepoora -	- - Supposed to have been originally granted by the Guickwar's Government to some Gosaeens.
	2	Govindpoora -	- - Granted by the Bombay Government to Moteechund Govindram, the late Duftardar of the Kaira Collectorate, who has greatly improved the resources of the village by laying out capital on works of irrigation. It is distinguished for its rice lands, which enjoy the benefit of irrigation from the Kharee river. This village was granted in hereditary enam, but the grant on this tenure was not confirmed by the Honourable the Court of Directors.
2. Muhoonda - - -	1	Naleea - - -	} - - Held in hereditary enam by the Desaees of the Aleena purgunna, Muhoonda talooka.
	2	Nugwal - - -	
	3	Khoordavad.	
	4	Jendvapoora -	- - Granted in enam by the Guickwar Government to a joshee, or Brahmin astrologer.
	5	Shastapoora -	- - Granted in enam by the Guickwar Government to one of its jasoods (spies).
	6	Kunjree - - -	- - Granted in enam by the Guickwar Government for the support of the great temple of Runchorjee at Dacore, talooka Thasra.
Napar - - - -	1	Dacore - - -	- - Granted in enam by the Peishwa, for the support of the temple of Runchorjee.
	2	Hurkhole - - -	} - - Held in enam by the Dessaees of the Thasra talooka.
	3	Sangole - - -	
	4	Kajepoora - - -	- - Held in enam by the Kajee (priest and judge among Mahomedans) of Cusba Thasra.
	5	Bhatpoora - - -	} - - Held in enam by Bhats (or Indian bards).
	6	Bhatpoora - - -	
	7	Gurveepoora -	- - Held in enam by a Gurvee, or charm (a class of religious mendicants).
Borsud - - - -	1	Rawlej - - -	- - Originally granted in enam by the Peishwa to a Parsee, afterwards resumed by one of the Peishwa's officers; but subsequently to the cession of the district to the British Government, the heir of the Parsee grantee sued the Collector for the recovery of the village, obtained a judgment in his favour, which was confirmed on appeal by the Privy Council in England. This village is about three koss from Cambay, and conveniently situated to be made a sea-port.
	2.	Wullasun - - -	- - Held in enam by Bhats.
	3.	Kunsaree - - -	- - Granted in enam by the Peishwa to a Nagur Brahmin of Petlad.
	4	Jeysurva - - -	- - Granted in enam by the Bombay Government to a Nagur Brahmin of Petlad. These two villages are now under attachment pending inquiry into the heirs of the last incumbent.
Nerriad - - - -	1	Ootarsunda -	- - Granted by the Bombay Government in enam on life tenure to the family of Soonderjee, a native banker at Rajkote, in Kattywar. Of the eight persons to whom granted, six are dead, and two survivors remain under attachment, in execution of a decree of the Civil Court.

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TALOOKAS.	Number of Villages.	Names of Villages.	REMARKS.
Nerriad (<i>continued</i>)	2	Munjepoora -	-- Granted by the Bombay Government in perpetual enam to Ramajee Huree and his heirs, the late Dufferdar of the Kaira Collectorate.
Kuppurwunj -	1	Mohmudpoora -	-- Held in enam by a Bahorte, or Bhat.
	2	Duntalee -	} -- Held by the Dessaees of the Kuppurwunj talooka in enam, from the Guicwar Government.
	3	Wasna -	
	4	Meerapoor -	-- Held in enam by a Brahmin of the town of Kuppurwunj.
	5	Narrungurnomut	-- Held in enam by a Gosaeen.
	6	Alva -	-- Held in enam by the Kusbatees of Kusba Kupperwunj.

31. Most of the above entirely alienated villages are in a prosperous condition (not more so than Government villages) from the attention bestowed by their proprietors on their proper management, and the capital sometimes laid out by them on their improvements. The revenue of many of these villages has, therefore, remained stationary ever since the time of their grant, while in a few cases the value of the original grant has been enhanced. There are, nevertheless, some few villages whose estimated revenue is entered in the public accounts at a larger amount than that now actually realised by the enamdars, which shows that the revenue has fallen off.

32. None of the enamdars in this collectorate have ever applied for a commission under Act XIII. of 1842; and from the comparatively small number of suits filed by them to recover their revenues, it may be inferred that they can easily collect their revenues without having the authority conferred on them by Government.

33. As more difficulty is experienced by the enamdars in the recovery of outstanding balances for former years, than in collecting the current year's revenue, the authority which the above Act (No. XIII. of 1842) is intended to confer on them can be of very little use to them, as it empowers them to summarily realise only the current year's revenue, which they can now do without recourse to coercion. If the Act empowered the enamdars to recover, summarily, arrears due to them for more than a year, then they would probably apply to have the commission therein alluded to; but I am not inclined to recommend such a measure, as the power of distraint in their hands for accumulated balances, as it would be liable to abuse.

34. The 38 partially alienated villages, generally called oodur jumabundy, or fixed rental, pay to Government an aggregate amount of Rs. 84,212. 13. per annum. They are held by Girasia and Koolee chieftains, who formerly held these villages rent free as absolute proprietors of their petty estates, independent of the paramount power in the country. In process of time, the Mahrattas first exacted an annual payment under the name of oodur jumabundy, to which a further exaction under the denomination of ghans-dana, or tribute, was added. The partially alienated villages of this collectorate pay the jumabundy to the Honourable Company, and the ghans-dana to his Highness the Guickwar. Both these items are now collected by the Honourable Company's officers, and the aggregate amount of ghans-dana is subsequently remitted by the Collector of Kaira, through the Resident at Baroda, to the Guickwar.

35. These oodur jumabundy villages (once entirely free, but by the exactions of our predecessors, the Marattas, now saddled with payments of portions of their revenues to the State), unlike the enam villages, are now declining in prosperity, from the inattention and neglect of their indolent Girasia proprietors to the management of their estates, which is generally left in the hands of a Banian karbaree, who seeks his own benefit at the expense of the interests of his master. These Girasia proprietors, called "thakores," are generally illiterate and opium eaters, and only look to their karbarees to make arrangements to meet the Government yearly demand, and to provide funds for the expenses of the thakores and their household. The consequence is, that the Government demand now presses hard on them; but even where it is moderate, the habitual careless extravagance of the Girasias has involved their estates in debts, which they have no means of liquidating within a reasonable period. The largest estates under this tenure of Oomeita, talooka Napar, and Ghorasur in the Muhoonda talooka, are encumbered with heavy debts (contracted by their proprietors), though the Government demand is moderate. In some instances, as at the oodhur jumabundee village of Junore, in the Thasra purgunna, very little excess remains over to its thakore from the village rental, after paying the portion due to Government, like which several similar cases may be cited; but because Government confine their demand to the rental fixed during the preceding native Government, the Girasias see no grounds to apply for a reduction; and fear that, before complying with any such application, Government would

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would institute minute inquiries respecting the resources of their villages, causes them to pay the old rental without demur. The lands of these villages are rich, and susceptible of improvement under an efficient management, and leave the proprietors more or less surplus after discharging the Government demand. The actual rental realised from these villages has never been inquired into, but it is supposed, on a rough estimate, to be generally one-third in excess of the amount paid to Government.

36. The Government villages in this collectorate are held on various tenures, and the levy of some minor items of taxation is regulated according to the custom prevailing in different villages.

37. In describing the tenures on which lands are held in Guzerat, Mr. Mackay states (p. 65) that Government lands in the Kaira Collectorate are called "khalsa;" but this term is understood here only by a few of the Government servants; the term sirkaree, or "tulput," being mostly in use in this collectorate, but "tulput" in a somewhat different sense. There are a number of villages in this collectorate originally held rent-free by Girasia chiefs; but on the ascendancy of the Mahratta power in Guzerat, those villages were partitioned between the Government and the Girasia proprietors. The Government share (which is generally much larger than the Girasia's) is called "tulput" in opposition to the Girasia's share called "wanta." Lands granted by former Governments to the Girasias as a recompense for past services, or on condition of rendering services to the State, are also called "wanta." Villages entirely belonging to Government are called "sirkaree," but not "tulput," though they are sometimes called "khalsa."

38. Wanta lands have been repeatedly divided and subdivided amongst the descendants of the original grantee; so that the share of each often affords him but a small pittance, while in a great many cases such lands are sold or mortgaged to sowkars.

39. The original object of alienating Government lands, under the denomination of the wanta, appears to have been to secure the services of the Girasias for the protection of the rastee, or peaceable villages; but this service tenure has been lost sight of for many years. It is only within the last few years, in connexion with the police reform, that the subject of enforcing the responsibility attached to the wanta lands has engaged the consideration of Government.

40. It may be noticed in this place that wanta lands are either held rent-free, or pay a quit-rent to Government; in the former case they are called "wanta nukra," and in the latter "wanta salamia." In some villages the whole of the wanta lands pay a fixed salami, or quit-rent in lump; but generally the quit-rent is assessed at certain fixed rates per beega. The salami and wanta lands correspond with the oodur jumabundee, or fixed rental on partially alienated villages. The subjoined Table shows the quantity of wanta lands in each of the talookas of this collectorate:

T A L O O K A S.	W A N T A L A N D S.		T O T A L.
	Rent-free.	Partially Rent-free.	
	<i>Beegas. w. ww.</i>	<i>Beegas. w. ww.</i>	<i>Beegas. w. ww.</i>
1. Matur - - - - -	10,769 5 11	24,359 4 12	35,128 10 3
2. Muhoonda - - - - -	1,980 15 0	3,757 11 15	5,738 6 15
3. Neriad - - - - -	8,000 6 10	12,907 12 0	20,907 18 10
4. Borsud - - - - -	608 10 0	2,166 14 0	2,775 4 0
5. Napar - - - - -	2,965 12 18	7,643 4 0	10,608 16 18
6. Thasra - - - - -	872 15 0	10,739 19 0	11,612 14 0
7. Kupperwunj - - - - -	662 3 0	6,923 8 0	7,585 11 0
TOTAL - - - <i>Beegas</i>	25,859 7 19	68,497 13 7	94,357 1 6

41. The estimated annual rental of the above wanta lands is Rs. 2,18,262. 2. 11., from which the annual amount of Government's quit-rent, Rs. 56,604. 11. 8., being deducted, leaves a yearly balance of alienated revenue, amounting to Rs. 1,61,657. 7. 3. The quit-rent imposed on wanta lands is very light, varying from two annas to 2½ rupees per beega. There is but a very small quantity of wuzefa (glebe lands for the maintenance of mosques and priests) in this collectorate; it is therefore included in the wanta. In most cases, the salami was imposed on wanta lands during the preceding native governments; but in some cases it was commenced to be levied some years after the cession of the districts to the British Government.

42. Pusaita lands are either granted in enam for past services to the State, or on condition of rendering it certain services in future. Such grants to Brahmins and Bhats are understood

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understood to be unconditional; most of the Desaees and Muzmoodars also hold them only nominally on service tenure, and no service is exacted, and the lands are divided and subdivided amongst the different members of their families. The village menial servants are the only parties always called upon to perform the public service, in consideration of the lands they hold under this tenure.

43. The original Brahmin and Bhat grantees of pusaeeta lands, or their descendants, sold or mortgaged their enams to Banian sowkars and others; and on this description of land, when in possession of the purchasers or mortgagees, a light salami or quit-rent payable to Government was imposed. Pusaita lands are, therefore, either rent-free, or subject to a quit-rent.

Pusaita lands may be classed as undermentioned:—

	Beegas. w. ww.		
Rent-free - - - - -	59,213	15	19
Salami or (paying to Government) quit-rent -	13,036	15	18
	72,250	11	17
Chakureea or service lands, for payment of services - - - - -	41,443	19	6
	<u>Beegas 1,13,694</u>	<u>11</u>	<u>3</u>

	Rs.	a.	p.
The estimated annual rental of the above lands is	2,53,490	11	9
Deduct the salami or quit-rent paid to Government	16,851	11	-
Actual Value of the Alienations - -	<u>Rs. 2,36,639</u>	<u>-</u>	<u>9</u>

44. The above pusaita lands include a small quantity of hareea lands, or grants by patells to persons killed in defending the village against invaders, &c., or in doing some good services to the village community.

45. During the preceding native Governments villages were farmed to patells or others who afford the highest amount, and whenever the actual collections fell short of the amount of the farm, the patells made good the deficiency by the secret or unauthorised sale or mortgage of Government lands; they also used to raise money by this means to meet their private expenses. Such lands are called "vechan" and "girania," and amount in the aggregate to 295,767 beegas. 3 w. 13½ ww., of which 64,461 beegas. 15 w. 6 ww. are nukra, or rent-free, and 2,31,305 beegas. 8 w. 7¼ ww., salami or quit-rent.

46. The estimated annual rental of the above vechan girania lands is Rs. 7,18,361. 12. 11., from which the salami paid to Government, namely, Rs. 3,17,432. 4. 5., being deducted, leaves Rs. 4,00,929. 8. 6. as the actual value of the alienation of "vechan" and "girania" lands. The rate of salami, varying from two annas to three rupees per beega is sometimes as heavy as the full Government begotee assessment; in such cases the holders of vechan or girania sulameea lands generally pay the full demand of Government, and only give up the lands to Government when they are no longer able to pay the full amount of salami.

47. The subjoined Table shows at a glance the different descriptions of alienated lands in this collectorate:—

TENURES.	Quantity of Lands.	Estimated Annual Rental.	Salami or Quit-Rent paid to Government.	Net Value of Alienations.
	Beegas. w. ww.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Wants and wuzefa nukra, or rent-free	25,859 7 19	59,752 8 6	—	—
Wants and wuzefa salami, or quit-rent	68,497 13 7	1,58,509 10 5	56,604 11 8	1,61,657 7 3
TOTAL - - -	94,357 1 6	2,18,262 2 11		
Pusaita nukra, or rent-free - - -	59,213 15 19	1,37,291 13 1	—	—
Ditto salami, or quit-rent - - -	13,036 15 18	27,830 4 3	11,109 4 3	1,54,012 13 1
TOTAL - - -	72,250 11 17	1,65,122 1 4		
Chakureea or service nukra, or rent-free - - - - -	35,969 0 1	74,690 15 7	—	—
Salami, or quit-rent - - - - -	5,474 19 5	13,677 10 10	5,742 6 9	82,626 3 8
TOTAL - - -	41,443 19 6	88,368 10 5		
Vechan girania nukree - - - -	64,461 15 6	1,36,036 8 6	—	—
Salami - - - - -	2,31,305 8 7¼	5,82,325 4 5	3,17,432 4 5	4,00,929 8 6
TOTAL - - -	2,95,767 3 13½	7,18,361 12 11		
Grand TOTAL - - -	5,03,818 16 2¼	11,90,114 11 7	3,90,888 11 1	7,99,226 - 6

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48. Most of the salami or quit-rent lands are assessed only when cultivated, but a small quantity always pays the quit-rent to Government, whether cultivated or not. In the preceding table is shown the amount leviable on the whole of the salami lands, if cultivated; but this has seldom or never been the case. During the last years, A. D. 1852-53, only 298,116 *beegas*. 5 *w.* 4½ *ww.* of salami lands were brought under cultivation, and yielded to Government a revenue of *Rs.* 3,62,485. 8. 4.

49. The owners of salami lands not paying a quit-rent to Government, are indifferent in procuring cultivators to rent them and prevent their remaining fallow; but those who hold such lands liable to be assessed for the benefit of the State, are compelled to let their lands, to enable themselves to make up the Government demand.

50. The levy of the salami, or quit-rent, on lands only when cultivated, or both when cultivated and left fallow, is regulated according to the custom prevailing in the different talookas and villages of this collectorate. From the records now with me, I cannot ascertain the proportion of these two descriptions of salami lands; but presume that the quantity assessable, both when cultivated and left fallow, falls much short of that paying a quit-rent to Government only when brought under the plough.

51. The difficulties which the owners of salami lands have to contend against, are, their bad quality, distance from the village, and the general preference given by the ryots to Government lands. Sometimes the holders of these partially alienated lands are residents of large towns engaged in trades or other avocations, and, therefore, unable to make timely arrangements for the cultivation of their lands, situated within the bounds of distant villages.

52. The partially cultivated alienated lands are mostly held by Rajpoots, Girasees, Kusatees, Sepoys, and Dharalas, and in some few villages by Brahmins and Banians. The Dharalas, or armed classes, generally pay a higher rate, the difference between the salami (or quit-rent) and the full beegotee assessment being considered a remuneration for occasional services demanded of them on extraordinary occasions, such as protecting the village against dhars, or gangs of robbers, threatened invasion, &c. This responsibility attaching to the tenure of their holdings was more rigidly enforced during the native government than at present; it is, however, still acknowledged, and will strictly be exacted under the new police system.

53. Although the alienated lands in this collectorate at present amount to upwards of five lacs (5,00,000) of beegas, the value of alienations has greatly diminished under our administration by the resumption of a large quantity (under Regulation I, 1823, and XVII. of 1827) of lands held on defective titles. Previously to the passing of the former Regulation, the Collector had recovered some such lands by filing suits against the holders in the late Kaira Adawlut. It appears from my records that under the above quoted Regulations, alienated lands to the amount of 23,584 *beegas* 1 *w.* and 18 *ww.* were regained, about one-half of which was subsequently restored to their former holders, as shown below.

	<i>Beegas.</i> <i>w.</i> <i>ww.</i>
Under Regulations X. of 1831 and VI. of 1833 - - - -	4,399 17 15
By order of Mr. Lumsden, specially deputed by Government to inquire into the tenures of alienated lands in this Collectorate - -	3,237 17 0
By the reversal of the Collector's decisions on appeals to the Sudder Dewanee Adawlut - - - - -	35 15 0
Bhat lands restored by Government - - - - -	3,550 9 0
Life grants - - - - -	110 5 0
	11,373 3 15

54. In addition to the above, a considerable quantity of land was resumed by Government for annual commuted money payments to be given to the persons surrendering their land to Government; such lands are called *sarkar-santhelee*, or rented to Government, and the payments by Government to the persons surrendering the land to Government are called *kothlee santh*. These compromises were generally made without any inquiry into the title of the parties to the lands thus made over to Government; the claimants having readily consented to the terms proposed for resuming their lands from a fear of their claims being held inadmissible, and rejected altogether, if subjected to the test of a rigid investigation, and the Government officers having preferred this mode of proceeding as being calculated to save their labour.

55. The total amount of *sarkar-santhelee* lands now amount to 45,162 *beegas*. 14 *w.* 2 *ww.*, yielding Government an annual revenue of *Rs.* 87,855. 8. 3., from which the annual payments to the original holders or their heirs, amounting to *Rs.* 34,094. 3. 2. being deducted, leaves a net surplus of *Rs.* 53,761. 5. 1. in favour of Government.

56. About four lacs of beegas of alienated lands are held on doubtful title, but the investigation has been unavoidably postponed by the Collectors of Kaira not having been allowed their full complement of assistants. The lengthy nature of the inquiry in such cases renders it necessary that one officer should be specially employed on this duty.

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57. I fear I have said too much about alienations, though I might still further continue this important subject; but as it would extend the size of this report, I shall now proceed to notice the area of Government lands, which are classed under the heads of—

	Beegas	w.	wa.
1. Irrigated - - - - -	28,635	10	0 $\frac{1}{2}$
2. Unirrigated - - - - -	5,94,451	12	9 $\frac{1}{2}$
3. Rice lands - - - - -	73,440	14	2
Culturable Government land - - - - -	6,96,527	16	11 $\frac{3}{4}$
Add alienated lands - - - - -	5,03,818	16	2 $\frac{3}{4}$
TOTAL Area of Cultivable Lands in the Kaira Collectorate - - - - -	12,00,346	12	14 $\frac{1}{2}$

58. Of the Government culturable land above stated, namely, 6,96,527 beegas. 16 w., the area actually cultivated during the last year, was 4,71,301 beegas. 11 w. 2 $\frac{1}{2}$ wa.

59. At page 68, Mr. Mackay states that "the alienated lands of Kaira amount to nearly 50 per cent. of the whole cultivated surface." This information he may have obtained from natives as a rough estimate, but it is not the actual result exhibited in the public records. The figures given in the preceding two paragraphs will show that the proportion of the alienated lands in this collectorate is 42 per cent. of the Government culturable land to 58 per cent. of the Government cultivated land. This result is still not perfectly accurate, as the number of beegas of alienated lands above stated to be 5,03,818. 16. 2 $\frac{3}{4}$, do not include the area of cultivable or culturable land of the enam or oodur jumabundy villages, which have never been surveyed, nor do the proprietors possess any correct account of the extent of their estates. To supply this deficiency, it is necessary that the operations of the Guzerat revenue survey (should they ever reach this collectorate), should be extended to the alienated and partially alienated villages of this collectorate.

60. The gross land revenue of the Kaira Collectorate for the past year A.D. 1852-53, was Rs. 24,30,851. 15., namely, Rs. 15,77,660. 1. the Government revenue, and Rs. 8,53,191. 14. the estimated rental of alienated lands. Remissions to the amount of Rs. 5,794. 3. were granted on account of the Government revenue, leaving Rs. 15,71,865. 14. as the net Government realisable revenue in 1852-53.

61. It will be seen from the above, that the value of the alienated lands in this collectorate forms one-third of the gross revenue, but this proportion would be enhanced, if the correct area and rental of the alienated and partially alienated villages were ascertainable. The gross revenue at present exhibited in our accounts is made up of the Government realisable revenue, the estimated rental* of alienated villages, and the estimated yearly value of alienated lands in the Government villages.

62. The details of the Government revenue for A.D. 1852-53 are shown in the subjoined Table:

I T E M S.	Amount of Revenue.		
	Rs.	a. p.	
Revenue derived from cultivated Government lands.	10,80,074	10. 8	The area of Government's cultivated lands being Rs. 4,71,301. 11. 2 $\frac{1}{2}$; the revenue collected therefrom gives an average assessment of 2 $\frac{1}{2}$ rupees per beega.
Ditto from uncultivated Government land -	1,30,779	-- 7	
Salami or quit rent - - - - -	3,66,808	5. 9	
TOTAL Land Revenue - - -	15,77,660	1. --	Inclusive of remissions:
Add Sayer Revenue - - - - -	60,515	13. 1	
GRAND TOTAL - - - Rs.	16,38,175	14. 1	

63. Although it would appear from the preceding table, that the average beegotee assessment in this collectorate is only 2 $\frac{1}{2}$ rupees, it may be remarked that such is not generally the rate. The rate of assessment on unirrigated land generally varies from 4 to 14 rupees per beega, but in certain cases it is as high as 19, which, as you justly observe in your letter, No. 519, of 19th February 1853, para. 1, the land could hardly pay, "be it of ever so good quality."

* I. e., The rental obtainable by the State, if the villages had not been alienated.

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* Neriad, Borsud,
Napar.

quality." The poorer lands occasionally cultivated, and capable of only raising inferior grains, pay a much lighter rate, four annas per beega being the minimum. Such lands are most common in the Thasra and Kupperwunj talookas, the lighter rates of assessment imposed on which have offered ample inducement to the ryots to reclaim and cultivate them. In the other talookas, more especially in the "Cherotur" districts, * waste lands can hardly be found; so much so, that in some villages the want of pasture for cattle is severely felt. To this cause may be ascribed the warm contest sometimes carried on amongst the ryots, and sometimes even amongst brothers and relations, to secure the right of holding the best Government lands. To so high a degree of rancour was this competition sometimes carried, that formerly, where each rival party offered more than the fair rental of the land, there the interests of the State have, from an over-zeal on the part of our native officials, been promoted, at the sacrifice of those of its tenants. In such cases the ryots now repent too late of their folly and pride, which prompted them to outbid their brethren, and the consequence is, that they are now reduced to poverty. I allude to these special cases, as showing that in the most fertile portion of the collectorate, the area of cultivable land is disproportionate to the density of population, which, as I have above shown, is in some parts † above 500 souls to the square mile; in the Neriad talooka considerably in excess of that number.

64 The irrigated lands pay at the rates of from 4 to 20 rupees per beega, according to the productions of the soil; and rice lands from two to eight rupees.

65. With reference to the maximum rates above alluded to, it may be remarked that they are generally in excess of an equitable assessment, and operate oppressively on the ryots. The object of the revision of assessment contemplated by Government, was to limit the Government demand from the cultivator to a fair rental on his holdings, but the measures adopted to accomplish it have not afforded him the desired relief, because the rent which he formerly paid as land assessment was increased by the amount of the extra cesses, levied from him as a personal tax, being consolidated with the land rental; as in the instance of the "hull-vera" or plough tax, the levy of which was regulated, not by the "ryots' actual means as the basis of the assessment," as asserted, page 103, by Mr. Mackay, but at a fixed rate varying from the minimum of five rupees to the maximum of ten rupees, according to the number of ploughs used by a cultivator. This did not render necessary an inquisitorial and vexatious inquiry, assumed by Mr. Mackay at, and described in, page 103. His definition of the hull-vera applies more to the exploded cess in the Thasra and Kupperwunj talookas, known by the term "kurrum-vera," or a cess levied according to the individual circumstances of the cultivator.

66. Besides the plough tax, various other imposts were separately levied, and, now consolidated with the land assessment, are still continued to be so, the provision of Act XIX. of 1844 being applied to non-cultivators only. It was more than six years ago that the Honourable the Court of Directors, with a view to relieve the ryots of the extra burthen, ordered the "hull-vera" to be at once abolished in this part of Guzerat (Ahmedabad and Kaira Collectorates). This order was conveyed in a letter, No. 1401 of 12th April 1838, from the Bombay Government to the local officers; and though it has been (I am informed) fully carried out in the Ahmedabad Collectorate, the indulgence sanctioned by the Honourable Court has not yet been extended to the ryots of this collectorate. It is true that no cess under the old name of hull-vera is exacted, but it is collected in a different form; namely, by increasing the direct assessment on the land, as shown in the statement (C.), accompanying my predecessor, the late Mr. Kirkland's, letter, No. 258 of 1843, dated the 14th of October, to your department. From this it appears that 28,551 beegas. 6 w. of land formerly paid a begotee assessment of Rs. 61,151. 0. 5. and a hull-vera, or plough tax, to the amount of Rs. 13,922. 4. 2., or an aggregate revenue of Rs. 75,073. 4. 7., which was reduced by only Rs. 1,362. 15. 10., being the portion of the hull-vera remitted; whereas the remainder Rs. 12,559. 4. 4. on account of the hull-vera, was, by Mr. Collector Kirkland in 1841-42, consolidated with the begotee assessment. But the hull-vera, or plough tax, in addition to the above, continues to be levied in different parts of the collectorate, as Mr. Kirkland failed to absorb the hull-vera into the begotee assessment in several villages, amongst which the grievances of the sepoy of Cusba Thasra, complaining that the hull-vera operates very injuriously, have formed the subject of a lengthy correspondence, ending for the time with your endorsement, No. 834, dated 22d March 1853.

67. The levy of the hull-vera, in excess of an equitable assessment on the Government land, is in itself objectionable; and the cultivators of this collectorate subject to it are deserving of its mitigation, to put them on a par with their brethren in the Ahmedabad Collectorate, who have been freed from the payment of the hull and other veras by their abolition; and, without being consolidated in the land assessment, Government may be inclined to postpone the consideration of this question until the indefinite period of commencement of the survey operations in this collectorate. But, with all deference, I beg to express my opinion, that the sooner the cultivators are relieved of this obnoxious extra impost, the better.

68. By Act XIX. of 1844, all taxes on trades, shops, &c. have been abolished, as above stated; but their abolition has caused much discontent amongst the agricultural classes
(who

† Five hundred and forty-one souls to the square mile in the Neriad talooka.

(who otherwise contribute so largely and directly to the Government revenue), and who have been expressly excluded from participating in the benefit of the above enactment, and who now pay so many veras or cesses. It is well known that the agriculturists were saddled with various descriptions of arbitrary cesses and imposts during the native Government; a contribution, once levied for a special purpose, ever afterwards became an authorised item of annual taxation to the State. A number of these cesses levied from the cultivators have been relinquished by Government; many of the *nerwadars* retained as appertaining to the land revenue. But when cultivators of Government assessed pay a fair rental for their holdings, there is no reason or justice why they should be ever burthened with extra taxation. If the Honourable the Court of Directors disapproved of the levy of the *hull-vera*, they may with equal propriety sanction the discontinuance of similar cesses levied under different names (a report on which I am about to submit); but a few of which I take the liberty of noticing in this place, in the hope that the propriety of retaining them, or otherwise, may engage the early consideration of Government.

1st. The "*ruveenee oopuj*," or additional land rent, levied in some villages on account of *rubee*, or winter crops, raised after the *khureeff* or monsoon produce has been reaped. This is contrary to the principle of a *beegotee* assessment (or fixed rental on the quantity and quality of land held), the payment of which leaves the cultivator at liberty to raise either one or two crops on the same land, according to his convenience and industry. Again, some of the Government lands pay a lighter *beegotee* when cultivated with grains, and a higher rate when raising superior crops. This mode of collecting the revenue is called the *Toolwar beegotee*; therefore, what Mr. Mackay states at page 101, that "the principle of levying the rent according to the crop has not yet been altogether abandoned, even in *Goozerat*," is not without truth. This system prevails only in a very few villages, but as it is calculated to discourage the cultivation of valuable crops, solely a *beegotee* assessment, fixed according to the quality of the soil, ought to be substituted.

2d. The penalty levied under the name of "*khool-tee-zummi-na*," from cultivators failing to cultivate a fixed number of *beegas*. This is felt heavily by old men, without children or partners, who may be forced to reduce their cultivation for want of means.

3d. "*Purgama no suvadeeoo*," or a cess levied from cultivators on their cultivating Government or alienated lands belonging to an adjoining or neighbouring village to that in which they live.

4th. "*Dharala Veera*," or a quit-rent, on lands held by *rajpoos*, *coolies*, and *sepoys*, but as such it is levied in some cases from parties holding no lands.

69. As I have been called upon by Government to submit a separate report on the objectionable *veeras* or cesses in this collectorate, I shall not enlarge further upon this subject in this place.

70. Independent of the burthen of various extra cesses, the land assessment in this collectorate is generally considered a heavy one. The annual revenue settlements during the native Government, with the *patels* of villages, were generally made in the most arbitrary manner, and the amounts were maintained undisturbed for many years after the acquisition of these districts by the Honourable Company, until A. D. 1831-32, in which year, on account of the extreme cheapness of grains, Mr. Mills, the then collector, permanently reduced the old assessment of the Government villages in this collectorate, to the extent of about a lack of rupees; this reduction was proportionately distributed amongst different villages, shares, and holdings, and afforded much relief to the agricultural classes in this collectorate.

71. The *ryots* suffer injury by loss of exchange, the Government revenue being only received in the Company's currency, while the prices of all grains and other products sold by cultivators, must be received in *Syashye* rupees, the local currency of the country. It would be a real benefit if the *Guickowar* could be induced by Government to close his Mint, where he produces the *Syashye* rupees, the difference of exchange charged to the majority of the cultivators being 16 per cent. A remedy for this evil, operating so much as it does to the disadvantage of the cultivators, lies with Government, either by ordering the Company's rupee to be the universal currency in this collectorate, or by buying up the old coin, and converting it into Company's rupees, provided his Highness the *Guickowar*, will consent to close his Mint.

72. Mr. Mackay has very correctly classed the Government villages of this collectorate into two principal classes, namely, "*nerwa*," or divided (among its share holders), and undivided. The latter are called "*senga*," and are under the direct management of the Government officers. With reference to the *bhagdaee*, or *nerwa* villages, the original sole proprietary right of the head of the village, and his responsibility to Government for the rent, as described by Mr. Mackay at page 69, appears to be correct, from the fact that in all villages held under this tenure, the *nerwadars*, or share holders, are the descendants of a common ancestor, and that the joint responsibility of the *joomedars* (signifying *responsibles*) who are the principal *nerwa* share holders, to make good the rent of defaulting shares, is still preserved and acknowledged. Another peculiarity of the tenure is, that no strangers can be admitted into the coparcenary or association without the consent of the body of the *nerwadars* or share holders, who are generally of the *Pateedar* or *Koonbee* caste (the *nerwadars* having the right of pre-emption to land abandoned by any of the share holders, which they are compelled to take up, as they have to make good the revenue to Government from the village without any abatement.

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73. In referring to the insecurity of the tenures in Goozerat, and more particularly of the bhagdaree, or nerwa tenure, Mr. Mackay states, at page 82, that the "bhagdars themselves are in a manner as insecure as the ryots, for their responsibilities may at any day be increased, &c." I think this remark applies more to the bhagdaree villages of the Broach Collectorate than the nerwa villages of this collectorate, because the Government assessment on the nerwas, or shares of all the nerwa villages, is fixed, and does not fluctuate with seasons, as I believe is the case in the bhagdaree tenure of Broach. Under the nerwa tenure in this collectorate the position of the nerwadars, or shareholders, is more secure than that of the bhagdar, or shareholder, of Broach. The dissolution of many of the bhagdaree villages, to which Mr. Mackay alludes in the same page (82), may have occurred in the Broach Collectorate; but the nerwa settlements here were, in many cases, made during the preceding native Governments, and have for upwards of a century remained for the most part undisturbed. Government have, it is true, occasionally modified, by slight abatement, the original settlements, but it was only on applications from the nerwadars for relief from an over-assessment; and in such cases it has been the almost invariable policy of the past and present rulers to forego a part of the original Government demand rather than destroy the nerwa tenure, affording, as it does, the best security for the permanence of public revenues. There are very few instances of the nerwa tenure having been superseded either by the khatabundy or individual leases, or the ryotwar system. It was only two years ago that, after an examination of the present capabilities of the soil, Government were pleased to sanction a reduction in the old rental of the nerwa village of Bhoomail, Neriad talooka; but the question of reducing the nerwadars to the position of ordinary cultivators under the ryotwar system was not agitated, and, if it ever was, the shareholders would have gladly accepted a smaller amount of reduction than that now conceded by Government rather than forfeit their position as nerwadars.

74. It is true that Government are the sole proprietors of the lands held under the nerwa tenure; but still the nerwadars, as hereditary occupants, are practically the immediate owners, and, assuming to themselves the position of landlords, hold a higher rank in native society than the cultivators of senja villages. The ordinary koonbee cultivators consider it to be an honour to get their daughters married to the sons of the nerwadars, how small soever their share be. The nerwadars may let on lease, but can only sell the lands under their occupation with the consent of the other nerwadars, subject to the payments and responsibilities of revenue to Government.

75. Although Government have the power of breaking up the coparcenary tenure on the failure of the whole body of the nerwadars to act up to their engagements, yet, till such a contingency occurs (which is seldom the case), all shareholders are guaranteed by virtue of the tenure itself against any increase to the fixed rental of the shares. In case of Government making irrigational or other improvements, the revenue could only be increased with the consent of the nerwadars. The right of Government being thus defined, namely, to demand a fixed rental, the nerwadars consider they and their descendants have acquired an inalienable and hereditary right to enjoy the produce of their shares, minus the fixed Government demand. It is this guarantee against a sudden increase at the will of Government or its officers that makes the nerwa tenure the most esteemed and appreciated of all others. When nerwadars die without male issue, a number of claimants struggle and expend much money to obtain the deceased's estates.

76. The tenants of the nerwadars in this collectorate are mostly hereditary, and perhaps as equally secure against an increase of rent as the nerwadars themselves. By virtue of the nerwa tenure the nerwadars may let out their lands on the best terms; but in the case of their hereditary tenants, the Collector sometimes, on appeal from them, interferes as an arbitrator to settle amicably the matter in dispute.

77. The nerwadars' tenants, far from being ejected at the will of their landlords (the nerwadars), are bound over by the supposed custom or rule of the tenure, to keep up their holdings hereditarily; in the event of their abandoning them, they are obliged to pay a heavy penalty, which interferes much with the free agency of the nerwadars' tenants. In the town of Neriad, though the nerwadars have, from their expensive mode of living, been reduced to poverty, the circumstances of their tenants have been much improved; and the consequence is, that the latter (the tenants) are now quite prepared to shake off their allegiance to the nerwadars, and would ere long have done so, and engaged themselves in other avocations (as petty village usurers, traders, &c.), had it not been for the penalty to which they become liable as soon as they give up their holdings. The nerwa tenure is thus rendered efficient both as regards the interests of the nerwadars and those of the State. Their peculiar rights and privileges are provided for in clause 1, section 8, Regulation XVII. of 1827.

78. It may be inquired why, under all these favourable circumstances, the nerwadars have failed to improve their circumstances. It would be difficult to account satisfactorily for this result; but, on inquiry, I find it was usual, during the preceding Government, for the nerwadars to raise money on their lands; but the lands thus passed away beyond their control, being sold or mortgaged, still form a part of the original share saddled with the payment of revenue to Government, and because such sales or mortgages are not recognised by Government, the nerwadars are forced to pay original rental to Government for less than the original quantity of land held from the State, *i. e.*, for less than the actual present area of their shares. Government have no power to resume lands alienated by the nerwadars as
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long as the nerwa tenure is maintained. Another, and perhaps more injurious cause than the above, I have already noticed at length, namely, the heavy expenses of marriages. It should also be remembered that the nerwadars must occasionally lay out capital in irrigational or other improvements; for if they do not repair their wells, they would cease to be able to pay high rents.

79. In the preceding paragraphs I have alluded to the opulence of the nerwadar's tenants at Nerwad, but this is by no means generally the case. The Government assessment, generally speaking, falls heavily on all classes, and personal inquiries lead to the conclusion that the agricultural classes (from the falling of the prices of superior priced products, such as tobacco, pera, goor, &c.), are not in such good circumstances as formerly. This is evidenced by their having recourse to borrowing to carry them on for a while longer, and to the want of property found when sowcars' decrees come to be executed. To save the people from falling into that deplorable state of indigence so universal in the Deccan, it is absolutely necessary to adopt early remedial measures. Now both tobacco and jeera, the staple products of the collectorate, fail to procure remunerative prices, the cultivators ought to look after their own interests, and think of substituting other more favourable crops, and this can easily be done in these districts, where the lands are generally fertile. The total extent of culturable land in the collectorate is 12,00,346 beegas, of which, excluding the rice lands, there are 11,26,906 beegas supposed to be capable of producing cotton, but leaving at the most three-fourths of these for other crops; about 3,00,000 beegas might profitably be cultivated with cotton, which if its quality were approved of in Bombay, and the Customs levied by the Guickowar and Nuwab in transit were abolished, would obtain a good market there, and form a valuable export. Ginger and mustard, now produced only to the extent of local consumption, or to a very trifling amount, might with potatoes be more extensively cultivated. A free and uninterrupted communication with markets beyond the collectorate, especially by the rapid conveyance which a railway affords, would prove very beneficial, in originating demands for produce now not inquired for nor exported. This could be best attained by a branch rail through this collectorate connecting Ahmedabad with the Baroda and Bombay Railway. At present, the average yearly cultivation of the cotton crop does not exceed 10,000 beegas, the wool being all used on the spot. If the expense of transit to Bombay were diminished, and thus a demand from thence for the article were created, it could be supplied.

80. The khatabundy tenure is the next in rank to the nerwa, the difference between the two being this, that the khatabundy lands are held by the individual cultivators, each of whom is responsible to Government solely for the rental of his own holdings; whereas in the nerwa tenure, the whole cultivable lands of a village are held conjointly by a co-partnership of shareholders. In both cases, the Government tenants are hereditary occupants of the land, and not liable to be ejected at the option of Government as long as they pay the stipulated rent. Lands not held under either of the above tenures, but when cultivated for a number of years, are called "chalookher" (or continued cultivation). The last class tenure is the "phirta gimoutia," or renewal of annual leases.

81. The quantity of land held, and the amount of revenue realised under each of the above-mentioned tenures, is as follows:

TENURES.	Number of Villages.	Area of Land in	Government Revenue.	Average Assessment per Beega.
	<i>Decimal.</i>	<i>Beegas w. ww.</i>	<i>Rs. a. p.</i>	<i>R. a. p.</i>
Nerwa - - - - -	105-232	1,32,652 12 2½	4,03,704 9 3	3 - 8
Khatabundy - - - - -	74-385½	58,305 13 19½	1,81,171 2 3	3 1 8
Chaloo-Kher - - - - -	135-197½	1,20,317 1 2½	1,39,550 11 10	1 9 2
Lease, Settlement - - - - -	11-333½	4,840 2 17	12,901 11 7	2 10 7
Phirta Gimoutia - - - - -	180-851½	1,55,178 0 1	2,92,746 7 9	1 14 2
TOTAL - - - - -	507	4,71,301 11 2½	10,80,074 10 8	2 4 8
Salami, or quit-rent - - - - -	- - -	- - -	3,66,806 5 9	
Grass or beer lands, fruit trees, and various description of cesses - - - - -	- - -	- - -	46,566 3 7	
Oodur Jumabundy - - - - -	- - -	- - -	84,212 13 -	
Grand Total Land Revenue - - - - -	- - -	- - -	15,77,660 1 -	
Add—Sayer Revenue - - - - -	- - -	- - -	60,515 13 1	
			Rs. 16,38,175 14 1	

82. It will be seen from the preceding table, that the average Government Begotee assessment on the nerwa and khatabundy lands is nearly the same, but the rental levied by the nerwadars from their tenants must be higher than the average rate above shown. The produce of the nerwa land is shared between three parties; the Government, the nerwadar, and the cultivator; but in the Khatabundy land, only the Government and their immediate tenants are a charge on the land.

83. The nerwa lands, comparatively speaking, are in the highest state of cultivation, and pay to the nerwadars at the rate of from 1 to 14 rupees.

84. Lease settlements for periods of 30 years, or less, are not common now in this collectorate, though they used to be at one time. There is not sufficient inducement offered for such leases; shortly after the acquisition of these districts by the Honourable Company, a considerable number of villages and a large tract of lands were leased out for periods up to 30 years, but this leasing system proved injurious both to the lessees (who found the realisations fall short of the Government fixed rental), and ultimately to Government, by rendering necessary the remission of large outstanding balances; consequently there is no inducement to repeat the experiment. Formerly, the revenue of many villages was collected in kind, or if in money, at arbitrary and fluctuating rates; whereas at present the Government rent is almost universally paid in money, and at a fixed begotee per beega, and consequently, by taking leases, the cultivators incur liability to pay the rent when the lands are left fallow, otherwise it is not customary to pay anything for land when left fallow. Although it may be objectionable to lease out entire villages for 30 years, there seems to be no reason why substantial farmers should not come forward to rent parcels of land for 30 years, as they can profitably improve them during that period, by means of irrigation, manuring, &c. But to build wells requires borrowing money from sowcars. For many years no tuccavee has been granted here, and the general impression is, that Government have discontinued to grant tuccavees, or people may not apply for the aid of Government, as they are called upon to produce efficient security for the repayment of the amount borrowed, which in their opinion much lessens their reputation, and the value of the concession.

85. In addition to the tenures above noticed, a very peculiar one remains to be described, as specified in clause 4, section 4, Regulation XVII. of 1827, under the term "vehta," which is an over-assessment on only a portion of a cultivator's holding, the remainder being either rent-free, or lightly assessed; it is, in fact, an indirect assessment on alienated lands, which generally forms a part of a cultivator's holdings under this tenure; but in some instances, only Government lands are held under the above described tenure, which also more or less prevails in some of the nerwa villages; and consequently what Mr. Mackay states at page 104, that instances have been known of 200 and 300 per cent. in excess of the Government rent being demanded "(by nerwadars) and paid," has reference, I presume, to lands held under the above "vehta" tenure.

Outlet for produce
required.

86. In mentioning the value of the produce of Kaira, Mr. Mackay states, that "there is but little cotton grown in Kaira; but its tobacco and wheat will stand in the place of the cotton of Broach." Tobacco is, however, no longer a profitable article of cultivation, though still extensively cultivated. Wheat is chiefly raised in the Matur talooka, and the total cultivation throughout the collectorate is about 10,000 beegas. The wheat is exported either to Baroda or Ahmedabad, but to no distant market. According to the estimate generally formed, lands capable of raising wheat amount to only 15,000 beegas, yielding about 2,00,000 Indian maunds. It would be necessary to create an external favourable market, for which the cultivators can only look to Bombay, if the expense of carriage and foreign customs were lessened. At Cambay, the nearest seaport to this collectorate, the Nuwaub charges high customs duty on goods, and it is further treated at Bombay as a foreign port. The produce of this collectorate is therefore obliged to be taken to the distant parts of Dhollera, in the Ahmedabad Collectorate, and Dehgaum in the Broach Collectorate. It would be convenient for the conveyance of the produce of these districts, if the villages of Rawlej or Dehwan on the Mhye, or Wurgaum at the entrance of the Saber Mutee, could be erected into free ports; the first are situated in the Borsud talooka of this collectorate; Rawlej is an enam village, about 3 koss distant from Cambay, and Dehwan is a little way up the river Mhye, and held on the fixed rental tenure by a Grassia chieftain. It appears to have been originally a seaport, and might perhaps be advantageously re-opened; the importance of its maritime situation is thus noticed by Major Walker (para. 27 of his report, dated the 18th of June 1804): "The port of Dehwan is comprised in the Tuppa of Napar, and as it is situated on the entrance of the Mhye, it may derive from that circumstance sufficient importance to deserve the attention of Government."

At present ginger and other products of the Borsud and Napar talookas are taken to Broach, either for consumption there, or for exportation to Bombay; the re-establishment of a port at Dehwan will therefore facilitate the exportation of the available produce of the greater part of this collectorate to Bombay.

87. Amongst the monsoon crops, although bajree is the staple, rice is that of greatest value. The total area of Government and alienated rice lands in this collectorate is estimated at 105,064 beegas, each beega is capable of producing at least 25 Goozeratee maunds, or 12½ Indian maunds. The villages situated on the bank of the Kharree River, are distinguished for the superior quality of rice produced there in great abundance. This valuable

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valuable product is generally exported to Baroda, and sometimes to Bombay* *viâ* Dhollera, in the Ahmedabad Collectorate. As wheat and barley are the second crops raised on irrigated rice lands, it would be much to advantage of the growers of these crops if an external demand or market were created, and the means of transit to it rendered more easy, and less costly than at present, as above suggested.

The principal productions of the Kaira Collectorate may be classed as follow, namely :

1. Monsoon or Khureef Crops.—Bajree, jowar, and dangar (rice) for the early harvest, with barley or wheat for the second or after crop; kodra, bowta, buntée, and leguminous plants.
2. Rubee, or Second Crop.—Wheat, barley, kussoombee, sugar-cane, poppy, jhera, ginger, chuna, huldee or turmeric.
3. Hurree, or Third Irrigated Crops.—Jowar, bang, and maize.

88. It is difficult to furnish an estimate of the expense of cultivation suitable to all crops and lands in the collectorate. The natives are suspicious of the motives of such inquiry, as they were taught by experience under the preceding native governments that such was generally the prelude to some new imposition. The stipendiary revenue officers have not personal experience on the subject. While the cultivators represent the cost of cultivation at an exaggerated amount, and the value of produce at too low an estimate, the native revenue officers reverse this, and hence erroneous results are manifested. Accordingly, Mr. Mackay, at page 157 of his work, throws doubt on the reliableness of the statement of the cost of cultivation furnished to him from this office, which appears to have been a copy of the one previously submitted to your department in 1849, by Mr. Collector Webb.

89. Subsequently, after Mr. Mackay's departure from Kaira, Mr. Acting Collector Morgan prepared a fresh statement of the cost of cultivation from the returns received from mamludars and local inquiries, and submitted it to your department on the 30th of September 1851, No. 985; but as this appeared to me to be as incorrect as the previous one, I made further inquiries, and find the cost of producing some of the principal crops and the profit obtained by the cultivator to be as follows.

90. The cost of cultivating a beega with cotton is as follows, namely :

	Rs.	a.	p.
Manure - - - - -	2	-	-
Ploughing - - - - -	2	-	-
Seeds - - - - -	-	2	-
Levelling the ground - - - - -	-	8	-
Weeding - - - - -	1	-	-
Picking - - - - -	3	-	-
	8	10	-
Government assessment - - - - -	4	8	-
	13	2	-
Cleaning by churkas - - - - -	2	-	-
	15	2	-
Value of the produce - - - - -	20	-	-
PROFIT - - - Rs.	4	14	-

Tobacco per Beega—Cost of Cultivation :

	Rs.	a.	p.
Manure - - - - -	4	-	-
Ploughing, watering, manual labour, &c. - - - - -	20	-	-
Reaping and tying bundles - - - - -	4	-	-
Government assessment - - - - -	8	-	-
	36	-	-
Deduct from value of the produce - - - - -	45	-	-
PROFIT - - - Rs.	9	-	-

SUGAR-CANE:

* The circuitous route is adopted in preference to the much nearer one, *viâ* Cambay, by reason of the heavy duties levied at the latter foreign port.

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SUGAR-CANE :		Rs.	a.	p.
Manure	- - - - -	20	-	-
Ploughing	- - - - -	15	-	-
Seed	- - - - -	25	-	-
Oilcake ploughed into the soil as manure, and an antidote against insects	- - - - -	5	-	-
Leathern water-buckets	- - - - -	10	-	-
The hire of labour for one year in drawing water, cutting the cane, expressing the juice, hire of screw-mill for expressing the juice, and Taora Pansor iron-boilers, earthen pots, &c.	- - - - -	55	-	-
Government assessment	- - - - -	130	-	-
		15	-	-
	TOTAL	145	-	-
Value of the produce	- - - - -	160	-	-
	PROFIT	15	-	-

RICE—Cost of Cultivation :		Rs.	a.	p.
Manure	- - - - -	5	-	-
Ploughing	- - - - -	2	-	-
Plants	- - - - -	1	-	-
Weeding	- - - - -	1	-	-
Reaping	- - - - -	8	-	-
Government assessment	- - - - -	4	-	-
	TOTAL	13	8	-
Value of the produce	- - - - -	20	-	-
	PROFIT	6	8	-

BAJREE—Cost of Cultivation :		Rs.	a.	p.
Ploughing	- - - - -	2	-	-
Seed	- - - - -	4	-	-
Manure	- - - - -	1	-	-
Weeding, &c.	- - - - -	1	-	-
Reaping, &c.	- - - - -	2	-	-
		6	4	-
Government assessment	- - - - -	3	-	-
		9	4	-
Value of the produce	- - - - -	15	-	-
	PROFIT	5	12	-

91. I am indebted to the muzmoodars of the Borsud and Nāpar talookas for the above information, which (as they are now present in my camp) I called upon them to furnish from their experience, as the statements received from the mamludars materially differed from each other. I have assumed the memorandum furnished by the above muzmoodars to be an approximation to the truth, because it appears to agree so exactly with the expenses of culture per acre, and the produce given at pages 106 and 107 of Captain Cruickshank's Report on the Ahmedabad Duskrohe, dated the 30th of September 1825. This officer has classed the different crops into two classes (namely, the greatest and the least produce), the expense and profit being shown separately. The details of the cost of production and profit given above correspond with the second class in Captain Cruickshank's Report. I must, however, confess that I do not feel myself satisfied of the perfect accuracy of the statement above given on this subject, and trust you will agree with me as to the difficulty of furnishing one containing correct information on the point, which is thus noticed by Captain Cruickshank at page 108 of the above report, para. 33 :

"In venturing to give the above estimates and calculations, it must be noticed that they are not intended as fixed and certain, though framed with care, and on as correct data as possible. They may possibly be fallacious, but will at all events be useful for the general purposes of inquiry, and serve to convey a good idea of the proportionate value of each crop.

crop. The expenses of cultivation will appear to be rated highly; but, as above noticed, they include the personal labour of the ryot and his family, which is tantamount to the wages he would receive were he hired to till the lands of another person. The charge of ploughing and watering must also be understood to embrace the maintenance of cattle, and the wear and tear of agricultural implements. The seed is generally, perhaps, the only article actually paid for in cash, but the prime cost of bullocks and other stock must also be taken into consideration." And I may add, that manure is generally the produce of the cultivator's cattle, and consequently the actual profit of the cultivator is higher than above stated. One serious evil to which the sugar-cane planters are exposed is the extortion by the religious mendicants of several maunds of goor or molasses. The cultivators are forced to submit to such extortions, from an erroneous notion that the success of the cultivation depends solely on their satisfying the demands of religious mendicants, though they are often not voluntary, but extorted by these people, who, in the event of refusal by the growers of sugar-canes, threaten by the magical power which they are supposed to possess to damage or spoil the whole produce in an instant. A number of Gosaeens, Biragees, or religious mendicants go to the sugar-cane fields while the goor is being manufactured, and demand a certain quantity of goor, a fourth, or a half of which is at last taken after much entreaties on the part of the cultivators representing their inability to comply with the full demand. A similar superstitious fear impedes the cultivation of indigo, which could otherwise be extensively produced in the Borsud and Napar talookas; the generally prevailing notion being, that a person cultivating indigo must die childless. These notions are not entertained by the bulk of the cultivators alone, but also by the upper classes of natives, including Government native officers in this collectorate. There can be no doubt that such superstitious fears, as above described, must operate injuriously to the interests of the agricultural classes, and can only be eradicated by education. Being anxious to promote their interests, Government may relieve them from an oppressive assessment, from extra burthens; but the removal of long-cherished prejudices, transmitted from generation to generation, must be the result, however distant, of mental enlightenment alone. It is to be lamented that their ignorance should prevent the investment of capital on the production of one of the most remunerative crops which the Cherotur districts are capable of raising.

92. At page 121 Mr. Mackay states that the average Government rental in the Kaira Collectorate is 50 per cent. of the average returns. This result, under the process of calculation explained in the preceding page, appears to accord with the average expense of cultivation and profit above given.

93. Having submitted the above general remarks on Mr. Mackay's reports on Guzerat, I shall now proceed to offer such further observations as occur to me on the subject.

94. The contrast drawn by Mr. Mackay between the condition of the cultivators of the Kaira Collectorate and those of Broach, with reference to their ability to meet the Government demands, appears to me perfectly correct, which are given in his own words as follows:—"There," (in the Kaira Collectorate) says Mr. Mackay, "cotton is grown to so small an extent as scarcely to figure in the resources of the collectorate. Grain is the chief produce, the land being as rich and prolific as any which lies between Ahmedabad and Bombay. Now, if grain were a better rent-paying crop than cotton, one would think that the cultivators of Kaira were in a very comfortable position as regards the assessment; but the very reverse is the case. The 30th of April is at hand, the day on which closes the financial year, and that on which the last instalment of the assessment is due and payable. The cultivators are quite at a loss to know how they are to meet the demand. Their crops have been abundant, but they have no market, and the surplus left in the collectorate, owing to the want of external market, necessarily keeps prices ruinously low, as regards all that is sold for internal consumption. Such is the case with the people of Kaira, contrasted with that of the ryots of Broach, one-third of whom are engaged in raising cotton, and all of whom are this year able to meet the demands upon them, from the high price of cotton and the corresponding high price of grain." Pages 30 and 31.

95. The above remarks, and the suggestion in the following paragraph (at page 31), namely, "Give cotton fair play, give it a reasonable prospect of a market, and in no part of Guzerat (at least of which alone as yet I have any personal knowledge) can it be said that grain is a more valuable crop than cotton," are well worthy of the consideration of Government. I have already mentioned the quantity of land capable of producing cotton in the Kaira Collectorate, namely, about 5,00,000 beegas; but if one-half of this were reserved for grain crops, there would still remain the other half available for the growth of cotton, and, if actually cultivated with it, would produce abundance of this valuable crop, and at the same time prevent the depression in the prices of grains.

96. Mr. Mackay states, at page 45, that "where pasture lands exist, some of the ryots are in the habit of keeping buffaloes, which are only useful to them for the milk which they yield." And I may add, that the dung of the cultivators' cattle supplies fuel and manure.

97. With reference to Mr. Mackay's remarks on the "attempts which have been made to introduce into Guzerat the culture of exotic cotton," I am not prepared to give a decided opinion, as I am inclined to attribute the failures in the experiments hitherto made more to inattention on the part of the cultivators rather than to the absolute inadaptation of the soil or climate to the growth of exotic cotton.

98. At

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98. At page 106, Mr. Mackay refers to the talookdaree system in the Ahmedabad Collectorate. There happen to be a few villages in this collectorate (Poonaj, Koonjra, Chanda, in the Matur talooka), formerly held on precisely the same tenure, which have for many years been, and still are, under direct Government management, the talookdars receiving from Government 30 per cent. of the Government revenue. As this is contrary to the principles of the talookdaree system (under the orders of Mr. Revenue Commissioner Shaw, dated 25th August 1851), the annual money payments to the talookdars since the last five years have been stopped, pending the decision of Government. The plan that has been adopted in the Kaira Collectorate appears to be worthy of continuance, as past experience has proved that it is injurious both to the interests of Government and the talookdars to leave the villages in their management. The principle of Government management, and the payment of an annual sum proportionate to the interest of the talookdar, appears worthy of adoption, even in the partially alienated villages in this collectorate, if such a plan can be carried out.

99. At page 133, Mr. Mackay states that "land has no saleable value" in Guzerat, and I fully concur in his remarks on this point, if it be meant that other than hereditary cultivators are rarely induced to acquire the right of occupation, by purchase of lands from cultivators, cultivators among themselves buying land from each other. It is very seldom that we find sowkars in large towns or villages possessing landed property belonging to Government, though they attach the crop in execution of decrees against cultivators. Purchasers are found with avidity for entirely rent-free lands, but not for Government, or partially alienated lands; but when the latter description is sold, a clause is always inserted in the deed of sale or mortgage, that "the seller or mortgager is alone to be the person held responsible for the payment of Government rental, should it be demanded at a future period from the person obtaining the land." The price of a beega of rent-free land is generally between two and three hundred rupees (Rs. 200 and 300) this sum being recovered in about 15 years. Occasionally the right of occupancy to Government, or partially alienated land, is sold, the seller receiving a slight compensation for labour, or capital expended by the seller on the fields shortly previous to the sale. The rigid mode of inquiry lately followed as to the validity of the titles to rent free, previously to entering the names in the Government land register of the heir or purchasers of land, act as an obstacle to the transfer by sale of alienated lands (which were common formerly). The mortgage of land is generally nominal, the mortgaged land being allowed to remain in the possession of the mortgager, who is only bound to make over the usufruct to the sowkar mortgagee, who, even if he should obtain an order of the civil court to be put in possession of the mortgaged or purchased land, cannot occupy it, because, as Mr. Mackay correctly observes, "the reception given by the villagers to the intrusive stranger has generally been such as to induce most mortgagees to refrain from such a mode of recovering their money." Instances have occurred of Sulami lands, sold for the recovery of arrears of Government revenue, having remained fallow for a number of years. Another reason why alienated lands have no market value, is that they are more or less saddled with extra cesses, according to the custom prevailing in different parts of the collectorate.

100. I have not yet alluded to the subject of remissions, which does not seem to have been specially alluded to in Mr. Mackay's reports in reference to this collectorate. The necessity for remissions arises in this collectorate chiefly from unfavourable monsoons, the secondary causes being blight, or unseasonable fall of rain about the Hooly festival, or middle of March, causing serious mischief to the wheat and other ripe rubbee crops, and to tobacco, the latter for value being the staple product of the Cherotur districts. Besides these, in special cases, it has been found absolutely necessary to grant annual abatements of the Government revenue; because the exaction of the full rental would have absorbed nearly the whole produce, and left the parties hardly a bare subsistence. The amount of remissions granted last year was only Rs. 5,794. 3., but in bad seasons it sometimes reaches as high as nearly 75,000 rupees. This shows the necessity for greater facilities for irrigation to avert losses from want of rain, to which I shall hereafter advert in the sequel.

101. It would appear from the figured statement given at the top of page 127, that the assessment in Broach varies with reference to the price of cotton, and accordingly the lowest amount of assessment was 13,38,202 rupees for 1838-39, while the highest amount in 1835-36 was 22,97,458 rupees. The prices of grains here have not injuriously affected the Government's revenue. They have remained steadily at near the same amount for many years, as the markets are uninfluenced by exportations. I have now got before me the amounts of Government revenue for the last 12 years, from which it appears that the lowest amount for 1840-41 was 14,98,199 rupees, whilst the highest for 1851-52 was 15,81,122 rupees, the difference being less than a lac of rupees; and the fluctuation in the revenue is generally caused by augmented or diminished cultivation of Government or Sulami lands, and incidental causes; and when the monsoons are unfavourable less land is sown.

Page 143. See the Note.

102. Mr. Mackay seems to have taken for granted that "a higher rate is charged by their proprietors upon the alienated than upon the Government lands;" this is not the case in this collectorate, as I have fully shown in my letter, No. 110, dated the 27th ultimo, which precludes the necessity for again discussing the point in this place, more especially as my remarks on Mr. Mackay's valuable reports have already extended to too great a length.

103. Encouragement

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103. Encouragement to cultivate waste lands forms the subject of pages 145, 146, 147. Mr. Mackay has correctly stated that the difference between the rates on reclaimed and waste lands is very little, and quite insufficient to hold out an inducement to take up waste lands. The difference in the rate should be greater, to afford the requisite inducement. The high state of cultivation in the densely populated districts aptly applies to the character of this collectorate; the superabundant population there might be advantageously encouraged to emigrate to the neighbouring talookas of Kuppurwunj and Thasra, where large tracts of lands are lying waste; but to meet the natural immobility of the natives, something more than a mere reduction in the existing rates of waste lands is necessary. Plots of ground should be set aside for establishing hamlets, and small advances in the form of a tucavee made, to enable emigrants to build houses, and provide themselves with the necessary agricultural implements. To the natural indolence of the koolees, to steady habits of cultivation, and their pilfering propensities may be attributed in some measure their indigence and want of labouring cattle and implements, and consequently the large tracts of waste lands in the Kuppurwunj and Thasra talookas; and it is hoped that, under the recently reformed police system, all lawless classes will ultimately be induced to resort to the peaceable industry of cultivation.

104. Of the 6,96,527 beegas 16 wussees and 11½ wiswusees of cultivable land, the waste lands amount to 2,25,226. 5. 9½; but these latter are mostly of inferior kinds; the lowest rate chargeable being two annas per beega, and the highest four rupees in the Kuppurwunj and Thasra talookas, although the maximum rate in other talookas is eight rupees. These waste lands, even if reclaimed and cultivated, will yield so trifling an increase of revenue as hardly to compensate for the reductions of revenue in consequence of over-assessment required to be made in the nerwa and other villages in the other talookas of this collectorate.

105. At page 138, Mr. Mackay alludes to the system of taking security from individual cultivators, called "mal-zamin" in this collectorate. As this is merely a matter of form now, and as I have never heard of it as hardship to the cultivators, I would not recommend any alteration in the existing practice. However high the Government demand be, the first thing the cultivators are anxious to provide after the harvest is to make timely arrangements for discharging the instalments of Government revenue; but, unfortunately, they are often driven to resort to borrowing from money-lenders, which, under existing circumstances, it is impossible to prevent.

106. In closing my remarks on the first three chapters of Mr. Mackay's reports, I would beg to solicit the earnest attention of Government to the suggestion offered by that gentleman at page 141, namely, that "a class of landlords should spring up who would perform towards the soil and the cultivators the duties of landlords." This can be effected by the general introduction of the nerwa tenure, with a slight modification. Several senja, or Government undivided villages, have under our administration been converted into the "nerwa" tenure on the application of the ryots themselves, and its universal adoption will give a greater degree of permanency to the existing tenure of the land in this collectorate, and the nerwadars, with a moderate assessment, will fulfil the duties required of them as landlords.

107. In connexion with agricultural prosperity, I would further beg to bring to your notice that the existing regulations of our civil courts have a tendency to impoverish the condition of the ryots. When a decree is obtained, it should not be allowed to hang for many years over the cultivator's head, to be executed every year of his life, when the harvest of his crops is ready; but the creditor should be restricted to recover all he can within three years of the court's passing the decree; and the sons of the cultivator should not be held legally answerable for the debts their father has incurred.

108. In connexion with the subject of irrigation, I beg to submit the following abstract of the returns of wells received from the different talookas in this collectorate:

	NUMBER OF WELLS			
	Used for Drinking.	Used for Irrigation.	Used for Drinking and Irrigation.	TOTAL.
On Government land - - -	799	2,566	418	3,783
On alienated land - - -	327	1,929	266	2,522
TOTAL - - -	1,126	4,495	684	6,305

109. The above Table gives on an average 11 wells for each village. From the 6,305, the number given above, 5,867 (namely, 3,470 Government and 2,397 private) are in an efficient state; 137 (viz., 95 Government and 42 private) require to be repaired; and 301, (viz., 296—Scss. 2. 7 C

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(viz., 218 Government and 83 private) are totally useless. The cost of repairing the above 137 wells is estimated as follows:

	Rs.	a.	p.
95 Government wells - - - - -	24,325	-	-
Contributions agreed to by the villagers - - -	5,792	8	-
Outlay required from Government' - - - - -	18,532	8	-
<hr/>			
42 private wells - - - - -	4,775	-	-
Villagers' contributions to be realised on Government sanctioning its share of the outlay - - - - -	3,575	-	-
The Government aid - - - - -	1,200	-	-

Thus an outlay from Government to the amount of Rs. 19,732. 8. will restore 137 wells to efficiency.

110. There are 3,233 tanks throughout the collectorate, of which only 238 are partially used for irrigation; 165 are now capable of supplying water throughout the whole year, and 3,068 only up to the end of February; 62 merely contain traces of once having been tanks, being filled up; to reform which would cost Rs. 35,074. 8., of which the villagers are willing to contribute to the extent of Rs. 11,143, and apply to Government for aid to the amount of Rs. 23,931. 8.

111. Besides the above, there are 19 bunds, or embankments, on the banks of the Kharee River, and 70 dekootees, or river wells, used for irrigation, on the River Wattrick.

112. Connected with this subject, and the roads in this collectorate, I beg to submit a letter, No. 769, dated the 31st of March 1854, from the executive engineer at Ahmedabad, who states his opinion that the roads of this collectorate require to be made straight, and to be raised above the level of the fields through which they pass. At present I have observed they form in the rains the channels for conveying away the water which drains off the fields, being roads in the fair season, and often watercourses in the rains.

113. Lieutenant Dickinson considers that the irrigational means of the Kharee River could be greatly increased, and also that more water may be obtained for it from the River Meswa. He also considers, that although the country slopes downwards from the River Mhye into the Kaira Collectorate, yet, without a minute survey of the country to enable him to judge with accuracy, he can only state his general impression that it would not be economically possible to turn the waters of the Mhye River to account in this collectorate. This, however, cannot be determined till after a regular survey has been made by an engineer officer.

Wells in the Kaira Collectorate, and frequency of salt springs.

114. In page 180 of his work, entitled "Western India," Mr. Mackay, with reference to the Kaira Collectorate, first observes that there are numerous wells respecting which it may be remarked that some have to be pierced to a considerable depth before water is obtained, which, of course, adds much to the labour of drawing it for irrigating their fields; also that there are many salt springs, which discourages the making of wells; for even when a cultivator has gone to the labour and expense of making wells, these salt springs are encountered, and sometimes the water becomes brackish afterwards, although sweet when first dug, in consequence of some salt spring neighbourhood overpowering the sweet spring upon which the well has been built. But even under the most favourable circumstances the drawing of water from wells is attended with greater labour and expense than the distribution of water obtained from channels flowing over the surface of the ground, as when streams are dammed up.

Irrigation from wells entailing greater labour than from surface rills.

Respecting irrigation from the River Mhye.

115. In the same place Mr. Mackay, in writing of the Kaira Collectorate, states that "there are in this collectorate no rivers of sufficiently copious supply to admit of their being turned to the purposes of irrigation all the year round; for the waters of the Mhye, which forms its south-eastern boundary, could be much more easily diverted into Baroda and Broach than into Kaira." As Mr. Mackay has not stated his reason why the waters of the River Mhye could, in his opinion, be more easily diverted into Baroda and Broach than into the Kaira Collectorate, I am at a loss to conceive why he makes this distinction, and I am unable to agree with him.

116. For some miles the River Mhye forms the south-eastern boundary of the collectorate, and as this river never dries up, it is susceptible of yielding a constant supply of water if a stone embankment was thrown across it to divert its waters into this collectorate. To my mind the only obstacle to the accomplishment of such a plan is the large capital which would be required.

117. As the whole of the Kaira Collectorate is composed of a light sandy soil, free from rock, no engineering difficulties would occur in excavating channels for water in any direction that might be desired; while a soil highly fertile when manured, and capable of yielding

yielding crops all the year round, if water only were supplied, would repay the outlay; and an industrious population, ready to avail themselves of irrigation if the means were placed within their easy reach, as well as Government, would be enriched if additional facilities for irrigation were afforded; it therefore rests with Government to appoint a qualified engineer to survey the river, and state what would be the expense of executing such a project.

118. Before the Mhye River approaches the Kaira Collectorate it runs along the frontier of the Ballasinore principality (formerly a political dependency under the Kaira Collectorate, now under the Rewa Kanta political agency). It appears to me that the best point from which a cut might be made from the River Mhye, to divert its waters into the Kaira Collectorate, would be at the village of Junnore, on the banks of the Mhye (this being an isolated village held by a Rajpoot thakore, paying an annual fixed rental to the East India Company, and attached to the Thasra talooka of the Kaira Collectorate, but situated within the principality of Ballasinore).

119. The reason of my selecting this point from which to drain the Mhye of part of its waters is because the distance here between the Rivers Mhye and Serhee is very short; and I am told that during the rains, when high freshes occur in the Mhye, the water already flows out of it through ravines into the Serhee River; and therefore I presume that these natural channels could be deepened, and rendered suitable aqueducts, at less expense than forming new channels elsewhere between the two rivers.

A point to connect the frontier River Mhye with the Serhee flowing through the Kaira Collectorate, to supply the latter with water.

120. The River Serhee flows for some distance a parallel course to the River Mhye in the Ballasinore principality, and also at its first entrance into the Kaira Collectorate, before it diverges into another direction: should it be found that Junnore, the point I have named for establishing a communication between the two rivers, is at all unsuitable, I have no doubt that other localities may be found for connecting the two. For instance, the Rivers Mhye and Serhee are said to be only two miles apart from each other at the frontier, where our district of Thasra and the Ballasinore principality meet each other at the hamlet of Limreea, attached to the village of Vanora, and also of the other hamlet, Chuneea, subordinate to the village Mhyestadee Wullubpoor Bhag, both places being separated about two miles from each other, and situated within the Thasra talooka of the Kaira Collectorate.

At the hamlet of Limreea and Chuneea the Rivers Mhye and Serhee are said to be only about two miles apart, and are therefore supposed capable of being easily connected.

121. As the River Serhee flows through the collectorate, and approaches within one coss of our fertile and highly-cultivated district town of Neriad ere it disembogues further on into the River Watrick at Kaira, nature has already formed one channel for conveying water through the heart of the Kaira Collectorate; and by extending a network of branches from the Serhee, near Neriad, *via* Napar to Oomeita, with a branch from Napar to Borsud (thus avoiding Guicowar villages, and carrying the water for the greatest part of the distance through our own), the loose sandy soil, with almost a dead level of surface, offering no difficulty to the excavation of new channels, and the conveyance of water, which might be spread in any direction desired.

The desirableness of making the channel of the Serhee a duct for conveying an increased volume of water through the Kaira Collectorate; with branches to be formed, extending to Oomeita and Borsud.

122. It may perhaps be inquired, as the Serhee River passes through an agricultural country, whether it at present contains a sufficiency of water for irrigation, and whether the cultivators avail themselves of it or not; I therefore beg leave to offer a few remarks, pointing out the reasons why the water is now so little used.

Present capacity of the Serhee to irrigate, the extent to which it is used for that purpose, and reasons for the same.

123. In the upper part of its course the Serhee ceases to flow in the cold weather, leaving pools of water in the hollows, at long distances; in this part of its course, therefore, there is little or no means of irrigation.

124. Lower down in its course it receives the Rivers Mohur and Lonee, from the direction of Muhoonda; but the Lonee, being very small, dries up immediately the rains are over; from the point of junction with these two rivers, the Serhee continues to flow to a later period of the year, but with a very small stream of water, passing within a coss of Neriad, till it reaches Kaira, within a short distance of which only, until it falls into the Watruck River at Kaira, does it contain a sufficiency of water for irrigation, consequently the amount of irrigation from this stream, under present circumstances, can only be very trifling. I may briefly enumerate the following as the obstacles to irrigation from the Serhee: the want of a sufficient supply of water through the greater part of its course, its banks being mostly covered with small ravines (the effects of the drainage of neighbouring fields), which render cultivation on the banks of the river generally impossible, and the conveyance of water to a distance is too expensive for the cultivators to manage. But the chief reason of the river water (where present) not being used for irrigational purposes is the depth of the bed of the stream from the bank of the river, being as great as the depth at which water is found in the wells, and the wells being more conveniently placed in the centre of the best fields are preferred, and more resorted to. (I have shown reasons why wells are not more numerous.)

125. For these reasons I have suggested that a supply of water might be procured from the River Mhye to fill the Serhee by making a cut to connect the two, making at the same time a masonry dam across the Mhye to divert its waters into the said cut, or having a steam-engine to raise water from the Mhye into the channel, I have proposed should be made to connect the two rivers, and by this means the Serhee River might not only be filled, but its water raised nearly to the level of its banks, whereby it could be conducted into the

Scheme to make the Serhee useful for fields, irrigation.

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fields, and new channels be opened *viâ* Neriad, Napar, to Oomeita, with a branch from Napar to Borsud, as I have above suggested.

126. In executing such a plan it would be necessary to place moveable gates at the ultimate termini, with intermediate gates along the course of the channel, to be closed when the rains were over, to force the water (by means of the current stream) to rise, and to open the gates at the commencement of the rains to let the water rapidly escape, and to prevent the country from being inundated, as in the rains, during freshes, the Serhee overflows its banks, and, so late as last rains, poured a flood through Kaira Camp limits to the town of Kaira, cutting off the communication for a few days between the town and its suburbs.

127. The channel of the River Serhee being narrow and deep, the formation of gates, closed at the end of the rains to arrest the flow of water, which would otherwise escape and be lost, would be attended with little difficulty, or comparative expense; and the accumulation of so large a reservoir of water might of itself probably suffice for the expenditure of the cold season, without rendering necessary, until the hot season, the further supply of water, the possibility of obtaining which from the Mhye has been suggested, and I therefore beg that the two measures may be considered independently of each other, as well as in connexion together.

I have, &c.
(signed) A. Elphinstone,
Collector.

Kaira, Collector's Office,
11 April 1854.

(No. 769.—Territorial, Revenue.)

To the Collector of Kaira.

Sir,

I HAVE the honour to acknowledge the receipt of your letter (No. 31), dated the 1st ultimo, calling on me to favour you with any remarks that I may have to offer on the subjects discussed in Mackay's "Western India," more especially to the roads and irrigational facilities in the Kaira Collectorate, neglected or capable of formation. You also wish to be informed whether I can suggest any scheme of rendering the Rivers Mhye and Serhee available for irrigation, in a manner which will afford a compensating return for the cost outlay.

2. I have only skimmed over the greater portion of Mr. Mackay's work, and have it not to refer to, but I read the chapter on roads; all that Mr. Mackay states of their present state is true, and his description is not exaggerated.

3. As regards their improvement, they might be made pretty straight, sufficiently broad throughout for two carts to pass, and placed on a level with the country, instead of below it; this is all practicable. The sandy roads are improved by rain; when they pass through black soil, rain soon makes them almost impassable, and when this is the case, the means of raising the road are at hand, and in those places embankments are required, raised above the rise of the waters, and pierced with barrelled drains; this is also of easy accomplishment.

4. With reference to irrigational facilities, the River Kharree may be made a great deal more of; nothing has been done with this beyond the construction of four sets of sluice gates to the west of this and to the south of Lallee; these gates are of great value, and might be multiplied, and a constant stream down the river has, I believe, been proved feasible and attainable from the River Mheswa, from a point in its course nearly due east of Ahmedabad, near the village of Pussoory in that collectorate.

5. The country falls from the River Mhye towards this, to the north of Dakore; the Serhee runs parallel with the Mhye, and below Dakore turns off west towards Kaira; after reaching Kaira, it falls into the Watruck, and the course of its waters is then south-west, and eventually south. I believe the bunding of the Serhee at Dakore has been discussed, with reference to the irrigation of a portion of this collectorate to its south and east; but I am unacquainted with the country about Dakore, and cannot offer an opinion of the cost of such a work and its details, and the eventual remuneration to Government. To arrive at any decision on such a subject, it would be necessary to make a very correct preliminary survey of all those districts that would be benefited by such a work, and to collect much other statistical information.

To do anything with the River Mhye in the neighbourhood of this collectorate appears to be economically impossible.

I have, &c.
(signed) W. R. Dickinson,
Lieutenant Executive Engineer,
Ahmedabad Division.

Executive Engineer's Office, Kaira,
31 March 1854.

STATEMENT of the Number of Houses and Population in the different Talookas of the Kaira Collectorate, according to the last Census.

No.	TALOOKAS.	NUMBER OF HOUSES.				POPULATION.			Area in Square Miles.	Number of Houses per Square Mile.	Number of Souls per Square Mile.
		Tiled.	Terraced.	Thatched.	TOTAL.	Males.	Females.	TOTAL.			
1	Mahtur - -	24,546	12	6,395	30,953	55,149	44,672	99,821	280	110	456
2	Mounda - -	16,274	1	7,707	23,982	52,514	41,410	93,924	253	94	371
3	Napar - - -	15,971	1	912	16,884	38,308	28,271	66,579	142	118	463
4	Borsud - - -	17,088	2	771	17,861	41,285	31,651	73,136	76	235	962
5	Nerriad - - -	28,376	13	4,301	32,690	66,645	51,937	1,18,582	218	150	544
6	Thausra - - -	10,477	3	8,901	19,381	41,770	32,948	74,718	168	115	444
7	Kupperwunj - - -	8,049	-	6,811	14,860	30,090	23,787	53,877	236	62	226
		1,20,781	32	35,798	1,56,611	3,25,755	2,54,876	5,80,631	1,875	118	422

ABSTRACT of the above.

CASTES.	MALES.	FEMALES.	TOTAL.
Brahmins - - - - -	21,948	18,957	40,905
Wanis - - - - -	11,009	8,722	19,731
Koonbies - - - - -	72,404	49,980	1,22,384
Kolies - - - - -	1,01,199	80,939	1,82,138
Other Castes - - - - -	86,631	68,291	1,54,922
Jains or Shrawuks - - - - -	3,738	3,272	7,010
Mussulmans - - - - -	28,826	24,715	53,541
TOTAL - - - - -	3,25,755	2,54,876	5,80,631

Kaira, Collector's Office,
11 April 1854.

(signed) A. Elphinston,
Collector.

(No. 1144 of 1854.)

From E. L. Jenkins, Esq., Collector of Broach, to E. G. Fawcett, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

With reference to your letter, No. 1136, dated the 21st April last, I have now the honour to offer a few remarks on the statements contained in the work, entitled "Western India," by the late A. Mackay, Esq.; and I also beg to submit a report on the subject from my acting first assistant, Mr. L. R. Ashburner, who has been employed in this collectorate for about five years.

2. At the commencement of the introduction to the work in question it is given out, that the object of Mr. Mackay's mission was to inquire into the obstacles which prevent an increased growth of cotton in India, and into any circumstances which may injuriously affect the industrial condition of the cultivators of the soil, but it is afterwards expressly stated, "that its chief interest in the estimation of those who instituted it is concentrated upon that branch of it which has reference to the growth and export of cotton."

3. Before proceeding further, however, I beg respectfully to state that I have not had sufficient opportunities of making myself acquainted with particulars relating to the cotton trade generally, to enable me to offer an opinion as to whether it may or may not be possible to enable India to compete successfully with the superior soils of America in regard to that article,

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article, and I do not think that any object would be gained by my entering into a long discussion in support or otherwise of the established customs and institutions of the country in regard to the tenure of land; I shall therefore confine my remarks to such parts of the book as have especial reference to this collectorate, and, for the most part, to such statements as relate to matters connected with the growth and improvement of cotton, which may be supposed to be under my own immediate control.

4. From the general tenure of Mr. Mackay's remarks, it appears to be his opinion that the chief obstacle to an increase in the growth of cotton, and the improvement of the land generally, arises from the peculiar position of the cultivator; and he endeavours to show that his tenure of the land is insecure, the rent is exorbitant, and, moreover, that his energies are cramped, owing to his being under the apprehension that the rent is liable to be raised in the event of the land becoming more valuable in consequence of any extraordinary exertions on his part.

5. With regard to the first point, it may, perhaps, be sufficient to state, that every ryot who holds land directly from Government is, or ought to be, perfectly well aware that there is not the slightest chance of his being dispossessed of his holding so long as he is able and willing to pay the Government dues; and I may, perhaps, be excused for remarking, *en passant*, that an individual who is unable to do this, either from mismanagement of the land itself or from his general circumstances, is not, in my opinion, likely to prove a valuable agriculturist in the way of producing cotton or any other article, and it would, therefore, be not only for the interest of Government, but for that of the cotton merchants also, that the land should be taken from him and made over to some person who is able to make better use of it.

6. With regard to the position of tenant cultivators who hold land from the Bhagdars, I beg to refer to the remarks made in the latter part of the 19th paragraph of the report of Mr. Ashburner. I, however, think it most prudent to refrain from giving an opinion on the present occasion as to the advantages or disadvantages of the Bhagdaree system itself, as I have not been very long in charge of this collectorate, and the question is one on which officers, who have had better opportunities of judging, seem to have differed in opinion very considerably.

7. With reference to the exorbitancy of rent, I beg to state that there is no doubt that the rates of assessment in this zillah "were" higher than they ought to have been. They were, however, reduced by the late Mr. J. M. Davies, as Mr. Mackay himself remarked, and an increase in cultivation has been the result of the reduction, as will be seen from the following Table:

LAND in Cultivation.

	<i>Beegas. w. wv.</i>		<i>Beegas. w. wv.</i>
In 1845-46 - - -	6,34,319 10 1½	In 1849-50 - - -	6,94,939 1 10¾
„ 1846-47 - - -	6,19,440 0 1	„ 1850-51 - - -	6,25,488 6 16½
„ 1847-48 - - -	6,29,992 19 8½	„ 1851-52 - - -	6,57,646 12 18¾
„ 1848-49 - - -	5,78,128 5 1	„ 1852-53 - - -	6,66,020 11 8¾

It may, perhaps, be as well to give at the same time a statement of the cultivation of cotton in the above years, which is as follows:

LAND cultivated with Cotton.

	<i>Beegas. w. wv.</i>		<i>Beegas. w. wv.</i>
In 1845-46 - - -	3,23,590 0 0	In 1849-50 - - -	3,06,320 0 0
„ 1846-47 - - -	2,15,715 0 0	„ 1850-51 - - -	4,32,810 0 0
„ 1847-48 - - -	3,94,992 0 0	„ 1851-52 - - -	3,73,952 0 0
„ 1848-49 - - -	3,56,447 0 0	„ 1852-53 - - -	3,71,561 0 0

8. While making the above remarks, however, I beg respectfully to state that I am not prepared to say that the rates are even now as low as it is desirable that they should be; and I have reason to think that a further reduction will be made when the revenue survey is extended to this zillah. But at the same time I think it right to mention that I have not received any complaints on the subject from the people themselves; and the revenue, which used formerly to fall very much in arrears, is now for the most part collected before the 1st of August in each year.

9. Since

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1087

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9. Since I was called upon to report upon the statements contained in Mr. Mackay's work, I have caused estimates to be made out, with a view to ascertain the costs of cultivation of the different articles of produce, and the profits which the cultivators may be generally supposed to derive therefrom, and I have before me, at the present time, several statements prepared by the different district officers, to say nothing of that which is contained in the 32d paragraph of the report of my acting first assistant. These statements, however, are found to differ considerably from each other, and I do not think it advisable to give what may be termed a version of my own of the estimated profit derived by the cultivators, unless I could prepare a statement for the exact correctness of which I was able to vouch, and this I am obliged to confess that I am unable to do.

10. My own opinion is that it is difficult or impossible to arrive at a correct conclusion as to the profits which cultivators are generally in the habit of deriving from "their respective holdings," by means of estimates of the above description, and it must be manifestly unfair to reckon the whole of what is called the costs of cultivation as money actually expended, as far as the generality of the present cultivators are concerned.

11. With regard to Mr. Mackay's own account, however, I think that, under all the circumstances of the case, I am perfectly justified in mentioning that I have been more than once informed by a person who accompanied that gentleman on his tour in this collectorate, that the statement contained in the book (showing the actual profit of the cultivator to be not more than 1s. per acre) is very much at variance with the information which he received from the people themselves at their own villages, when no Government servants were present.

12. I observe that Mr. Ashburner, in the 24th paragraph of his report, endeavours to show that it is not likely that the rates of assessment are exorbitant, because the cultivators are found to indulge in expensive marriage ceremonies, &c.; but I cannot accede to the conclusiveness of his argument on this point, as it is to be feared that if the circumstances of such persons were to be minutely inquired into, it would be found that many of them are pretty deeply involved in debt. The fact of the matter is, however, that one great cause of embarrassed circumstances on the part of natives generally arises from the circumstance of their considering it necessary to borrow money to enable them to make a show on the occasion of such ceremonies, and the debts thereby incurred are multiplied to an enormous extent by the exorbitant interest which is charged by the money lenders. Another very unnecessary source of expense arises from the litigious nature of the natives themselves, which leads them to have recourse to the civil courts on the occurrence of a dispute in the most trifling matters; and I cannot help observing that I feel convinced that no mode of proceeding would tend more to depress the circumstances of the people of the country generally than the introduction of any new rules or regulations which may render the process of litigation more expensive than it is at the present time.

13. I have already observed that I have reason to think that a further reduction will be made in the rates of assessment when the revenue survey is extended to this zillah, and the apprehension of enhancement, if such an apprehension exists, will then be removed by a guarantee for a number of years being given. I have, however, no reason to suppose that any material increase in the cultivation of cotton would be occasioned by the reduction in the Broach districts, although such an increase might be expected in other collectorates where there is a considerable quantity of waste land.

14. With regard to the relative prices of cotton and the principal kinds of grain, I think it as well to give the following analysis of price for those different periods, which is taken from the statistical report made by Mr. J. M. Davies in the year 1849, and will be found in the 127th page of Mr. Mackay's book:

AVERAGE PRICES for three different Periods.

PERIODS.	Average Price of			
	Cotton.	Wheat.	Jowaru.	Rice.
	Per Bhar. Rs.	Per Kuls. Rs.	Per Kuls. Rs.	Per Kuls. Rs.
From 1810 to 1820 (inclusive) - - -	54 ½	16 ½	14 ¾	13 ½
„ 1833-34 to 1839-40 „ - - -	46 ½	17 ½	13 ¾	11 ¾
„ 1840-41 to 1847-48 „ - - -	30 ¾	14	8 ½	9 ¾

L. Jenkins.

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I also beg to give a statement of prices of the same articles, from the year 1849 up to the present time, which is as follows:—

YEARS.	Kuppas (Cotton) per Bhar of 960 lbs.	Per Kulsey of 656 lbs.			REMARKS.
		Jooar.	Wheat.	Rice.	
1848-49 - - -	29	7½	14	13	38 rupees is the higher sum that was obtained for a bhar of kuppas in the past season; but the price varied at different times.
1849-50 - - -	32	9	15	12½	
1850-51 - - -	40	7½	12	12½	
1851-52 - - -	30½	7½	13	12	
1852-53 - - -	34½	9½	11½	11½	
1853-54 - - -	38	8½	11½	12	
TOTAL - - -	204	49½	80	73½	
Average - - -	34	8½	13½	12½	

15. And with reference to the above statements, I beg to extract the following remark, which is contained in the 16th paragraph of the report above alluded to:—"As long as cotton fetched a high price (anything, that is to say, above 45 rupees the bhar, which is a fraction less than 3*d.* per pound on cleaned wool) on the spot, it paid the whole of the Government assessment, and for the most part kept grain out of the market, the ryot raising it for his own consumption; but as cotton fell, and because unequal of itself to defray the charges of the land, grain of all sorts has been forced into the market, until it has become almost unsaleable.

16. An opinion has been expressed, both by myself and by my acting first assistant, that it is not probable that there would be any material increase in the quantity of land applied to the cultivation of cotton in this zillah, under any changes which may be made in the rates of assessment. But it may very reasonably be asked, whether it is not possible that a very great improvement may be effected, in regard to the quantity and quality of the article produced, by the introduction of an improved mode of agriculture? And I think that most people would be inclined to suppose that this may easily be done, considering the rude nature of the implements which are made use of for agricultural purposes, and the very superficial manner in which the ground is ploughed. All I can say on this subject, however, is, that cotton experiments were commenced in this zillah in the year 1840, under the superintendence of Dr. Peart, and were carried on under the management of Dr. Burn, Mr. Simpson, Mr. Mercer, and Mr. Landon, up to the year 1849, when they were given up altogether. I also remember perfectly well that Dr. Peart himself expressed an opinion, that "it was impossible to beat the Broach ryot in the cultivation of cotton;" and the same conclusion appears to have been arrived at after the experiment had been tried, in a period of about nine years, under no less than five different persons, some, if not all, of whom may be supposed to have been well qualified for the work which they undertook to perform.

Whether, therefore, it may or may not be really possible to make any improvement in the present mode of growing cotton, I certainly do not consider that the Government can be justly charged with remissness in not having made an effort in the matter.

17. Supposing, however, that no means can be suggested by which a change for the better may be effected in regard to the production of cotton, there is no doubt whatever that a very great improvement may be made in its colour and general quality produced; that we could put a stop to the frauds which are practised on it by the dealers themselves; and I must remark that the remedy of this evil, which I consider to be the greatest to which Indian cotton is subject, does not rest with the Collector and Magistrate alone, and in fact that any efforts which he may make will be comparatively useless, unless he is vigorously supported and co-operated with by the higher class of merchants in Bombay.

18. During the time that I have been in charge of this collectorate, I have, I beg respectfully to state, used every means in my power to prevent the exportation of adulterated cotton, both by reasoning with the merchants themselves on the subject, and by enjoining vigilance on the persons who are employed to inspect the bales at the different bunders. I may also mention, that the number of convictions under Act 3 of 1829 was much greater than in any comparison one, as you will have seen from the quarterly statements which have been heretofore furnished in accordance with the standing orders on the subject.

If supposing that we could be perfectly certain that no adulterated cotton had been shipped from any of the ports of Guzerat, there is, I believe, no doubt that the bales are not

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not unfrequently tampered with after they are put on board the boats, and even after their arrival in Bombay; and it is therefore, as I said before, absolutely necessary that the merchants at the Presidency should exert themselves strenuously in the matter, if they are really desirous of sending cotton to England in the most perfect state in regard to fibre, colour, and staple, in which it is possible to prepare it for the market.

19. The account of the state of the tanks in this zilla, which is given in the chapter on the subject of "Irrigation in Guzerat," appears to have been taken from the statistical report of Mr. J. M. Davies, which has been before alluded to. But it must be remarked, that although Mr. Davies in the 43d paragraph expresses an opinion, in which all must agree, that the advantages of repairing the tanks cannot be overrated as far as the health and general comfort of the people are concerned, yet that it is stated in the 40th paragraph that the only crop raised by tank irrigation is rice, and that the rice thus raised in Broach is in every respect inferior to that grown by similar means at Surat.

It is also remarked at the beginning of the 43d paragraph, "that the financial results of the measure (of repairing the tanks) would not justify any great outlay, as the whole of the uncultivated rice grounds in the collectorate do not amount to more than 1,744 beegas, the prospective assessment of which, at an average of four rupees per beega, would not yield a greater annual return than 6,976 rupees."

20. It may, perhaps, however, be as well to mention, that I used my utmost endeavours during the past season to impress upon the people the necessity of exerting themselves in the way of cleaning and repairing their respective tanks, and I helped them as much as I could from the sum which is placed at my disposal for purposes of that description. I also beg respectfully to state, that I consider the suggestion contained in the 45th paragraph of the report of Mr. Ashburner to be well worthy of consideration, and I shall take steps for ascertaining whether the people of any or all of the villages may be willing to pay a tax, or contribute labour in the manner therein proposed.

21. The question of the feasibility or otherwise of constructing the canal proposed by Colonel Grant, I consider to be one of too great difficulty and importance to form the subject of a few cursory remarks in a report of this description.

22. The sixth chapter of Mr. Mackay's work treats on the rate of travelling in Guzerat, and I regret to be obliged to admit that the remarks therein contained are only too true, as the state of the roads generally forms a subject of complaint to every European traveller who passes through the province.

23. An attempt has been made within the last few years to increase the facility of transit by the expenditure of 30 rupees per mile on some of the principal roads; but all that can be said on this point is that a slight and very temporary improvement has been effected; and it is scarcely necessary to mention that a great deal more remains to be done before anything like a road, in the European sense of the word, can be said to exist in any part of this collectorate.

24. With reference to the above remarks, however, I beg to refer to the 52d and 53d paragraphs of the report of Mr. Ashburner; and before quitting the subject, I beg to state that the long and short of the matter is, that the roads of Guzerat, bad as everybody must allow them to be, never did prove an obstacle to traffic to anything like the extent that Mr. Mackay's account would lead an inexperienced reader to suppose that they must have done.

25. The several kharrees and streams which intersect the roads in this zilla were inspected and reported on by Lieutenant Playfair of the Engineers, in the last hot weather, and he has sent in estimates for the construction of bridges over such of them as are found to afford the greatest obstacles to traffic at all seasons of the year.

26. Another grand cause of complaint, in addition to that of the state of the roads, which has existed for some years past, is that of there being no bunder at the city of Broach. This want was however supplied by the erection of the mud wharf, which was sanctioned by the letter from Government, No. 6923, dated the 30th November last. The said wharf was purposely left in an unfinished state, because Mr. James Landon, who undertook the building of it, wished to see how far it would be affected by the floods of the Nurbudda before he completed the work.

I am happy to say, however, that unfinished as it was, it fully answered the purpose for which it was intended, and proved a great convenience to traders and travellers of every class, as I think any person who passed through Broach during the past season would be willing to testify.

27. The wharf was, I am sorry to say, more than half destroyed by a heavy flood which occurred in the month of July, but it will be reconstructed on Mr. Landon's return to Broach after the monsoon.

28. In conclusion, I beg respectfully to state, that if you require any further information with reference to the remarks made by Mr. Mackay on matters connected with this zilla, I shall be happy to furnish it with as little delay as possible.

Broach, Collector's Office,
15 September 1854.

I have, &c.
(signed) E. L. Jenkins.
Collector.

To E. L. Jenkins, Esq., Collector of Broach.

Sir,

In compliance with your request, I have now the honour to forward you my remarks on the book entitled "Western India," by the late A. Mackay, Esquire:

2. The objects of this work, as set forth in a preface by Mr. Bazley, President of the Chamber of Commerce, Manchester, appear to be a purely philanthropic anxiety for the welfare of the people of India; the author, after condemning in general terms the present Government of India, proceeds to inquire if the people are industrious, happy and contented? "Is material prosperity indicating the success which attends honest labours under a wise rule?" "Do the courts of law secure impartial justice to the wronged and innocent?" "Have public works been founded for the convenience and comfort of all?" In all these indications of prosperity the author declares this country to be wanting.

3. My experience of Guzerat is confined to the three zillahs of Broach, Surat, and Kaira, and of the inhabitants of these, I think it may be stated, without exaggeration, that there are few communities so happy or contented with their lot; their wants are few and simple, and their ideas of happiness depend on the gratification of these alone. In this respect their condition would contrast favourably with the peasantry of many European nations; their contentment, and the small amount of crime, as compared with the population, are sufficient evidence of their prosperity; even were that not apparent in their general appearance, the comfortable houses they inhabit (comfortable in their ideas), and the amount of gold and silver jewellery worn by their women.

4. In favour of our courts of law much cannot be said; the administration of justice is a difficulty which has baffled the wisdom and intelligence of some of the most enlightened men who have ever lived; and in India, in addition to the difficulties inherent to the subject, we have to contend with some which are peculiar to our position, as for instance, the diversity of races to whom the law has to be administered, their litigious characters, their extreme contempt of truth, and the present state of the law, which obliges us to receive evidence on an oath which is not binding on the conscience of the witness; but whatever may be the defects of our adawlut, I doubt whether the worst of them have done so much mischief to society as the Court of Chancery in England.

5. With regard to public works, Guzerat has not many to boast of; the enormous expense they entail, and the financial difficulties of the Government have not allowed of any large expenditure under this head, while the apathy and want of enterprise of the people has failed to supply the deficiency.

6. The author next adverts to the small amount of raw cotton produced in India, and compares the amount of British manufactures consumed and railway communication enjoyed by America with similar advantages in India; the disparity is great, but it cannot be attributed to the misgovernment of the country; the climate, character and habits of the two nations are so dissimilar, that a fair comparison cannot be drawn. The energy of the Anglo Saxon race in America produced the railroads without the assistance of Government, while its habits, combined with the climate, demand a larger amount of British manufactures; but the Indian ryot can be equally happy and contented with slower locomotion, and a smaller consumption of long cloth. The habits of a whole nation are not easily altered.

7. With regard to the extended cultivation of cotton, I shall hereafter show that Broach cannot produce more cotton than it already does, without violating certain well established rules of agriculture which are essential to its continuous cultivation. Mr. Mackay acknowledges that cotton in Broach cannot be cultivated to a greater extent, but asserts, that by the introduction of an improved mode of agriculture the land already in cultivation may be made to produce a larger amount of cotton. The evidence of the American gentlemen who superintended the cotton experiments, "that they can suggest no improvement on the native mode of cultivation," and the total failure of all their attempts to compete with the ryots in this respect, with unlimited capital at their command, proves this hope to be fallacious; on this point I shall have occasion to remark hereafter, and to show that the soil of other districts which the author looks upon as a source of supply, is not suited to the growth of cotton, as for instance, the southern districts of Surat, and the greater part of the Kaira and Ahmedabad zillahs.

8. The high rate of assessment, which Mr. Mackay looks upon as the chief obstacle to the extended cultivation of cotton, has nothing whatever to do with it; were it so, we should find the proprietors of rent-free lands devoting a larger proportion of their lands to the cultivation of cotton than their neighbours paying the full assessment, but this is not the case.

9. That cotton can be more extensively cultivated in some parts of Ahmedabad, in Khandeish and Berar, and other parts of India, is not to be denied; but Khandeish and Berar were nearly depopulated by the Pindaries, and an agricultural population must be again created, before any extensive increase of cultivation can take place; I do not under-rate the effect of increased facilities of finding a market which a railway will afford, but this is not the only thing necessary.

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10. With these preliminary remarks, I will now proceed to inquire into the obstacles which prevent an increased growth of cotton in Guzerat, to examine the data on which Mr. Mackay assumes that the assessment upon the land is one of those obstacles, and to point out the mistakes into which his want of local knowledge has led him.

11. Passing over the geographical and statistical account of Guzerat, which is correct, I find at page 46 the assertion that nothing is gained by the system of growing other grains together with cotton, and that "instead of one good crop the ryot got but a partial crop of both." This a great mistake; care is always taken that one crop shall ripen and be removed long before the other arrives at maturity, and with this precaution the best practical farmers are of opinion that the system is a good one; however, as this may be considered a mere matter of opinion, it requires no further notice. On the following page, however, Mr. Mackay, in alluding to the difficulty of procuring labour during the cotton-picking season, states that it is owing to the wheat and bajery harvest happening about the same time as that of the cotton. It is well known that bajery is one of the earliest of crops; it ripens in October, while the cotton-picking is seldom commenced till late in February; wheat is a later crop than bajery, but its harvest never interferes with the cotton-picking.

12. Again, it is not the pod which, becoming brittle, is mixed with the cotton by the careless pickers; the pod of cotton is composed of a tough substance; what Mackay means is the outer calyx, but this is not from over-ripeness, as he seems to imagine; this substance becomes brittle long before the cotton ripens or the pod opens.

13. At page 52 Mr. Mackay describes the manner in which the wukharias expose the cotton to dew, and tells us that after being exposed all night to the dew, "in the morning it is gathered" into heaps and hastily passed through the churka in its moist state. Had Mr. Mackay been more fully informed on this subject, he would have discovered that cotton in a moist state will not pass through the churka, that the greatest care is taken to preserve it from the dew and keep it very dry until it has passed through the churka; it is only after this process has been performed that cotton is ever exposed to the damp.

14. The adulterations practised at Tunkaria Bunder, described at page 57, are of course much to be regretted, but when adulteration is practised thus openly it almost ceases to be a fraud; the simple remedy of rejecting such cotton is quite within reach of the merchants. Had inquiry been made into the case alluded to by Mr. Mackay he would have probably found that it was the result of carelessness, not fraud, as he imagined; the purchase is completed, and the motive for adulteration ceases before the cotton reaches Tunkaria, and on arrival in Bombay the bales are broken up, weighed by the European standard of weights, and rescrewed.

15. These errors may appear trivial, and they are so, but they are so numerous, and betray such deficient information, that they detract much from the value of the author's remarks.

16. The custom of storing cotton in pits is much less general than Mr. Mackay describes, in fact it is almost confined to the districts north of the Nerbudda; in the southern districts it is stored in enclosures made of mats. Mr. Mackay's remarks on pits seem to be just; there can be no doubt that cotton can be very securely stored in pits, and that it is the abuse not the use of them that is liable to any objection.

17. The comparative merits of the steam saw-gin and churka seem now to be fully understood; the former excels in cheapness, cleanness, and economy of time, but it injures the staple of the cotton. All the improvements made to the churka have kept in view its being worked by hand power; it appears to me (I offer the suggestion with diffidence) that the mechanical principle of the churka may be retained, and at the same time many of the advantages of the saw-gin secured by adapting the churka to steam power. Cotton is cleaned in the churka by passing it between two cylinders revolving in opposite directions; I would apply steam power to a series of such cylinders of considerable length, and feed them with cotton by a contrivance similar to that in a chaff-cutting machine.

18. The adulterations and frauds practised in the cotton trade are of course much to be regretted, but the real remedy seems to lie in the hands of Bombay merchants; if they give as high a price for bad and adulterated cotton as for good and well cleaned cotton, they cannot expect the producer to take any great care in its preparation for market. Government has done its utmost to check the frauds by legislative measures, but the Bombay merchants, who are most clamorous at the evil, refuse to co-operate to put a stop to it. In 1852, when some adulterated cotton was discovered in Bombay, it was only with great difficulty that the agent for one of the European houses could be made to attend to give evidence. Mr. Mackay, in his remarks on this subject, does not seem to be aware of the existence of Regulation III. of 1829; he proposes to check the frauds by licensing the screws, by a rigid system of inspection; but while the necessary object may be attained by simply rejecting the adulterated cotton, it appears to me quite unnecessary to employ an expensive and probably corrupt agency for the same purpose.

19. Mr. Mackay, in chapter ii., briefly describes some of the Guzerat landed tenures, but he seems to have understood but imperfectly one of the most important of them; for speaking of the bhagdars he tells us, page 72, that "a check is now put upon the transactions of the patel with the ryots, by the presence in each village of a stipendiary Government tullati or village accountant, instead of the hereditary officer who preceded him." There are no traces in Guzerat of the office of tullati ever having been hereditary; had it been

been so, we should certainly have found pussaita allotted for their maintenance. The tullati of the present day, it is well understood, has nothing whatever to do with the transactions of the bhagdars with their sub-tenants; his duty is confined to keeping the Government accounts with the bhagdars or superior holders. The sub-tenants are not, as Mr. Mackay informs us, page 71, "mere tenants at will," whom the bhagdars may oust at their pleasure; even the least permanent of sub-tenants, the operwaria tenants, hold their lands on a written gunote or lease, and cannot be dispossessed of them without the formality of a civil suit, while a large portion of the sub-tenants are what are called "juptee kheroots," or permanent tenants, who have acquired a prescriptive right to their sub-holding, and the bhagdar has no power either to raise their rent or to oust them from their land so long as they continue to pay for it.

20. Mr. Mackay has, however, arrived at very correct conclusions as to the present state of the bhagdaree tenure; it cannot be denied that it is rapidly tending towards dissolution, and no amount of Government support will ever render it popular; it seems to have originated in a more primitive state of society than is now springing up, and to be inconsistent with the centralising tendency of our rule. (Theoretically, the bhagdars should perform all the functions of landlords, but in practice they have degenerated into mere middle men, and the condition of their ryots contrasts unfavourably with that of a begoti or khatabundy villager.) Mr. Mackay, however, somewhat exaggerates in page 104 the extent of the bhagdar's charges in excess of the Government assessment, though there is no doubt their rents are higher than those of Government, and the fact of their being able to levy them proves at any rate that the Government assessment is not excessive. From the success of the khatabundy and begoti system in Anklesur and Hansote, I would suggest that the failure of the ryotwar tenure in Madras has been owing to the severity of the assessment, and not from any defects inherent in the system; however, being personally unacquainted with the ryotwari system of Madras, I offer this suggestion with much diffidence.

21. Mr. Mackay concludes his sketch of the landed tenures by the statement that the ryots' tenure is a "mere tenancy at will, or that form of it which has superseded in England the old tenancy at will, a tenancy from year to year." This is such an obviously incorrect description of the ryots' tenure as scarcely to require any refutation, when so large a portion of the country, amounting to 40 per cent. in Broach, 25 per cent. in Surat, 50 per cent. in Kaira, and about the same in Ahmedabad, is absolutely alienated from Government, or held on a fee simple tenure, and from the remainder the ryot cannot be dispossessed as long as he pays his rent; it is absurd to describe the tenure as a "mere tenancy at will."

22. The question of the ryots' right to the soil is too large a subject to enter upon here, and its discussion has already been exhausted (by others more competent than myself); it is sufficient to say, that whatever it may be in theory, the ryots themselves consider their possession as permanent, and in practice it is so; for such a thing as dispossessing a cultivator of his lands is unheard of. But even were it not so, were the tenure only a lease for years renewable for ever, the greater part of the lands of England are cultivated on a far less permanent tenure, and it is not found inconsistent with the most approved system of cultivation; the want of permanency of tenure is theoretically an evil, but it is a grievance unknown to the ryot, and existing only in Mr. Mackay's imagination.

23. Mr. Mackay's remarks on the assessment paid in kind, on the toolwari or assessments of the crop, and on the hulvera or assessment upon the plough, are in general correct, except that he is wrong in describing them as inquisitorial and obnoxious to the cultivators; it is well known that these are very favourite modes of assessment, and the objection of the ryot to pay a money rent has always been the chief obstacle to its introduction. The revenue survey now in progress will shortly remove all these objectionable modes of assessment, and at the same time obviate the necessity of granting remissions in years of failure on a pretended estimate of the crops through the corrupt agency of the district hereditary officers, whose large allowances, amounting to about a lakh and a half of rupees in Broach alone, may then with advantage be subjected to the operation of the Surinjam rules, and gradually be made available to the exigencies of the state.

24. Mr. Mackay's estimate of the amount of the assessment on the land is much exaggerated, and the profits of the cultivator much under-rated; he makes out that the annual profits to the cultivators are "a little less than half a rupee, or a shilling sterling per acre;" that is about 4 annas per beegha per annum. To any one who is at all acquainted with the condition of the Broach cultivator, this calculation is obviously incorrect; the very fact of their having brought under cultivation 95 per cent. of the whole area of the zilla (much of the remainder being unarable) is sufficient to prove this, for no agricultural operations could be carried on at so small a rate of profit, still less could the cultivators afford to indulge in their usually expensive funeral and marriage ceremonies, to provide their women with the gold and silver ornaments to be seen on the persons of almost every woman who appears in public, to build the substantial houses to be found in every village, and to clothe themselves in the comfortable way they do. Owing to the extent of cultivation in the northern districts of Broach, fodder for cattle is most expensive, averaging about 20 rupees per 1,000 bundles of grass; the number of bullocks, cows, and buffaloes in the purgunnas of Jumbooseer and Ahmode alone amounts to 62,921 head. Were the rate of profit only 4 annas per beegha, the cultivator could not afford to support his own family, much less could he afford to feed

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feed these large herds of cattle and supply the wear and tear of his implements and working cattle. The latter item is occasionally very heavy; in years of sickness among cattle the very exaggeration of Mr. Mackay's estimate proves its incorrectness.

25. By* a series of calculations (pp. 107-8) which, though based on incorrect data, lead Mr. Mackay to a result very nearly correct, viz., the "average rental on cotton-growing lands in Broach is Rs. 1 15. per beega, or 7s. 9d. sterling per acre;" but he goes on to inform us, "It would be a mistake to suppose that this represents the average Government rental of the lands actually producing cotton, for the distance of some places from markets, and the difficulty of reaching them, and the poorness of soils in others, tend to throw some land out of cultivation; and hence the production of cotton is confined to the better classes of soils, comprising about five-sixths of the whole area capable of producing it;" and by dividing the rental paid by this five-sixths of the whole (12,30,757 rupees) by the number of beegas composing it (5,85,905 beegas), Mr. Mackay makes it appear that the average rent per beega is "about Rs. 2 2."

26. I have made the most careful inquiries from some of the best practical cultivators in Guzerat, and from their information, as well as from my own personal knowledge of parts of the Broach Zillah least favourably situated with regard to markets and soils, I can confidently assert, that in no part of it is any land thrown out of cultivation from either of the causes assigned by Mr. Mackay. (The total amount of Government land under cultivation last year, 1852-53, amounted to 6,66,020 beegas, of which 2,60,017 beegas, or 39 per cent., was under cotton; these figures do not include fallow or grass land, which amounted to 1,22,025 beegas.)

27. But Mr. Mackay informs us, p. 121, that it would be a great error to suppose that this sum of Rs. 2 2. represents the full burden borne by the cotton lands, and he goes on to show that † "to the bhagdars, and such begotee tenants as sub-let their land, the cultivator of Government land is called upon to pay something in excess of the Government rent; Broach is the greatest sufferer in this respect, where it averages at least 10 per cent. of the Government revenue." The owners also of alienated lands, Mr. Mackay informs us, are in the habit of letting their lands on "whatever terms they please," and generally at 20 per cent. in excess of the Government rate of assessment. I am at a loss to conceive on what data Mr. Mackay assumes that the owners of alienated lands can sub-let their lands at 20 per cent. in excess of the Government rates, while the bhagdars, who are equally unfettered in the disposal of their lands, can only obtain an advance of 10 ‡ per cent on the Government rates. The amount charged by both bhagdars and owners of alienated lands in excess of the Government rates of assessment must depend on the same circumstances, viz., the amount of Government land unoccupied, and not, as Mr. Mackay informs us, at page 122, "upon the rates charged upon Government lands." This can, surely, have nothing to do with it; for as long as a cultivator can obtain Government land at Government rates, he will not cultivate bhagdaree or alienated lands, for which he is required to pay in excess of the Government rates.

28. The rates charged by bhagdars and owners of alienated lands, though they may be high, are still exaggerated by Mr. Mackay; they are, however, the market price of the land, and, at any rate, prove that the Government rates are not excessive; any attempt to limit them, or to interfere with the bhagdar in the disposal of his land to the highest bidder, would be opposed to every principle of political economy, and would effectually deter any capitalist from investing his money in land. In the early part of his book Mr. Mackay, in treating of the position of the cultivator, whose depressed condition he much exaggerates, attributes his depression to the absence of an absolute right of ownership in the soil as a stimulus to industry and exertion; but (page 121) the exercise of one of the simplest rights of ownership, that of disposing of his land to the highest bidder, is described as one of the burdens borne by the cotton lands; and the author (apparently quite ignorant of the position of tullati in a bhagdari village) thinks it well that "Government have placed an independent stipendiary officer in each village to act as a check upon the bhagdars."

29. Of Mr. Mackay's remarks, page 123, on the assessment of the land in the native States depending on the rate of assessment in the Company's territory, I am unable to discover the meaning; there has been probably some mistake on the part of the editor.

30. I will

* Mr. Mackay states (p. 107) that "the area of Government lands in cultivation from which the full rates of assessment were drawn was (1849-50) 7,57,000 beegas;" this is a mistake, the total of Government lands in cultivation that year amounted to 6,48,900 beegas. The sum given by Mr. Mackay includes 1,08,774 beegas of uncultivated grass land, fallows, &c.

† I am not quite certain that I have correctly understood Mr. Mackay; in this passage, p. 121, he tells us "the cultivator of Government land" is called upon to pay something in excess, &c., as if the bhagdars levied a tax upon them for cultivating Government lands. If he does not mean something of this kind, why make any distinction between the excess charged by the bhagdars and by the owners of alienated lands? In the remarks which follow, Mr. Mackay is evidently in perfect ignorance of the position of a tullati in a bhagdaree village.

‡ I should say 10 per cent. in excess of the Government rates was, with a few exceptions, the highest at which bhagdari land is let.

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30. I will now proceed to examine Mr. Mackay's estimate of the cultivator's profit in Broach, but I would first protest against the mode of calculation he has adopted; he makes use of data, the correctness or fallacy of which it is impossible to test; the amount of almost every item is a mere matter of opinion, and persons best informed on the subject may arrive at conclusions widely differing from each other, and perhaps both equally distant from the truth. Thus, page 128, Mr. Mackay estimates the "anticipated yield of the cotton of the Broach Zillah at 27,000 candies, or 67,000 bhars" (40 per cent. of which he calculates is grown on alienated lands); but I would ask on what data was this estimate framed. Mr. Mackay was only in Broach a few days, it is therefore not the result of his own observations; he must consequently have depended for his information on others. I also have done by best to frame an estimate on the statements of those best qualified to form an opinion, and I candidly confess my utter failure. The export returns are some guide, but how is the local consumption to be estimated? Were it merely the yield of cotton upon Sirkari lands there would be no great difficulty, for the average yield of a beega is by this time well known; but when we consider that about 40 per cent. of the zillah is alienated, and for which there are no cultivation returns, the task becomes more difficult. Again, Mr. Mackay estimates the value of all other produce of the zillah at one-and-a-half times that of the cotton, viz., 18,83,250 rupees; this is also a mere matter of opinion; it may be a very ingenious guess, but it is impossible to depend upon it as the basis of any important calculations. The same remarks apply to the estimate of 10 per cent. in excess of the Government rates paid to bhagdars, &c.; it may be a correct estimate, but there is no data to prove it so; it may be true of Jumbooseer, but not so of Wagra or Anklesur; and that one or more of these estimates are false, is evident from the glaringly incorrect conclusions to which they lead their author. Considering the difficulties of making a correct census in India, the amount of the population* of Broach is by no means to be depended on, still less so is Mr. Mackay's estimate of the 75 per cent. of the population engaged in agriculture, and 40 per cent. of those cultivating alienated lands. It seems unnecessary to observe, that any calculations founded on such rough estimates as these can be of little value; they are, however, the basis of Mr. Mackay's calculations.

* 3,00,000.

31. I believe it is by no means impossible to arrive at a very close estimate of the cultivator's profit, by comparing his returns with his outlays in the cultivation of some of the principal crops, and so long as the result can be attained by this simple process, it appears quite unnecessary to make more complicated calculations on less satisfactory data. It may be said that the same objections may be offered to my estimates as to those of Mr. Mackay; but, I would beg to observe, that the points which form the subject of my inquiries do not present the same inherent difficulties as those from which Mr. Mackay draws his conclusions; that they are the result of five years' experience in the Broach zilla, that they are supported by the careful researches of the late Mr. Davies, and by the testimony of the superintendents of the Government experimental farms. The average produce of a beega of cotton or grain may be discovered pretty nearly by asking the cultivator the quantity of each he has produced in any given year, and the amount of land employed in producing it, and then dividing the latter by the former; the truth of your informant's statements with regard to the land may be tested by the entries in the pahani patruck of his village. Any direct inquiry as to the amount of the produce of a beega will fail, for the cultivator has never thought it worth while to inform himself on the point, and his replies are made at random.

32. The following table will show the average profits to be derived from the cultivation of some of the principal crops of this zilla; the prices of the produce are calculated at the average of the prices for the last ten years in the Ahmde Bazar, and the Government assessment is the average rate of Rs. 2. 1. 10. levied upon all the lands of the zilla; this is, of course, higher than that levied upon cotton land alone, which Mr. Mackay correctly shows to be about Rs. 1. 15. I take no account of any excess of the Government rates levied by bhagdars, wantadars, &c., from their sub-tenants; because, as I have already shown, it is impossible to obtain any satisfactory information on the subject. It is, besides, a matter over which Government can have no control, and so far from being looked upon as an evil, as it is by Mr. Mackay, is rather an indication of the healthy state of the agricultural interests, and a proof that the Government rates do not exceed a rent determined by fair competition in the market. Neither have I made any estimate of the interest on money borrowed, which Mr. Mackay includes in his calculations, for though it is perfectly true that a large proportion of the cultivators are in debt, most of them have sufficient capital to carry on the ordinary operations of agriculture without any further assistance. Their debts are incurred on account of their marriage and funeral ceremonies, not on account of the expenses of cultivation; and were the whole of the Government assessment remitted forthwith, it would probably have but little effect in relieving the cultivator of his debts; the rent he pays to Government would merely be transferred to some one else.

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RETURN showing the Amount of Produce of a Broach Beega, its Value, the Government Assessment upon it, the Cost of Cultivation, and the Profit left to the Cultivator.

	Average Price per Bhar of Cotton and Kullees, or 16 Maunds of Grain.	Products per Broach Beega of 2,477 Yards.				Government Assessment.	Cost of Cultivation.	TOTAL.	Ryot's Profit per Beega.
		Maunds.	Value of Ditto.	Value of the Kutol Crops, Straw, Kurreeb, &c.	TOTAL.				
	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Cotton	82 7 9	4	5 6 7	- - -	5 6 7	2 1 10.	1 12 -	3 13 10	1 8 9
Jowar	8 6 1	7½	3 14 10	3 6 -	7 4 10	2 1 10	1 8 -	3 9 10.	3 11 -
Bajree	12 2 10	7	5 5 3	2 4 -	7 9 3	2 1 10	1 12 -	3 13 10	3, 11 5
Rice	10 - -	12	7 8 -	1 4 -	8 12 -	2 1 10	4 10 -	6 11 10	2 - 2
Thull	26 7 8	4	6 9 11	1 4 -	7 13 11	2 1 10	2 - -	4 1 10	3 12 1
Kodra	4 12 11	14½	4 5 8	- 4 -	4 9 8	2 1 10	2 - -	4 1 10	- 7 10
Wheat	14 7 9	6	5 6 11	- 4 -	5 10 11	2 1 10	2 - -	4 1 10	1 9 1
Toor	11 4 -	5½	3 11 -	- 2 -	3 13 -	2 1 10	1 8 -	3 9 10	- 3 2
Castor Oil } Seed - }	17 2 6	4½	4 13 2	- - -	4 13 2	2 1 10	1 8 -	3 9 10	1 8 4

A beega of jowara will produce 25 pools of kurub, the average price of which is 1½ rupee per-cwt. A beega of bajree will produce 200 pools of kurub, worth ½ rupee per cwt., and one bel. of wheat or other kutol crop, which will fetch 1½ rupee per bel on an average. A beega of rice will produce one bel of straw, worth 1½ rupee. The kutol crops sown with thull will be one bel, and fetch 1½ rupee. Kutol, or after-crops, are often sown with cotton and many other crops; but in this return I have only estimated the kutol with bajree and thull, which are seldom sown without kutol.

33. In the above Table, in order to show the general position of the cultivator, I have made my calculations on the average assessment on all the lands of the zilla, viz., Rs. 2.1.10., determined by dividing the total realisable revenue for the year 1852-53, by the number of beegas upon which it was levied, but as this includes a considerable quantity of garden and irrigated land, which is more highly assessed, the above average is rather higher than that usually paid by cotton growing lands, which Mr. Mackay correctly shows, page 109, to be Rs. 1.15. per beega.

34. I have compared my estimates of all the produce per beega with those of the returns forwarded by the late Mr. Davies to the Cotton Committee in the year 1847, and find them to correspond in almost every instance; the other items of Mr. Davies' returns, having been framed previous to the reduction of the assessment, do not apply to the present period. I have also adopted Mr. Davies' estimate, Rs. 1.12., of the cost of cultivating a beega of cotton, though I believe it to be a very liberal one; it is higher than the estimate of Mr. Mercer, the American Superintendent of cotton experiments, and higher than even Mr. Mackay's estimate. In all these estimates of the cost of cultivation it must be borne in mind that they are formed under the supposition that the implements of husbandry and cattle are hired as well as the labour; but the cultivator with his own labour, and that of his family, and his own cattle, can cultivate his lands for little more than the wear and tear of his implements and cattle, so that his profits are considerably more than shown in this return.

35. Rs. 1.12. being the cost of cultivating a beega of cotton, and Rs. 1.15. the average Government assessment upon it, what is the profit to the ryot, on the cultivation of 16 beegas of land, the average quantity required to produce a candy of 784 lbs. of cotton, or 2½ bhars of kuppas?

	Rs.
Government rent of 16 beegas of land, at Rs. 1. 15. per beega	31
Cost of cultivating ditto, at Rs. 1.12. per beega	28
	—
Total Outlays	59 or 1 a. 2p. per lb.

	Rs.
Returns, 2½ bhars of cotton, at 32 rupees per bhar	80
Deduct outlays	59
	—
Cultivator's Profit	Rs. 21

36. Eighty rupees then being the cultivator's selling price of a candy of cotton, the other items which will enhance and regulate its price in Bombay and Liverpool, are as follows:

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Wukharia's profit, which I learn from the late Mr. J. M. Davies' report to the Cotton Committee, confirmed by my own inquiries, averages about 5 rupees per candy.

Broker's profit $1\frac{1}{2}$ rupees per candy; this may appear too low an estimate, but it must be remembered, that the brokers are not exposed to the same risk of loss as the wukharias who purchase the kuppas from the ryot, and clean it, and whose profits will depend upon the advance of the price of rooe on that of kuppas; the cost of cleaning being defrayed by the sale of the seed extracted from the cotton, the brokers are content with a much lower rate of profit than the wukharias.

Freight to Bombay $3\frac{1}{2}$ rupees per candy; this includes humalage at the bunder, as well as cartage to the port of shipment, and weighing.

Guarding, carriage, and other trifling charges in Bombay, six annas per candy.

The cost of a candy of cotton, then, landed in Bombay, is as follows:

	Rs.	a.	p.
Cost of production, with ryot's profits	80	-	-
Wukharia's profit	5	-	-
Broker's profit	1	8	-
Freight to Bombay	3	8	-
Minor charges	-	6	-
	<u>Rs. 90</u>	<u>6</u>	<u>-</u>

I omit any calculation for insurance, for cotton is frequently not insured from the Guzerat ports.

37. The remaining items of expense, in absence of more trustworthy information, I have accepted from Mr. Mackay's book. They are:

Cost of re-screwing and re-shipping in Bombay, seven rupees per candy; and freight to Liverpool, at 3 *l.* per ton, 10 $\frac{1}{2}$ rupees per candy; making the total cost of laying down the cotton at that port, *Rs.* 107.14., or say, 10 *l.* 16 *s.*, or 3 $\frac{1}{2}$ *d.* per lb. I learn from Mr. Mackay's book, page 164, that the lowest price at which American cotton can be sold in Liverpool, to cover expenses, is at 4 $\frac{1}{2}$ *d.* per lb.; if, therefore, Indian cotton can be produced, and laid down in Liverpool at a cost of 3 $\frac{1}{2}$ *d.* per lb., while it costs 4 $\frac{1}{2}$ *d.* to bring a pound of American cotton to the same market; and the latter, in spite of this, beats the former out of the market; it is evident, we must look for some other cause than that assigned by Mr. Mackay for this anomaly, viz., the cost of production arising from a high assessment on the land. The fact is, that Indian cotton is naturally so inferior in quality to American, and is so deteriorated by adulteration and careless picking, that it is only tolerated by the English manufacturers; so long as they can procure American cotton, there is no demand for the Indian variety, and it is only when the American market fails that they look for our cotton, to mix with, and cke out, their supply of American. Mr. Mackay tells us, that the American cotton is 25 per cent. more valuable than the Indian; and the following passage from a letter of Mr. A. Turner, President of the Manchester Chamber of Commerce, correctly describes its position in that market; he writes, "When American cotton is selling at a very low price, say at 4 *d.* per lb., there is no inducement to consume the indigenous cotton of India, except at a much lower rate, and the price, consequently, is so much reduced in the English market, that it will not answer a merchant's purpose to purchase it in India at a price which will pay the grower, and the export to this country of course falls off."

Vide Cotton Experi-
ments, p. 59.

38. It will, perhaps, be asked, if Indian cotton at a cost of 3 $\frac{1}{2}$ *d.* per lb., can be landed in a market where 4 *d.* per lb. is considered a low price for American cotton, how is it the supply is not larger, and more regular? But the great risk of engaging at such a distance, in a trade in an article liable to such fluctuations of price as cotton must be considered. When American cotton is selling at 4 *d.* per lb., it is probable that Indian cotton could only be disposed of at a loss, and merchants require a higher rate of profit to cover this risk. For it is not merely a temporary failure of the American supply that will create a large demand for Indian cotton; machinery adapted for spinning the long stapled American cotton, is not suited to the short stapled adulterated cotton of India, and manufacturers will not go to the expense of altering their machinery for a mere temporary deficiency; their only resource is to mix the American and Indian cotton together, by which they turn out a very inferior description of yarn. A reference to the return, following para 32, will also show that the profits derived from the cultivation of several kinds of grain, exceed those on cotton cultivation; and, in addition to this advantage, from the time the grain begins to ripen, parched grain forms a very considerable article of consumption in the cultivator's family. Under these circumstances it is only to be wondered that Indian cotton holds any position in the English market.

39. The producers of Indian cotton, and those engaged in its trade, appear to me to have no cause for despondency; there will probably, within a short time, be an increased demand for Indian cotton in the China and Japan markets, and should anything happen to affect the slave market of the southern states of America, the manufacturer will look to India as his chief source of supply.

40. Mr. Mackay concludes his remarks on this part of the subject, with a sketch, page 163, of the results of the improvements he would introduce in the cotton trade, by the abolition

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tion of the bhagdaree and substitution of the begotee tenure, by superseding the wukharia and native agent, and placing the trade in the hands of Europeans; the latter measure, depriving the natives of one of the most profitable branches of commerce, seems somewhat inconsistent with Mr. Mackay's philanthropic expressions of anxiety for the interest and welfare of the natives, to be found in the early part of his work, and in its preface; his cursory observations in the Broach zillah would naturally prepossess him in favour of the begotee tenure, but a more extended experience, and perhaps a careful study of the begotee tenure in Madras, would have shown Mr. Mackay that it is open to many objections from which the bhagdaree tenure is free, and is even less calculated than the latter to extend the cultivation of cotton in India. European agency would no doubt do much to improve the quality of cotton in its preparation for the market; but so long as the European and native merchants in Bombay continue to purchase good and bad adulterated cotton indiscriminately, giving as high a price for one as the other, it is hopeless to expect any improvement in this respect.

41. I have already shown the value of the data on which Mr. Mackay has arrived at the conclusion, that cultivation in Guzerat is either carried on at a loss, or at most, at a profit of only 4 annas per beega. His next assertion, that land in Guzerat has little or no saleable value, is equally unfounded. On this subject I have made careful inquiry; and find that transfers of land by sale and mortgage are common throughout the zillah; the following prices, founded on *bonâ fide* transactions which have come under my own notice, will give some idea of the market value of land;

1st. Government land paying the full begotee will fetch on sale two rupees per beega, the buyer paying the Government begotee.

2d. If an advance be required, and Government land be mortgaged as a security (girania), it will raise one rupee per beega; the land is then handed over to the creditor, who pays the Government assessment upon it, and returns it to the mortgagor on repayment of the sum advanced; no interest is charged.

3d. A beega of nukra pussaita mortgaged in this manner will produce 15 rupees.

4th. If sold, a beega of nukra pussaita will fetch 25 rupees.

5th. Lands subject to a salami, if mortgaged as above, will produce 12 rupees per beega, the mortgagor paying the salamee, averaging about 1 rupee per beega; if sold, the land will fetch 18 rupees per beega.

42. It will perhaps be said that these prices are so low as to bear out Mr. Mackay's assertion that land has little or no market value; but I would submit that, when so large a portion of the population are engaged in agricultural pursuits, and the price of produce is so low, these are by no means low prices; they may be low compared with the value of land in England, but they are not so, considering all the circumstances affecting its value in India. The demand for land as an investment for capital in the southern districts of this zillah attracted my attention soon after I was placed in charge of those districts, and I brought the subject to the notice of my superior in my jumabundy report for 1849-50. Mr. Mackay's remarks on the advantages of a low rate of assessment are very just. By the reduction of the rates in 1849, all that was necessary in this respect was then effected for Broach, and the high price of fodder, 20 rupees per 1,000, would now seem to indicate that cultivation had exceeded its proper limits. The demand for land is very great, and were they available, any number of beegas might be brought under cultivation; the whole area of the zillah is Beegas 8,24,343. 8. 17½, of which Beegas 7,88,046. 0. 18¾, or 95 per cent., is under cultivation; of the remainder a large portion, like the Hansote Bhata, is unarable.

43. I doubt whether a reduction of the rates to 12 annas per beega, as proposed by Mr. Mackay, would have any effect in extending the cultivation of Broach; the demand for land already exceeds the supply. In Kaira, Ahmedabad, and Surat, reduction of the rates would give a stimulus to cultivation, and the revenue survey will, no doubt, shortly effect this object; but these zillahs labour under a disadvantage from which Broach is, in a great measure, exempt, in having a population composed of a large proportion of the wild tribes, Grassias, Kolies, Bheels, Kusbaties, Musulmans, &c., &c., who are indifferent cultivators even under the most favourable circumstances. Mr. Mackay falls into the error, common to superficial observers, that the native mode of cultivation is unscientific and unskilful; on this point we have the evidence of Messrs. Mercer, Simson & Hawley, the scientific superintendents of the cotton experiments, who are of opinion "that the skill exhibited by the ryots in their agricultural operations is very superior, and that their economical system enables them to obtain much larger returns for the capital invested than they, the planters, can." Any one who has observed the native mode of agriculture, the careful manner in which every particle of manure is preserved, the rotation of crops attended to, and, above all, the heavy crops produced, must have arrived at the same conclusion; their implements of agriculture are rude, but efficient, and suited to the soil and climate. The experiments tried with the American ploughs resulted in utter failure, and deep ploughing was found to be unsuited to the soil of Guzerat.

Page 74 of Summary of Proceedings connected with the Government Cotton Experiments in Southern Mahratta Country.

44. Mr. Mackay's theory, in his note, page 143, that the high rate of assessment has checked the spread of population and the extension of cultivation is perhaps partially correct, as regards Ahmedabad and the northern districts of Kaira, but not so of Broach; the revenue survey now in progress will remove this evil, but the great obstacle to improvement will still remain; I allude to the extreme difficulty of prevailing upon the cultivating classes,

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kunbees, bramans, borahs, tulubda kolies, &c. to emigrate, even for a short distance; if the land is at hand, and they can cultivate it without leaving their villages, they will do so; but if it be so far removed that they cannot conveniently cultivate and watch it without quitting their houses, and building houses on the spot, they have so unconquerable an objection to separating themselves from the lands of their fathers, that they will relinquish it, in spite of any advantages it may offer: bheels, patunwaria kolies, tullavias, &c. will emigrate readily, if offered land on favourable terms, but their habits are so wild and unsettled, and they are such bad, unskilful cultivators, that it may be doubted whether any object is gained by detaching them from their more civilised brethren.

45. The importance of irrigation, at least in the Broach zillah, is very much overrated by Mr. Mackay, in his fifth chapter; as regards cotton, he was perhaps not aware that seasons of partial failure of the monsoon invariably produce the largest crops of cotton; that the effect of abundant moisture in cotton cultivation is to produce very luxuriant trees, and a large proportion of seed but a diminished outturn of wool. Rice, sugar-cane, ginger, and garden produce in general, are the only crops that will pay for irrigation; the supply of these articles is probably fully equal to the local demand; while for exportation Broach cannot compete with the districts of Surat and Kaira, which are so much more favourably situated for purposes of irrigation. In the southern districts of Surat, a kutcha well can be built for seven rupees, while Kaira is intersected by rivers, the water of several of which is almost on a level with the surrounding fields; but in Broach the water is seldom found nearer the surface than 30 feet.

46. I do not mean to assert that nothing is wanting in the way of irrigation in Broach. I have repeatedly brought to the notice of my superiors the dilapidated condition of the tanks and wells of my districts, and the inadequacy of the funds at my disposal for their repair. Government are, no doubt, as well aware of the fact as myself, and are probably only deterred by financial difficulties from at once applying a remedy to the evil. When I was in charge of Hansote, I prevailed upon the holders of rice land in some villages to pay a small extra cess, to be expended every year in the repair of their tank; a Government order to this effect, applied to the whole zillah, is all that is necessary to provide a fund sufficient for this purpose; the tax would be most popular, and would be cheerfully paid by all; it might be left optional either to pay the tax in money, or to excavate so many square feet of earth from the tank; this was the custom under the native government, and still exists in parts of the Madras Presidency.

47. In the expenditure of the fund at our disposal for the repair of wells and tanks, the orders of the Revenue Commissioner restricting the sum to be expended on any one work to 200 rupees, have, I believe, been productive of much evil; it compels us to fritter away our fund in little works the expenditure upon which, even if doubled by the contributions of the villagers, is so small as to produce no great practical benefit. Assistants are besides unable to superintend so many little operations at once; they should, I beg to suggest, be made fully responsible, that the fund placed at their disposal is not only not misapplied, but applied to the best advantage; and then left unfettered as to the mode and objects of expenditure.

48. Mr. Mackay could hardly be expected to have acquired, in the short time he was in Guzerat, a knowledge of the practical working of the rules of 1844, for the encouragement of irrigation (by granting to the builders of a well leases of the land around it at the rates of unirrigated land for 30 years), and his remarks on the subject betray his want of information; the obnoxious inquisitorial nature of the proceedings he describes, page 190, are quite imaginary, and the uncertainty of not having his rent raised, unknown to the ryot: the only objection I have observed to the rules was in Kaira, where the wells built were seldom calculated to last 30 years, the cultivator evidently intending to let them fall into decay, and take a fresh lease of a fresh piece of land when necessary.

49. I have already stated that irrigation of cotton is not only unnecessary but injurious; were it not so, I believe the system of canal irrigation proposed by Mr. Mackay, page 194-5, would be quite impracticable; I am aware that it has been sanctioned by Colonel Grant, and it is, therefore, with much diffidence that I dissent from the opinion of so high an authority; but I am inclined to think that had Colonel Grant seen the height of the north bank of the River Nerbudda at the spot from which he proposes to commence his canal, and the country between that and the River Dhadhur, he would have come to a different conclusion. I do not mean to deny that the canal could be dug, and the water raised to the surface by mechanical means; but that it would never pay for the enormous outlay may, I think, be with confidence asserted; the expense of raising water from the bed of the Nerbudda, even on the south bank, which is almost level with the water, is so great as to offer no inducement to the villagers on the river to avail themselves of it, and there is no reason why they should do so from the canal. Even were it successful, the result would be to extend the cultivation of sugar-cane and garden produce, not that of cotton, as Mr. Mackay imagines, for I have already shown that cotton requires no irrigation; the less moisture it gets, the larger and finer will be the outturn of cotton; had irrigation been necessary for cotton cultivation, we should have found it long since introduced in America, which is liable to fluctuations of season as great as those in Guzerat.

50. Both Colonel Grant and Mr. Mackay seem to have overlooked the fact, that the water of the River Dhadhur at Ahmode, where he proposes to form the junction of his canal, is salt, and in the hot weather it is salt even as high up as the village of Dadapore. The resources

resources of science would perhaps overcome even this difficulty ; but it is an important one, and deserves consideration in estimating the feasibility of the scheme.

51. Mr. Mackay's proposal to throw a dam across the Nerbudda appears to my unscientific mind quite impossible ; and being, I believe, without the sanction of Colonel Grant's professional opinion, I have no hesitation in pronouncing it so. I believe any one who has been in the habit of seeing the Nerbudda in a state of flood, and has observed the shifting nature of the sand, in which the foundation of the dam must be laid, would come to the same conclusion. Mr. Mackay tells us such things have been done in India before, under native rule : he probably alludes to the River Godavery ; but the Godavery has a rocky bottom, upon which the foundation of a dam can be securely laid, while the greatest depth to which the strata on the banks of the Nerbudda have been penetrated shows nothing but sand. It is also a question of doubt whether the volume of water in the Godavery is equal to that in the Nerbudda, especially during floods ; but admitting this, the different strata forming the beds of the two rivers will admit of no comparison being drawn.

52. The state of the roads in Guzerat forms the subject of Mr. Mackay's sixth chapter, and exhibits the exaggerated spirit in which his book has been written. I do not mean to assert that roads in Guzerat are not very bad ones, according to our European notions of a road ; but to state, as Mr. Mackay does, that the ruts into which the wheels sink are so deep that the axletrees of carts wear away the earth in the space between the wheels, and that throughout Guzerat "you can scarcely for a hundred yards at a time safely gallop your horse," is an exaggeration. The 40 miles of road between Broach and Surat is about as bad as any in Guzerat, and has been frequently ridden in five hours (I myself have done so) ; places may be found, no doubt, before the road has been mended after the monsoon, where the axletree would touch the earth ; but were there many such places, as Mr. Mackay would lead you to imagine, the road would be utterly impassable, which is not the case.

Pages 204 and 231.

53. It is a mistake to suppose that the lines of ruts which compose a road are any obstruction to traffic, unless indeed they are so deep as to bring the axletree in contact with the earth. The native cartmen prefer the ruts to a level road, for it saves them the trouble of driving. In illustration of this, I may mention that when repairing the Jumbooseer road in the early part of this year, I had caused all the ruts to be filled up with earth excavated from a ditch on each side of the road ; the cartmen, in preference to driving along the level road, put one wheel of their carts into the ditch and the other on the road, and the whole traffic of the road was for some time carried on in this manner. Another instance occurred on the piece of metalled road between Surat and Veriou. In 1849, when it was in good order, I was surprised to find on each side of it a line of ruts, as deep as any on the Broach road, through which the whole traffic of the road was carried. On inquiring of some patels I met at Veriou why they did not make use of the hard road, they told me that it hurt the feet of their bullocks. This difficulty might be obviated by shoeing them, as in the Deccan ; but this custom has yet to be learned by the people of Guzerat.

54. I am not underrating the value of good roads, for nothing can be more conducive to the prosperity of a district ; I merely wish to show that the absence of them is not the grievance Mr. Mackay would make out. Much has been done since he wrote on this subject, by the expenditure of 30 rupees per mile on the improvement of roads, but much still remains to be done. In my jummabundy report for last year, I brought to your notice the existence of abundance of metal for a road at the village of Panowli, on the road between Broach and Surat ; it will also be found at the village of Piramun, near Anklesur, so that this portion of the road at any rate might be built at no great expense. The traffic between Broach and Surat is so great, that were a small toll levied at the Keem River it would very soon repay the outlay, and provide a fund for keeping the road in permanent repair. Should the scheme of the Baroda and Central Indian Railway be carried out, it will provide all that is necessary in the way of a main road through Southern Guzerat ; but it should, in my humble opinion, be made to embrace a branch line from Indore to Gogoh, the importance of which the directors seem to have overlooked.

55. The Dhollera tramway, originating with the late Major Fulljames, might also have been extended, and become a very important line, had not the rapid filling in of the creek rendered it very probable that Khoonbunder will soon cease to be a seaport.

56. Mr. Mackay's remarks on the necessity of erecting piers or wharves at the various seaports appear to be very just ; the mud bunder recently erected by Mr. Landon appears to have supplied this want to Broach during the past season, and should it survive the monsoon, a similar one might be built at Tunkaria bunder with great advantage.

57. There are so many more competent to the task than myself, and my remarks have already extended to so unreasonable a length, that I abstain from any notice of Mr. Mackay's chapters on the Southern Mahratta country, and the new survey. Gifted with great talents and powers of acquiring information, it is much to be regretted that he should have allowed his judgment to have been warped into such an illiberal and one-sided view of the question.

I have, &c.
(signed) L. Ashburner,
Acting First Assistant Collector.

First Assistant Collector's Office, Broach,
24 July 1854.

(No. 926 of 1854.—Territorial Department, Revenue.)

From *H. Liddell*, Esq., Collector of Surat, to *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

As directed in your letter of the 21st April last, No. 1136, I have the honour to submit my own remarks and that of Mr. Daley, superintendent of cotton experiments in this collectorate, on the first part of Mr. Mackay's Work on Western India.

Surat, Collector's Office,
5 July 1854.

I have, &c.
(signed) *H. Liddell*,
Collector.

REMARKS offered by *Henry Liddell*, Esq., Collector of Surat, on the Work of the late *Alexander Mackay*, Esq., on Guzerat.

Chapter I.—Pages 46 to 48.

1. THE author seems to make some mistake as to the date of the first picking of the cotton, which is generally made about the end of January, and not the end of February, as he mentions. In this case, there is no reason why the first picking, which affords the best cotton of the season, should not be brought to market in a perfectly clean state, and free from damp and other impurities. The Holee festival, which lasts only for four or five days, interrupts the picking process, but certainly not to a considerable extent, as the second picking is generally over before this festival commences.

Page 49.

2. The khulee system, which obtained in the Broach Collectorate, has been of late abandoned, and the ryots are now at liberty to keep their cotton where they please, but not in such a state as Mr. Mackay makes out. Almost all the pits are, and were generally used to be, covered with "mithur," or mats. In this zillah, the cotton is stored in sheds. When at Juhangeerpoora village in March last, I observed some of these sheds, which were hardly open to dew or dust, being covered with strong bamboo mats. I concur with Mr. Mackay as to the preferring neatly and carefully constructed and cow-dunged pits to sheds, since, besides being costly, the latter are liable to the attacks of fire, and to be easily and rapidly burned down.

Pages 50 to 60.

3. The wukharia is generally a middleman, and not money lender, as Mr. Mackay seems to imagine; but I quite concur in the correctness of his description of the evils attendant on the present system of the dealings between the ryots and the wukharia; and as long ago as 1834, while an assistant collector at Jumboosur, reported thereon, and gave it as my opinion that the merchants themselves might remedy this by despatching European agents to the cotton districts to buy direct from the cultivators, but never to make engagements for standing crops, but for cotton actually delivered according to samples approved of, otherwise the ryot is sure to adulterate it, as noticed by Mr. Mackay, if the price rises after he has made his bargain. Bales of cotton ready for shipment are now examined by the police, and in case of dirt or moisture being discovered they are confiscated, and the owners punished. Bales of Broach and Baroda are, besides being examined, stamped. These measures have, if not wholly, to a great extent checked the evil which has been so bitterly complained of by Mr. Mackay. To these measures must be added the promulgation of the enactment referred to in page 60 of the report under review. But, above all, I would strongly suggest the expediency of local cleaning and screwing factories as have lately been established by Mr. Landon at Broach, and at the same time recommend Government to hold out all the inducements in their power to capitalists to embark in such undertakings.

4. That the saw-gin cleans the cotton with greater celerity is admitted by all; but on the other hand, it destroys the fibre to a certain extent. Then the problem to be solved by a scientific mechanic would be so to improve on the principle of the native churka, that by supplying a motive power equal to the saw-gin, the cotton could be turned out with all the superior qualities of silkiness of texture and uninjured fibre peculiar to the churka.

5. I quite agree with Mr. Mackay, that a great many of the evils inseparable from the present state of the cotton trade and cultivation might be entirely put an end to by the application of European capital and superintendence, but I cannot see Government is to blame for these not having been supplied long before. They cannot force either the one or the other out of their natural channels. Difficulties there may be, and discouragements which any one acquainted with native habits and prejudices will easily understand, and requiring no small amount of patience and good temper to combat and to overcome, which may have hitherto, and do now, perhaps, prevent Europeans entering personally into such speculations, but I am quite sure that when they do venture, that they will get every encouragement

agement from the Government, which is consistent with sound principles to grant, as a course obviously involving their own interests: rabid prejudice alone could doubt this. The case of Mr. Landon, at Broach, is one exactly in point. This gentleman, long opposed and thwarted by all the open hostility as well as secret chicane which interested natives could bring to bear against him, has, by a course of perseverance and energy, greatly, if not wholly, overcome them, and is now, I believe, fast making a fortune, at the same time benefiting enormously both the country and cotton trade by his efforts and example, and therefore it is a fair inference that others with the like qualities of energy and perseverance would have the like success.

Chapter II.—Pages 64 to 89.

1. Mr. Mackay's sketch of the tenures in Guzerat is generally correct, but he appears to have made a mistake in stating (page 66) that alienated lands paying quit-rent are liable to sale if that rent be unpaid. It is the produce which is liable to this process, and not the land. He has also laboured under an error in observing (page 57) that "jagheer lands may now, like other property purely private, be absolutely transferred by sale or otherwise." Such lands are only alienable for the life interest of the party alienating the land, or during the existence of a descendant to the original grantee, in failure of which the jagheer reverts to the State. In villages, where the fixed assessment has been introduced, the bhagdar is not at liberty to charge a higher rate to his tenant, as Mr. Mackay seems to infer (*vide* page 70).

2. Mr. Mackay's inference that the ryots are, under the circumstance of its being optional to Government to enhance the assessment, not induced to take and consider Government lands as their property, while they pay the regulated rental, is mainly founded upon the solitary instance of Mr. Kirkland's settlement in Broach as far back as 1835-36; but this settlement was made at a time when the foolwarry system was only partially superseded by the introduction of the fixed rates, or begotee system. Such a settlement could never take place in the present day, without the previous sanction of Government, consequent upon the general operation of fixed rental. Now the holding of a ryot is quite secure so long as he pays the existing rent, which is perhaps, with a few exceptions, moderate. I am not aware of a single instance in which the ryots ever deserted a village under the British Government on the score of exorbitant nature of assessment; and it was most disingenuous in Mr. Mackay to adopt Mr. Kirkland's settlement for his text, because he must have been aware that, under the altered circumstances of the present system, such a sudden rise could not take place.

3. His observations that the tenures on which the ryot holds his lands are those merely of a tenant-at-will (page 87) I think erroneous. After the introduction of the British rule, the assessment has been from time to time lowered throughout all the zillahs of Guzerat; and when the revenue survey operations are carried out, the rates will be lowered still more. I am, therefore, certainly at a loss to know what has led Mr. Mackay to misrepresent the position of a ryot in the manner he has thought it proper to do, and could only, in my opinion, have been ventured upon to an audience and a body of men who had no means of knowing or ascertaining the truth. The causes which prevent the people taking an interest in improving the fertility of the Government soil entrusted to their care for as long a time as the dues of the State are satisfied, are widely and totally distinct from those assigned by Mr. Mackay, and have little or nothing to do with the tenures. It is notoriously the custom of the country that the assessment, when on the begotee principle, remains unchanged from one survey to another; and therefore the ryot must be aware that he is secure in possession until that event takes place, and even then that his lot is more likely to be improved than the reverse, as all the changes that have taken place in the assessment have had a tendency downwards. In this respect, then, a ryot has an undisturbed lease for 30 years, at a fixed rate, with a prospective right for ever, if the assessment is paid; and I cannot call to mind any tenure in England that exactly parallels this, or which is so advantageous to the tenant or occupier.

4. The causes which, in my opinion, prevent improvement in the circumstances of the ryots are partly to be attributed to fall of prices of every sort of grain and cotton, and partly to family misunderstandings and consequent disputes for sharing profits. I must give a flat contradiction to Mr. Mackay in his assertion, that, under the bhagdaree khatabundee, or any other tenure, the ryot is insecure as to permanent occupancy. One man is not enough to manage the cultivation of extensive holdings, unless he is assisted by his brothers and others in whom he can place confidence; and unless a man holds considerable quantities of lands, say 100 beegas at least, he must not expect anything like good profit. The natives are generally averse to an enterprising combination, and the result is, that a man takes only such a small quantity of land as he is himself able to manage and pay for. The little profit which he derives, after payment of Government assessment, is squandered away generally in observing the numerous religious customs, and ceremonies, and marriages, caste, dinners, &c.; and thus he is always a poor and needy cultivator, for which no fault whatever lies with Government, as Mr. Mackay makes out.

Chapter III.—Pages 90 to 154.

1. In this chapter Mr. Mackay has attempted to show the necessity of reducing the assessment as low as one rupee per beega; but his reasonings and assertions on this subject will be better explained by the settlement officer than I can do here. In my opinion, the average

average assessment of little more than 2½ rupees per beega in this zillah is neither exorbitant, nor the tenures insecure. The rates of chourasee have not as yet been revised, as those of Oolpar, Koorsud, &c., still, on the last settlement of that purgunnah, I found ryots paying 800 rupees and upwards of assessment, willing and anxious to get more lands in their villages, but could not, the present incumbents not wishing to part with theirs, even at a premium. This does not look like over-assessment.

2. I think with Mr. Mackay that the cultivation of the land, and state of agriculture generally, is not what it ought to be, and that the productive powers of the soil are not tested by the present mode of culture; I attribute this to causes altogether different. Our repeated reductions of assessment have, in my humble opinion, contributed not a little to this state of things, as confirming the native in his habits of laziness and improvidence, and making him trust more to the forbearance of Government than his own industry. Ignorance and want of means also are of course to be brought into account as influencing in no small degree the state of the country.

3. It may not be useless in this place to trace the same effects in other countries resulting from the same causes. In England itself, where the soil is comparatively good and the rents low, but the tenantry bigoted and ignorant, the production is far below what it ought to be. Contrast Scotland, where the tenantry have to contend with a stubborn soil and high rents, the production is increasing every day, and the agriculture is the finest in the world. This, I think, proves that the pressure of rent has little or nothing to do with the state of agriculture, that is, in an injurious manner, but rather the contrary, that it acts as a stimulus to exertion and extra-production. The tenantry of England, bolstered up for many years by protective duties on foreign corn, did nothing to improve agriculture; now when these are abolished, and the spur of competition is applied, they are only now beginning to turn over a new leaf in this respect, but this too is chiefly owing to amateurs. It might be a matter for consideration the expediency of instituting an agricultural college, with ground attached for practical teaching, which I understand in England has succeeded well, and which I have no doubt will work beneficially in this country.

4. My opinion has all along been that the ryotwarry system is altogether a failure, as a system, for permanently improving a country; it is better, indeed, than the zumindaree, bhagdaree, or any other system of middlemen; but as a means to an end for creating a wealthy farming class, it is altogether powerless. The land is in too many hands, and until Government discourages this in every possible way, the great mass of the agricultural population will never emerge from the mire of poverty into which they are plunged. The regulations allowing sub-letting, and affording assistance to superior holders for realising their revenue from sub-tenants, should be rescinded, and no sub-letting should be allowed, or at all events no assistance on the part of Government given to obtaining their demands from sub-tenants, and then the practice would cease.

5. Contemporaneous with strenuous endeavours to induce large holdings and the sweeping away from the books of the hosts of needy ryots would be the necessity of some sort of banking system applied to the mofussil. Any change of assessment, however favourable; not involving also changes in the monetary system of the country will, in my humble opinion, be doing little or nothing.

6. The rates are really heavy in some of the districts of this collectorate, where the revision of assessment has not taken place, as in Oolpar, Koorsud, &c., but not so heavy as to consider them to be exorbitant or oppressive. The introduction of the revenue survey will, however, soon remove this partial evil. The manner in which the collections are generally made, without resorting, but in a very few cases only, to the process of distraint of ryots' property or of confinement of their persons as defaulters, leaves no ground to support Mr. Mackay's opinions on the subject of the exorbitant nature of the assessment.

Chapter IV.—Pages 155 to 172.

1. Mr. Mackay's own inquiries have led him to conclude *Rs. 1. 10.* as the cost of cultivation for one beega, while, according to a statement which was furnished to him by the superintendent of cotton experiments in this collectorate, it comes to about *Rs. 2. 2.* The cause of this discrepancy has been explained by Mr. Daley, under Chapter IV. in para. 1 of his accompanying letter. The mamlutdar of Koorsud, through whom I made inquiries as to the actual cost of cultivation, gives *Rs. 1. 12. 7.* for one beega of land continually under cultivation, and *Rs. 2. 8. 7.* for one beega of land remaining uncultivated for two or four years. Under these circumstances, Mr. Mackay's conclusion would not appear to be altogether erroneous, though I am not prepared to adopt it as a general one.

2. Mr. Mackay's remarks as to the profit of a ryot would appear to lead one unacquainted with the real state of things to believe that the ryots are at the starving point, which is notoriously not the case. A great proportion of the people is, of course, poor and needy, and without capital to improve their holdings in a profitable manner, but they are not totally destitute of the means of living comfortably. They have generally their own houses to live in, and their own bullocks for pursuing their agricultural profession. This property they would hardly have been able to secure or procure had they been actually in a state of starvation, as Mr. Mackay's calculations would go to prove.

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Chapter V.—Pages 173 to 200.

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1. As regards irrigation, I think it is a subject which has not had sufficient attention bestowed upon it. It is remarked by the natives that the annual monsoons are now much more irregular in their advent, as also in the quantity of rain falling, than they used to be, and therefore the necessity becomes greater for rendering the ryots independent of them by the substitution of artificial irrigation.

2. There are two large rivers in this division of the province which are not taken advantage of at all, and which might be turned to great account. Colonel Grant, of the Engineers, seems to have had a scheme of cutting a canal between these two rivers (Taptee and Nerbudda), and thereby irrigating an immense tract of land. I cannot, of course, pronounce upon the feasibility of such a work, but would most strongly recommend that the attention of Government should be drawn to the subject, and its engineer officers be called upon to examine the country in question, and report on the advisability of constructing such a work. If it could be done, the results to this collectorate, and that of Broach, would be incalculable.

3. In concluding my short remarks on this subject, I would most strongly urge on Government the necessity of putting at least one engineer officer at the disposal of every Collector for examining and reporting on the wants of each district in the matter of irrigation and other improvements.

Chapter VI.—Pages 201 to 232.

On the subject of roads in Guzerat, I would beg to suggest a reference to the conclusion of this report, where I have briefly recorded my opinion in the matter.

Chapter VII.—Pages 233 to 263.

On the subject of harbours of Guzerat, I have no remarks to offer; this will no doubt be fully reported on, by the Customs Department.

CONCLUSION.

1. In conclusion, I hope that Government will overlook any want of connexion that may appear in my remarks, as a much longer time would have been required to have framed a proper report, and to have done such justice to the whole subject as its importance demanded. It must, however, be a matter of congratulation that the only tangible grievance in the whole of Mr. Mackay's book is the state of the roads, which it cannot be denied is not good; but it is to be recollected that, as there is no metal to be got within 50 or 60 miles, the expense of construction would have been enormous.

2. In the short space of 50 years the province has been brought under an equitable, mild law, where formerly there was no law but that of the strongest, and consequent continued scenes of violence and rapine and oppressive assessment, which required armies to collect. Under such circumstances, then, after a most laboured, one-sided, and prejudiced attempt to throw odium on the East India Company, this agent of the Manchester cotton spinners can only fairly substantiate one charge, which, in a very few years, will be entirely removed by the construction of railroads, so that the common roads, if constructed before at a great expense, as it turns out, would have been money entirely thrown away.

3. It would have been more to the purpose if those gentlemen, instead of attempting to pick holes in the coats of others, had they come forward to assist the Government in the good work of ameliorating the condition of the cultivating classes by bringing their capital to the country, setting up cotton-cleaning establishments, &c., thereby giving an impetus to trade, and creating a demand for their produce. They must be aware that Government is precluded, by sound policy, from interfering in matters that more properly belong to private enterprise, and to howl against them for not doing so is both as unjust as unfair.

(signed) *H. Liddell*, Collector.

Surat, Collector's Office,
5 July 1854.

(No. 5 of 1854.)

To *H. Liddell*, Esq., Collector, Surat.

Sir,

WITH reference to your memorandum, No. 535, of the 18th March last, I beg to submit the following remarks on the late Mr. Mackay's Work on Western India :—

Chapter I.

With regard to Mr. Mackay's statement, that it is maintained by some, the exotic cotton can never be established as a rival to the indigenous, owing to its requiring more moisture than the latter, is rather premature. It is true that the exotic requires more moisture than the indigenous, but it does not necessarily follow, because the exotic requires more moisture, that

that it cannot compete with the indigenous. In a fair monsoon the exotic yields one and a half that of the indigenous; in an average and also in a bad season, they yield alike; but if both had the benefit of irrigation, there can be no question of the superiority of the exotic in yield, in length of fibre, and in fineness of texture. Since the commencement of the cotton experiments in Guzerat a seer of exotic cotton wool was never obtained from the Surat zillah until the year 1852, when 1,313 lbs. of New Orleans and 43 lbs. of Sea Island cotton were sent by me to the Collector of Customs in Bombay, for examination and sale. The decision of the merchants in Bombay on them were as follows:—

Sea Island cotton, colour creamy white, staple tender, rather irregular and short for the quality; cotton very good and clean, 43 lbs., Rs. 6. 2. 3, or at the rate of 112 rupees per candy of 784 lbs.

New Orleans cotton, colour good and clean, staple strong and even, 1,313 lbs., Rs. 175. 13. 7., or at the rate of 105 rupees per candy of 784 lbs.

2. I was, however, fortunate enough to obtain some experience in the culture of the exotic, by observing some experiments conducted privately at Poona of the cultivation of New Orleans and Sea Island cotton, by Colonel Grant, of the Bombay Engineers; and I was also permitted to visit Khandeish, to observe the culture of the exotic under Mr. Simpson, superintendent of cotton experiments in that province, previous to entering on my duties in this zillah. I have stated the above merely to show that my opinion on the exotic deserves equally as fair consideration as that of Mr. Mackay, who was only about two months in Guzerat.

3. About four months ago I noticed some exotic plants sown by Mr. Rogers, on the edges of some of the watercourses in the garden attached to the Assistant Collector's bungalow at Dholka. The plants would have grown up to standard trees if they had been pruned; the pods yielded by the plants were larger, but the texture was the same as those obtained from Coimbatore by Colonel Grant.

4. There were in the year (1852) noticed by Mr. Mackay, 776 beegas sown with American cotton in the Surat zillah alone, instead of 85 beegas in the province by that gentleman; Oolpar, 198; Koorsud, 285; Chowrasee, 260; Balsar, 6; Mandvee, 8; Walor, 2; Kurrode, 1; Soopa, 4; Jullalpoor, 12.

5. Mr. Mackay states that the first picking of cotton commences in the end of February. This statement does not apply to the Collectorate of Surat, in which the first picking sometimes commences about the middle of January, but generally towards the end of that month. His remark is applicable to the Collectorate of Ahmedabad, in which the first picking begins in the latter end of February. In the Surat Collectorate the second picking is generally over before the Hoollee festival begins, and it does not seriously interrupt the picking, as Mr. Mackay's statement would imply, as the festival lasts about five days. It is difficult to bring the indigenous cotton perfectly clean to the market, because the calyx of the pod is so very brittle that on the gentlest pull to get the cotton out of the pod, a portion of the calyx falls into it; whereas the calyx of the exotic is so hard that the cotton can be obtained quite clean. To keep the cotton free from damp and dirt, it would be necessary to have neatly constructed cow-dunged pits, as observed by Mr. Mackay. In this zillah the cotton immediately after it is picked is placed in "aars," or oblong inclosures; they are carefully cow-dunged. All round inside the inclosures are sheds to protect the men working at the churkas; in the centre and sides of the inclosures the cotton is stored, and it is covered over with either date or bamboo mats to protect it from dew and dust. Since my arrival in Surat I have certainly never seen cotton in such a filthy state as described by Mr. Mackay.

6. With regard to superintendents purchasing cotton for firms in Bombay, I beg to state that I have not purchased one rupee's worth of cotton for any firm or individual; but the permission was, I believe, judiciously granted to the superintendents. It has caused many of the firms in Bombay to send European agents to Khandeish, Belgaum, and Dharwar.

7. Mr. Mackay is mistaken when he describes the wukharia to be a money lender. The wukharia is an agent, and it is a great pity that we have not European instead of native agents throughout the whole of the cotton districts; if we had many of the former, there would soon be an end to the complaints about the adulteration of cotton, frauds, &c. Mr. Mackay's description of the evils attendant on the dealings between the ryots and the agent is correct. Government, about four years ago, directed all bales of cotton previous to shipment to be examined and stamped by the police authorities, and in the event of adulteration or moisture being discovered, the bales to be confiscated and the owners punished; so that the evil so strongly complained of by Mr. Mackay had been greatly checked long before the arrival of that gentleman in India.

8. The introduction of a few more factories like that of Mr. Landon's at Broach, would tend to stop all clamours about frauds, adulteration of cotton, &c.

9. That the saw-gin cleans cotton better, cheaper, and with greater celerity, I am convinced; but that it always destroys the fibre, I am not prepared to admit. So long as a gin is worked by hand, the grates of the gin can always be kept in adjustment, so as to prevent the saws lying on the grates and destroying the fibre; as soon as a hand-gin is out of adjustment it is immediately heard, and adjusted accordingly. In the case of gins worked by steam, I allow the fibre is liable partially to be destroyed, because when any of the gins get out

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out of order they cannot be heard; and besides, even if they were heard, it would not do to stop the whole of the gins for the sake of one or a couple that might be out of adjustment.

10. Mr. Mackay has given the average daily out-turn of each gin worked by eight men, as 185 lbs. of cotton, or a little more than 23 lbs. to each; I do not know how he could have obtained so low an average. The lowest out-turn a day in this zillah is 186 lbs. of cotton, or about 23 lbs. to each man. In Khandeish I believe the lowest out-turn a day is 266 lbs. of cotton, or about 33 lbs. to each man. The men here are not yet inured to working the fly-wheel of a gin as they are in Khandeish.

Chapter IV.

Mr. Mackay states Rs. 1. 10. as the cost of cultivation for one beega of cotton. The cost of cultivation, however, varies in different localities; it cost me Rs. 2. 2. to cultivate one beega at Moogood, but I had to hire bullocks and the necessary implements; and this is about the sum that it costs the poorest cultivators in this collectorate, who have to hire bullocks for one beega. A cultivator possessing bullocks and implements can cultivate one beega of cotton for about Rs. 1. 14.

2. The chapters omitted here being without my province, I have not noticed them.

I have, &c.
(signed) C. Daley,

Surat, 24 June 1854.

Superintendent of Cotton Experiments.

(No. 54 of 1854.)

From Captain F. Fanning, Superintendent Revenue Survey and Assessment, Goozerat, to E. G. Fawcett, Esq., Revenue Commissioner, Northern Division.

Sir,

In compliance with instructions conveyed to me in a letter from Mr. Secretary Goldsmid, No. 594, dated 28th January 1854, which was accompanied by copy of a despatch from the Honourable the Court of Directors, No. 17, dated 30th November 1853, I now do myself the honour to submit such remarks as have occurred to me while reading the work named in the despatch, and in the margin.*

2. At the commencement of his introductory chapter, the author of the work in question tells us that his object is "to inquire into the obstacles which prevent an increased growth of cotton in India." This leads him to treat on the industrial condition of the cultivators; on the means of communication by land and by water now available in the country; on the state of works for irrigation; on assessment, and on other matters affecting the power of India to consume, as well as to produce. But all the topics discussed in the course of this wide range of inquiry are considered, with reference to the possibility of improving the quality and enlarging the supplies of raw cotton from India, as the grand end of the inquiry instituted.

3. In this chapter the author endeavours to show that the supply of Indian cotton is merely supplementary in the English markets to that received from America, and that the former grown and exported under existing circumstances, cannot compete with the latter article; the end arrived at being that it is important to Indian commerce to give the cotton of this country "a constant, instead of a casual footing in the English markets." To secure this end, Indian cotton, we are told, must be more clean, and permanently more cheap than at present, or better in quality at any rate, if anything like American prices are expected to be realised by the sale of it. It must be better, or cheaper, or both.

4. As the result of extended personal observation, the author states his opinion that prices in America have reached their minimum, while he thinks that Indian prices admit of being greatly reduced. India then sees exactly the utmost she can have to fear from her rival. If the English demand for the raw material continues to increase as it has heretofore, America will not be able to satisfy it, except on condition of a rise in prices. If the author's reasoning and conclusions are so far correct, it must follow that in event of this demand increasing, and prices consequently rising, the supplementary supply of Indian cotton, even though of no better quality than at present, would become of vital importance. The relative quality of American and Indian cotton remaining the same, the relative prices would not alter, so that the condition on which alone America could respond to the call for increased supply, namely, a rise in prices, must benefit the Indian cotton trade; must at least enable India more than now to compete with America, so that it would seem that an increased demand alone would enable Indian cotton, as it is, to compete with that from America in the English markets.

5. But

* "Western India.—Reports addressed to the Chambers of Commerce of Manchester, Liverpool, Blackburn, and Glasgow, by their Commissioner, the late Alexander Mackay, Esq.

5. But the condition is the grand objection, the rise in prices. The difference between present and anticipated prices would have to come from the pockets of the prime movers of the inquiry, the results of which are under consideration.

6. The real object then sought to be obtained is not to impart to India, and for the benefit of India, a power to compete with America as a cotton exporting country, but to secure to England a larger supply of cotton than she now receives, at no higher prices than are now paid for it. Let the cost of cultivation and exportation remain as now, and let a permanent rise in the prices ruling in the English markets take place, and Indian cotton will have a constant and not a casual footing there; or, enable India to export her cotton more cheaply, and let the prices remain as they are, and the same end will be attained. Of these two cases, it is the latter on which the author dwells, as the only condition on which the competition of India with America can be maintained.

7. However, it being desirable to enable India to bring her cotton to market, without Manchester having to pay more for it than at present, the writer proceeds with his inquiry as to whether obstacles preventing the extension of the Indian cotton trade admit of being removed, so as to enable this country to compete with America in the English markets, at present prices, or below them.

8. One very important obstacle in the author's opinion is the existence in India of a too onerous rent. He thinks that if rents in the cotton-growing districts were fixed permanently, or for long periods, at comparatively moderate rates, it would tend far towards the establishment of the desired competition. I would remark on this, that when Mr. Mackay was in Goozerat, the revenue survey operations now in progress had not been commenced in the province. One result of these will be that comparatively moderate rates will be fixed for the period of 30 years. Whether this term would be considered a "long period," or not, it is of course difficult to say, my own impression being that it is not long enough, but if it be admitted as a long period, one of the great obstacles to the extension of the Indian cotton trade, in Mr. Mackay's opinion, is on the eve of being removed. But this obstacle, even now, no longer exists in the Southern Deccan, and yet, as we shall find further on, the author is not satisfied there on finding it so. In this, there appears to my mind some expression of contradictory opinions, which I am unable to reconcile.

9. To record, even in the most condensed form, all the notes which a perusal of the work, now in my hands, at first suggested to me, would lead to tiresome prolixity, so, omitting entirely here (as I shall also do further on) all notice of many subjects which I had previously noted for remark, I hurry to the commencement of the first chapter of Book I.

10. I propose to notice, with all possible brevity, such statements as appear to provoke remark, as these are met with, in each chapter in succession.

11. The author opens his first chapter by saying, "It will not be arrogating to myself too much to lay claim to some competency as a witness in speaking of Goozerat." Notwithstanding his very keen powers of observation, it will not, I think, be admitted that he has not on numerous occasions arrogated to himself too much, in speaking far more decidedly on various points than his information could possibly warrant. Considering, however, that he knew not one word of the language of the people among whom his inquiries were prosecuted, and his entire ignorance of their habits, (an ignorance which not unfrequently peeps out), it seems surprising to men of abilities and powers of observation, inferior to the author's, to note the large amount of accurate information recorded in these pages. He has certainly noticed more, and often more correctly, in three months, than many of our countrymen would have observed in as many years. What he saw and felt, such as the state of the harbours and the roads, he describes graphically, for the most part accurately and well; but far less dependence can be placed on what he heard through those who may have interpreted for him.

12. In considering the first and following chapters, I might proceed to draw up a list of mistakes, as I conceive them to be, on the author's part. The existence of these inaccuracies, more especially in the statistical portion of the papers, throws a doubt on nearly all the conclusions which he draws with reference to the condition of the ryots. A few of these errors will be noticed presently.

13. The present system of picking, storing, and adulterating the cotton, and the injury done thereby to its staple, (injury so great that the cotton cannot be properly cleaned even by saw-gins), requires no doubt the use of remedies not hitherto applied, with a view to improvement. The continued course of adulteration to which the cotton is exposed between the field where it is grown and its harbour of final export must, of course, render it a comparatively worthless article; and I see no reason for thinking the author's descriptions on these points exaggerated.

14. As a cure for the defects of a state of things such as is described, he advocates the introduction of European capital and enterprise; but the application of this remedy he contends to be in great measure dependent on the opening up of the country; but, as he remarks, this panacea cannot be administered in a day. Improvement to the extent desired can only be of slow growth.

Chapter II.

15. In this second chapter the author proceeds to describe the tenures under which he found cultivators occupying land in Goozerat. In these he discovers a great deal which he considers highly objectionable, there being no fixity of tenure, either temporary or permanent, to stimulate the enterprise and industry of the ryots. On the tenure under which the cultivator holds his lands very materially depends his condition and prospects, and on these again depends the solution of all questions regarding the possibility of improving the cotton trade; of securing, in short, to the English manufacturer supplies to meet an anticipated increase of demand, at prices no higher at any rate than those now ruling. The burden which the ryot bears, and the tenures by which he holds, have then to be considered.

16. No one probably who has the slightest acquaintance with the subject will for a moment think of denying that there is very much in the existing system, or want of system, which requires speedy and sweeping changes. This becomes immediately evident to the most casual observer, and could not of course escape the keen eye of Mr. Mackay; but while his conclusions are indisputably correct in so far as the existence of a crying necessity for revision is affirmed, the errors of detail to be found in his descriptions both of tenures and of the various forms of village constitution, show that he had not mastered his subject sufficiently to grapple with it effectually. The author is wrong in supposing "tulput" lands to be synonymous with lands paying the full Government assessment. Much "tulput" land is held free, or only partially assessed. On what authority does he state that the lands known as "wanta" have latterly amounted to a fourth part of villages, which in many instances wholly belonged to the "grassias?" On further inquiry, he would have found the "wanta" amounting to half, or more than half of the whole area of some villages; and in nearly all, where land of this description exists, he would have discovered it in quantities either considerably exceeding or falling short of that which he has assumed to be the constant proportion it has latterly held to the whole village. Again, he talks of a "system," the "gametee," as prevalent "in Kattiwar." "Gametee" is no system, but the designation of a person who holds a conspicuous position in a system. In describing, however, the different forms of village constitutions and the landed system, as he understands them, the author, after attempting to convey a correct notion of the "surface aspect," proceeds to look deeper, with a view to a correct understanding of the position with reference to the soil, allowed to the Goozerat ryot by the present policy of Government.

17. It must, I think, be granted that in the tenures under which, up to the present day, land has been held in Goozerat by ryots directly from Government, there has been no absolute possession of land, and no absolute power of disposal over it which can be viewed at all in the light of a fee simple.

18. When penning the pages under consideration, the author probably saw no prospect of any measures being taken immediately with a view to the revision of the landed system in Goozerat. But many evils which he justly condemns may now be considered as on the point of being removed. The results of the revenue survey operations now commenced in this province will be to give to the cultivator an undoubted and independent right to the soil, to keep his land, or to dispose of it without the possibility of any increased demand being made on him by the Government, during the term, at any rate, for which the settlement is made.

19. Towards the conclusion of this chapter, which contains much in which I concur, it is said of the cultivators, "unaccustomed to see Europeans, except as connected with Government, they look upon every one who interrogates them as a Government officer, who means them some mischief." There is undoubtedly truth in this, and yet a different feeling is, I think, not unfrequently manifested now. That the cultivators anticipate much benefit, as the result of the expected revision of assessment, and that they feel confident that mischief, at any rate, is not intended them by the European officers now employed in carrying on operations preliminary to the settlement, is evident from their words and deeds, to those who know enough of their language and habits to comprehend the meaning of either.

Chapter IV.

20. By whatever name the assessment be designated, it is evident that in revising it on the system which has now been introduced into a large part of the Presidency, and is being applied to the remainder with as little delay as the execution of indispensable preliminary measures will admit, the present policy and intention of Government is, that it should absorb only a portion of the rental.

21. Mr. Mackay describes the distinction between the settlement and the assessment, a distinction which has no recognised existence under the revised system. His remarks on the inadequacy of the remuneration now generally received by tultatees are, in my opinion, just. The uncertainty which exists as to what the settlement may be in any particular year, as to what the ryot may have to pay, and the Government to receive, affords doubtless many opportunities for, and temptations to the commission of fraud, to a person in the position of a village tultatee. The machinery for the collection of the revenue, and the duties with reference to it, assigned to each of the various official persons named are graphically

graphically described; I concur generally in what is said regarding the objectionable, and altogether perplexing variety of modes for levying rent, as at present, and heretofore existing. It may very justly be said that the revenue system of Ahmedabad presents "an extraordinary jumble of confusion."

22. I do not, at present, incline to meddle with the author's conclusions as to the average pressure of the land tax in the various zillas of Goozerat; but I am still less inclined to accept these conclusions as representing anything like the truth.

23. The author next proves, apparently to his own satisfaction, that the average value of the gross produce of all lands in Broach, under both cotton and grain, amounts to Rs. 4. 3. per beega, five rupees representing the average value of cotton produced by the same area. His conclusions may be near the truth, but the grounds on which they are based by no means satisfy my judgment. The estimates of the average money return per beega in the four Goozerat collectorates I believe to be entirely untrustworthy, and utterly useless for any practical purpose whatever. That they are so, is not, I think, to be much wondered at. Any inquiry into such matters is attended by considerable difficulties, and persons with better opportunities, more time, more knowledge of the country, the people, and the language than the author possessed, though perhaps with less talent, and smaller powers of observing correctly, have after devoting much care to the investigation failed to satisfy themselves that they had arrived at true estimates.

24. Being desirous of ascertaining as accurately as the nature of the inquiry would permit the average gross produce of land under cotton, and being perplexed, like the author, by the very great amount of discrepancy discovered in estimates made and recorded by the other parties, I endeavoured to satisfy myself in some degree on a point regarding which so great a variety of opinion appeared to prevail. With this view I visited a number of fields variously situated, on which ripe and untouched cotton crops were standing. In each case a certain area was measured off by my own hands, after which the cotton was picked, and weighed in my presence, and the result indicated by each experiment ascertained. These results, among other things, induce me to doubt the correctness of the author's assumptions regarding the gross yield of cotton. The appearance of the standing crops on which my experiments were tried was, in nearly every case, very inferior. That which, of all experimentalised on, yielding the largest produce, was pronounced a poor crop by those who accompanied me, before it was touched; an opinion in which I concurred, as apparently much better crops than the one alluded to are constantly met with. However, the maximum gross produce as obtained by my experiments is 64 per cent. in excess of that assumed by the author; and the average indicated by all the trials made is 18 per cent. over Mr. Mackay's estimate, in which he assigns 50 pounds of clean cotton to a beega of the Broach standard. The land on which the experiments alluded to were made is situated in the Dholka purgunna of the Ahmedabad collectorate, and is, I think, generally considered, by those well acquainted with both districts, inferior to the cotton-growing soil of Broach. These experiments, however, though fairly made, have been on a scale far too limited to admit of much being built on the results of them; still they afford substantial and not fanciful evidence, so far as they go, on the subject of the gross yield of cotton.

25. The author tells us that he has been elaborate in getting at results, because he wished to put himself beyond the reach of being met by mere assertion. But, notwithstanding his array of figures, the results, elaborately arrived at through them, are no more than calculations made on the merest assumptions. For instance, with reference to the extent of charges, in excess of rent, made on alienated land; he says, "if we take it at 20 per cent. upon the rate of the Government rent, we can scarcely be charged with exaggeration." The question immediately arises, "why not," and why take it at 20, instead of any other per-centage? It must, I think, be evident that conclusions, based on such assumptions, can be nothing worth, can hardly, at any rate, be more valuable than the "mere assertions" of persons whose opportunities for observation have been better, and more numerous than the author's could have been. All that is stated with reference to the proportion borne by the rental to the gross produce of the land, appears to me to be quite fanciful. The author has deluded himself by contemplating the array of figures before him, that he has arrived at something substantial.

26. The relation between prices and the assessment for the ten years ending 1843-44 is next considered. It is undoubtedly true that prices both of cotton and grain have fallen enormously of late years without any corresponding decline having taken place in the assessment. The Government demands which a cultivator might have been able to pay in 1834-35, with cotton selling at 56 rupees per "bhar," claimed ten years later when prices had fallen to 33 rupees per bhar, might probably ruin him. If the assessment was fair in 1834, it must have been ruinous in 1836; and assuming Mr. Mackay's figures here to be correct, as I have no means at hand of verifying them, the state of things here described may possibly account in some degree for the general state of indebtedness into which, in many of these districts, the ryots are now plunged.

27. But the figures to be found from page 128 onwards, designed to show the balance of profit left to cultivators, after paying all outgoing, are, I believe, generally even more fanciful than those I have lately adverted to, having reference to the value of the gross produce of land; indeed, the correctness of the former depends on the latter being trustworthy. I object, moreover, to the sums charged in these estimates under the head of cost of cultivation;

vation; but as this is a subject separately considered in another chapter, it need not be further remarked on in this place.

28. Although I contend that the details and figures from which the author has drawn confident inferences are untrustworthy, I must admit a conviction that large numbers of the ryots in this province, instead of realising the profits of farmers, simply make the wages of labourers; and this, moreover, is a state of things which a mere reduction in the amount of the Government demand, however liberal it may be, will not readily rectify, in the existing state of the law regarding land. The ryot who has got into debt is entirely at the mercy of the money-lender. He neither reads nor writes, and has no notion of the extent of his liabilities. The Government dues being paid, and an allowance being made for the food and clothing of the cultivator and his family, and for the prosecution of his agricultural labours, the whole balance goes to the "wanias." On the Government demand being reduced, the "wanias" gets more, but the ryot is in very nearly the same position as before. The money-lender is too cunning to let his debtor escape easily out of his books. It is then evident in such cases as these that, though the cultivator is nominally a direct holder from Government, there is really a middleman. After the Government tax is paid, the whole balance is at the mercy of the money-lender. The ryot, with reference to the "wanias," would seem to occupy a position little better than that of a serf; he is, however, found to be a profitable serf, and worth keeping in good humour, so he is allowed food and clothing for himself and family, and the means of carrying on the cultivation of his fields. All in excess of this is, I believe, usually taken by the money-lender. The cultivator, incapable of calculating the amount of his liabilities, and trusting to the honour of his creditor, would appear to be hopelessly involved, so he submits quietly to extortion. He cultivates for the subsistence of himself and family, but for the profit of the "wanias." The money-lenders seldom press their debtors to extremes, though there have been striking exceptions to this, with fearful consequences following to the too grasping and tyrannous creditor. But if there is any truth in this picture, it seems to follow that profits derivable from farming do exist, although the ryot, if in debt, does not get them. It follows, also, that the land supports more than landlord, that is Government, and a mere race of labourers, as stated by Mr. Mackay; for, as has been seen, middlemen, in the shape of wantias, flourish on it too.

29. The author, with reference to what the assessment should be, says, that "in England one-third of the gross produce is supposed to be an ample share for the landlord." That Government always receives more than this proportion of the gross produce, admits, perhaps, of doubt; still it may, I think, be asserted that generally reductions in the present rates of assessment are urgently called for, though the extent to which these reductions should be carried cannot be satisfactorily ascertained now. This will be considered ere long with reference to each district separately.

30. It is a mistake, in my opinion, to speak of the waste lands in the Ahmedabad collectorate as "generally superior." In so far as I have seen, they are generally the reverse, a great portion of them being strongly impregnated with salt, and nearly uncultivable. It is assuredly true, however, that the system of taking security on the crop from the cultivator cannot be too strongly condemned, driving him, as the author truly remarks, to the money-lender for security, which, of course, is not given for nothing, before he can venture to dispose of his crop, and often delaying the housing of the produce till the crop is hardly worth the trouble of reaping.

31. With reference to the recapitulation at the close of this chapter, having questioned the correctness of the author's data, I do not, of course, admit his inferences from them as to the per-centage of the gross produce absorbed by the Government rental. He writes, "Rent, in England, is the surplus produce of the land after the wages of labour and the profits of stock have been made good, but rent in Goozerat is the surplus left after the wages of labour are paid." By the latter part of this sentence he leads us to suppose that Government takes all except the wages of labour. I would ask, then, where the wantias' profits, which are thought to be no trifle, come from.

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32. Notwithstanding many inaccuracies, as I conceive them to be, the author has, I think, been much more successful than might have been expected in obtaining the "main object," which he tells us, at the close of this chapter, he had in view, namely, "to convey a general impression of the entire system." The general impression conveyed to the mind of a reader is, on most points, perhaps, not very far from a true one. The chapter seems to me to prove little; but rather to embody the first, and often just impressions made on the mind of a clever and very observant man, who has, however, deluded himself with an idea that he has proved many things by figures, which are statistically untrustworthy.

33. With regard to what the author calls Mr. Prideaux's "Canons of fiscal legislation," it would seem that the author of the note on the land revenue, appended to Dr. Royle's report, is enunciating a principle which, in his opinion, should guide, rather than one asserted to exist now as a guiding principle, when he writes, "It is essential that the demand should not be liable to increase, &c." He does not say that in unrevised districts it is not, but asserts that it should not be so liable. A quotation from the note in question, given further on, tends further to confirm what I have supposed, namely, that the writer referred to revised districts only as those in which the sound principles he advocates had been acted

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acted on. The quotation alluded to will be found at page 150, in these words, "In the unrevised districts of the Bombay Presidency, the information relative to the state of the land revenue is less complete and satisfactory." The reader naturally infers that the districts of which the circumstances have been under discussion previously to this quotation, are revised districts only. In the latter, it is certain that the very sound principles laid down by Mr. Pudeaux have been inculcated by the Government, and acted on by the executive officers; but if the writer meant, as Mr. Mackay supposes, that the land revenue of Goozerat has hitherto been settled and collected on those principles, his statements are altogether inadmissible.

Chapter IV.

34. This chapter opens with a statement, the truth of which will be readily appreciated by all who have prosecuted such inquiries as those undertaken by the author. All such inquirers have probably found great difficulty in obtaining any really trustworthy information regarding the cost attendant on the cultivation of cotton or other agricultural produce. These difficulties are always great to men acquainted with the people, their habits, and their language, and who, moreover, may have had opportunities of watching, and seeing for years the operations carried on, about the expense of which information is desired. If to men, with these advantages, the difficulties are great, what must they have been to Mr. Mackay? Without caring to contradict the statement that European officers connected with the Government are less likely to be told the truth than others, in reference to such matters, I cannot help saying it is a pity that the author has not left it on record in detail, how he, knowing not one word of the language of the people, succeeded in winning the confidence of the ryots, and then in getting from them "something like the truth." This record, to be useful, however, would have required to have included a description of the criterion by which the resemblance to truth of the matter elicited was recognised.

35. It may, I think, be at once admitted, that the sums put down as the cost of cultivation, "on the authority of a revenue surveyor," with reference to the Duskroee purgunna, in the statistical Report alluded to in this chapter, are untrustworthy. It is even more clear that no true information, as to agricultural expenditure, was possessed by most of those whose very contradictory statements are quoted. But this does not prove that the results of the author's own inquiries are a bit nearer to the truth than those which he justly condemns. However distrustful, and very reasonably so, of the statements of his contradictory informants, the author "determined to examine into the matter thoroughly for" himself. "With this view," he says, "I visited a great many villages in the cotton districts, and examined the ryots personally on the subject. My first difficulty was to remove their suspicions that my object was the enhancement of the rent. My next was to get at the real truth." And further on, "it was with no little difficulty I could get them to be frank with me." While he confesses he met with difficulties, the author seems confident that he had overcome them; that, notwithstanding his inability to speak a word to the people himself, "he got them to be frank with him, and, in short, got at the real truth."

36. I do not incline to go through the author's estimate of agricultural expenditure, item by item; but while I deny that he has grounds for the assurance with which he speaks, of having got at the real truth, I admit that, in my humble opinion, he has attained nearer to it than any of the authorities he has quoted. His estimate of the cost of cultivation is at any rate, I think, quite high enough.

37. With the aid of many figures, the author proceeds to show, that, with all its burdens accumulated on it, the selling price at Liverpool of Indian cotton is 4 *d.* per pound, while that from America sells at 4½ *d.* We have here a difference of 6 per cent. of the cost of the American article, in favour of Indian cotton, which latter, however, is generally estimated at 25 per cent. less valuable than the American, on account of difference in quality. American then has an advantage over Indian cotton of 18 per cent. American cotton is already cultivated, we are told, under every possible advantage. Its price does not admit of being lowered; India sees what she has to compete with. To enable her to do so, the quality of her cotton must be improved, or the cost of its production reduced, or steps must be taken in both of these directions at once.

38. Affirming the beegotee system to be the right one, the author proceeds to show how, under more liberal fiscal arrangements, Indian cotton might be put down at Liverpool at 2½ *d.*, instead of 4 *d.* per pound. One of the most important elements in the improved system for which he contends, is a reduction in the assessment of *Rs.* 1. 2. per beega, that is, the assessment, which he calculates to average *Rs.* 2. 2. per beega of the Broach standard, is to be reduced to one rupee. A reduction to this extent in the assessment, accompanied by the opening up of the country, and the settlement amongst us of European agents which would follow, are all necessary, in the author's opinion, to secure the advantages he desires for the ryots, and to ensure Indian cotton selling at Liverpool at 2½ *d.* per pound.

39. Since the author was in Goozerat a revision of the assessment in a few villages of the Ahmedabad collectorate, preliminary to a general revision, has been effected, and in these, the average assessment on cotton lands has been fixed even lower than one rupee per beega of the Broach standard.

Chapter V.

40. There exists, in my judgment, no room for a doubt as to whether Goozerat would be benefited by more extended artificial irrigation than she now has. The means now available for this important purpose are undoubtedly very far from being what, with great advantage to the country, they might become. With reference to tanks, the author truly says, that the supply of water in most of these is exhausted by the end of February, while many are found dry in January. It might be urged that in some parts of Goozerat, no land, except that devoted to the cultivation of rice, is irrigated from tanks, and that as this crop is reaped before the earliest of the periods above mentioned, the water is not required for agricultural purposes beyond the time up to which we have it. But though tank irrigation may now be necessarily restricted to rice cultivation, it does not follow that it would be so if a larger supply of water existed. There is no reason except want of water, why the productive powers of rice land should remain in abeyance from November till June.

41. It must, I think, be conceded that old wells are falling into decay, and that few new ones appear. Statistics which will show exactly the number of wells now existing, as compared with that which was found at the time of the old survey, some 30 years ago, are in course of preparation now.

42. I agree with the author, that the object sought by the publication of the rules of 1844, offering encouragement for the construction of wells, has not, in so far as I can see, been attained. As to what extent these rules have been taken advantage of, I have no information; but, comparatively, few modern wells are met with. The objection raised, however, by the author, to the first of these rules, appears to be hardly valid; for although the cultivator who digs a well may, in unrevised districts, have no guarantee that his dry crop assessment shall remain unaltered—for the rates chargeable on his, and on his neighbour's lands, might be raised without the wells being considered at all—still, in such a case, he would hold his irrigated land at the same rate as his neighbours would occupy their unirrigated fields of a similar description.

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43. The author proceeds to say, "If Government would really make its regulations effective, let it at once guarantee the cultivator" that his rent shall not be increased for 30 years. The guarantee which, the author here seems to admit, would be effective, is given to the cultivator under the revenue survey settlement, and yet this measure too is found fault with, as will be observed farther on, when districts revised, or under revision, are commented on.

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44. The chapter closes with some account of Colonel Grant's proposition to construct canals diverging S. W. and N. W. from the Nerbudda, above Broach. While fully alive to the great advantages to be derived from any really well considered and feasible system of irrigation on a grand scale, I have not a sufficiently familiar acquaintance with the localities referred to in the description of the scheme to authorise my making any remarks on the subject.

Chapter VI.

45. In the chapter upon which we now enter, the author describes the roads of Goozerat. These are truly said to "have not yet advanced beyond the first stage of their development." The diagrams, with which the present state of the highways of the province are illustrated, the writer assures us are "no drafts upon fancy." To those who have not seen the reality of what is here represented on paper, it will probably occur that the sketches exaggerate the roughness of our ways; but, though all roads in Goozerat are, perhaps, not so bad throughout their entire length, as to be truly painted by any of Mr. Mackay's illustrations, still that "actual roads" are represented, I can easily credit; for my own experience has, I think, shown me portions of road exactly answering to each and every one of the sketches given. The portions of road, moreover, to which I allude, are not small and exceptional bits, found here and there on lines of communication which are otherwise more passable; for on such main roads as those traversed between Surat and Broach, and between Ahmedabad and Dholera, and other important places, are to be found miles of highway which are in no respect better than the author's description would lead a reader to suppose them. In the diagrams, I can see no attempt, on the author's part, at caricature; they appear to me to represent honestly the characteristics of Goozerat roads, and to afford a more accurate notion of what these impediments to intercommunication in the province really are, than any merely written description could possibly convey.

46. Regarding the roads which traverse the light soil north of the Mhye, on which the author tells us the bullocks frequently sink knee deep in the sand, there may be slight exaggeration; but I am not at all sure that the picture is overdrawn. The transition from the deep uneven ruts of the roads previously described, to the soft and yielding sand of those on which we now enter, is to a traveller in a bullock gharee a delightful relief indeed. But the roads which afford ease to the bruised occupant of a cart, are distressing beyond measure to the unfortunate cattle. The latter may be seen panting along at a snail's pace, their feet deeply buried at each step in the burning sand; while the pitiless sun scorches them from above; burdened, perhaps, with a heavy load, which the yielding nature of the road seems to make doubly weighty, and tortured by the fierce direct, and almost equally distressing reflected heat, with mouths and nostrils covered with dripping foam, by which

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you may track them on their way; affording altogether a picture which strongly impresses on the mind of the observer the great obstacles offered to traffic by such roads as we have here. In short, it is undoubtedly true that the roads generally are as bad as they can be; "they are still as rude and impracticable as it was possible for them to have been a thousand years ago."

47. The difficulties offered by unbridged rivers, which in some cases are tidal too, are not exaggerated by the author, as probably all who have travelled much in Goozerat will attest from their own experience.

48. One obstacle to road-making in Goozerat, which is sometimes put forward as an excuse for the existing state of our highways, is noticed. It is said we have no material; the province furnishes no stone. Mr. Mackay denies that Goozerat is destitute of stone throughout the length and breadth of it, and maintains that roads should be made at any rate; the richness of the country warranting, in his opinion, the expenditure on this account of sums which in less fertile regions might appear extravagant.

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49. It occurs to me that in such parts of the country as stone could not reach, except at an enormous expense, we might still have very passable roads. In the author's list, which shows a total of 24½ miles of made road in the whole of Goozerat, it will be seen that he includes four miles near Ahmedabad. The roads alluded to in the neighbourhood of this city are comparatively very good at all seasons. In the construction and subsequent repair of at any rate a considerable length of these roads, no stone has, I think, been used. I have seen them under repair, and the only materials made use of were masses of old masonry, detached by the pickaxes of the labourers from the decayed walls and foundations of the numerous crumbling ruins of ancient buildings with which the city is surrounded to some distance from its walls. These masses of solid brickwork were broken up on the road, and well beaten in with rammers, and the result, as above mentioned, is a very fair road. In districts, then, altogether destitute of stone, might it not be practicable to construct kilns at convenient intervals along any line of communication where the construction of a road seemed desirable, with a view to burn coarse brick for the purpose indicated. Rough brick might perhaps in this way be burned in kilns until it somewhat resembled the substance commonly called slag, and in this state might be found no contemptible substitute for stone, where the latter is not procurable except at enormous expense.

50. The survey now in course of execution by the engineers of the Bombay, Baroda, and Central India Railway Company will test in some degree the feasibility of the railway scheme advocated by the author, and will tend to prove whether or no the advantages which he anticipates, with great show of reason I think, would really result from the carrying out of the plan to the country generally, and to the proprietary body who may embark in the enterprise.

51. The contrast drawn at the end of this chapter between what has been done for the Deccan, and what has not been done for Goozerat; in that the former has some good roads, and has had her fiscal system liberally improved, while the latter, up to the time of Mr. Mackay's visit, seemed utterly neglected, is striking, though I do not pretend to understand the reason of its existence.

Chapter VII.

52. Passing over without remark the author's statistics regarding the value of the export and import trade at the various bunders in Goozerat, the accommodation offered by the bunders themselves comes under consideration. From personal observation of most of the bunders alluded to, I can bear testimony to the truthfulness of the descriptions of them presented to us by Mr. Mackay. Art has done nothing for them, and nature has not been munificent in providing conveniences. Surat, Broach, Tankaria, Cambay, Dholara, and Gogo are, I believe, as nearly as possible what the reader of the chapter under notice would be led to suppose they are. No greater facilities or smaller difficulties in embarking and disembarking merchandise than are described exist, as far as my observation has gone. The present state of the Goozerat ports has, in my opinion, been fairly described by the author, and I incline to charge no exaggeration on the statements to be found in this chapter.

Book II.—Chapter I.

53. The author next enters on a description of the late condition and present state of the southern division of the Presidency. The old revenue system is briefly considered; but as this is condemned, and now rapidly passing away, the writer does not dwell at length on the details of it, but proceeds to deal at once with "the new financial system, known as the new survey and assessment." The mode of procedure adopted by those deputed to carry out the policy of Government in connexion with a revision of the assessment, is described with considerable minuteness; the details having been apparently culled from the official correspondence on the system of revenue survey and assessment best adapted for the Bombay Presidency, published by Government in 1850, and containing the well-known Report drawn up by Messrs. Goldsmid, Wingate, and Davidson.

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54. While admitting that the survey has done some good, the author condemns it as a half measure, in that it fixes the amount of the Government claim for a term of years only, and not in perpetuity; because, while binding the Government as by a lease, it fails to excite the energy and forethought of the ryot, in that it does not devolve on him his legitimate responsibility as a leaseholder; and because, while the improvement of the roads is admitted to be a prime condition to the success of the new survey and assessment, that very improvement, when effected, will disturb the elements which have been considered in grouping the villages into various classes to such an extent as to vitiate that classification entirely.

55. The entire abdication by Government of all proprietary rights in favour "of the actual holders and cultivators of the soil," would, the author contends, do more towards stimulating the energy of the cultivators and the development of agricultural wealth, than any other plan. The land tax, or the tax upon rent, must be fixed in perpetuity. It does not of course admit of a doubt that this measure would increase the saleable value of lands far more than any scheme which proposes fixity, on however favourable terms, for only a definite period. But the author takes pains in several parts of the work, to impress on his readers that agriculture is the sole occupation and resource of an enormously large majority of the people. Supposing this to be so, the sources from which Government can derive revenue, must be almost exclusively connected with agriculture. All other sources, at any rate, will pour but dribbling streams into the exchequer. The land tax must be the stand by where nearly the whole population is agricultural. If then Government were to deprive itself for ever of the power of raising the amount of this tax, and if the state necessities should so increase as to render an augmented revenue absolutely necessary to the welfare of the empire, what is to be done then? The land being the source whence by far the greater part of the Indian revenue is received, and Government, by its own act, having been permanently debarred from adding to its supplies from this source, even although it should be proved that the burdens on land were much less than they might equitably be: whence is the increase of state income to meet the increased calls upon the Government to be derived?

S. o.

56. The great improvement in the condition of all agricultural interests which the permanent measure, advocated by the author, is doubtless calculated to produce, might in the course of time, be followed by the establishment of manufactures, and by the employment of a larger proportion of the population than at present, in occupations unconnected with the soil, and hence would of course arise other sources whence revenue might be levied; still, in anticipation of the establishment of these not yet existing taxable elements in the economy of the country, it would appear to be a measure involving some degree of risk and inconvenience, for Government to bind itself to levy no more directly from the land at any future time than presently fixed rates, notwithstanding the urgency of the state necessities, and the confessed ability of the landed interests to bear a larger portion of the public burdens than may then be laid on them.

S. o.

57. The rates having been fixed by the survey for a term of 30 years, the author objects to the cultivator being absolved from the liabilities of a leaseholder. In a passage, remarkable for the unpleasant spirit in which it is written, he supposes the Government to be actuated by a desire to take underhand advantage of the ryot, in pretending to confer on him the benefits of a long lease, without its attendant disadvantages. The Government it is insinuated, wish to get high rents as long as may be, but a lurking suspicion is entertained "that the rates under the new survey are still too high to bind the tenant to pay for a long series of years." If Government does entertain the least suspicion that, in any case, there is even a possibility of the survey rates being too high, consideration is surely shown for the cultivator, in that the moment he really finds himself over-burdened, he can throw up his land. Moreover, the violent fluctuations of the seasons, more than once alluded to by the author, would seem to afford an argument against the ryots being bound by the terms of a lease, and in consideration of these fluctuations, and of the present non-existence of agricultural capital, it is evidently for the benefit of the cultivator that he should be as free to keep, or give up his land, as he is under the revenue survey settlement. After some amount of farming capital has, under the liberal provisions of a survey settlement, been called into existence, it might be wise policy, and tend to excite the energy and forethought of the cultivators, to devolve on them the ordinary liabilities of leaseholders; but under present circumstances, it is, I confidently believe, most for the benefit of the ryot, that he should bear no greater responsibilities than the liberal policy of Government, as developed in the rules for the revenue management of surveyed districts, imposes on him.

Page 302.

58. The author affirms, with good reason, in my humble opinion, "that the improvement of the roads is a prime condition to the success of the new survey and assessment," but he appears to be unnecessarily alarmed at the disturbance of those elements, with reference to which, villages may have been classed, and the consequent vitiation of that classification itself likely to result, when the desired improvements in our roads have been effected. Whether this is to be feared to the extent the author apprehends, or not, it is evident that existing circumstances must necessarily have been considered in grouping villages into classes, with reference to advantages derived by them from their proximity to roads, markets, &c. This classification could not be made with reference to roads and markets, which may possibly be constructed or called into existence hereafter. When present circumstances have passed away, and markets and roads have been formed, where none are to be found

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found now, the change in the relative position, and therefore relative value of the villages, might require a revision of the rates imposed on the lands. Admitting this, it would seem to be an argument against a very long term of settlement, as those villages from whose neighbourhood roads, &c. had disappeared, would remain unfairly burdened during the currency of the settlement, unless Government agreed to a sacrifice of revenue, while those lands approached by the newly constructed works, would be much enhanced in value, without the possibility of a corresponding increase of the public burden being placed on them till after the settlement expired.

59. Mr. Mackay describes the tenure constituted by the revenue survey as a "tenure certain as regards its terms for only a limited period, and defeasible at the end of that period." At the end of the term, the rent may be raised on the cultivator or his children, in consideration of the then increased value of the land derived from improvements made perhaps only shortly before the termination of the settlement; it is evident, then, that the saleable value of land must decrease year by year as each of the thirty passes away. And as a quick and ready perception of advantageous results promised by immediate and energetic action is, perhaps, not characteristic of the natives, the probability is, that several years will be allowed to pass away unheeded in most cases before the cultivator is able to make up his mind on the subject of the new system, and to commence improvements; on this account, the term for which the survey settlement is made might, perhaps, be advantageously extended; indeed, as the thirty years draw to a close, it may probably occur to landholders that a due regard for their own interests requires that they should let wells and such works fall as much as possible into disrepair, and all improvements disappear, with a view to prevent the rates being raised on account of the value of the land being enhanced since the expiring settlement was made.

Page 330.

60. The author finds it difficult "to get at the exact state of the farmers' circumstances under the new survey;" the rent, however, "is generally estimated at a fifth of the gross returns;" Mr. Mackay takes some trouble to prove that it really amounts to a fourth. In England, we are told elsewhere, that a third of the gross produce is considered a fair share for the landlord; if so, it would seem that a fifth, or even a fourth, can hardly be a very burdensome assessment in India.

Page 137.

61. However, while the author is very far from being satisfied that the new financial system on which he has been treating is such a measure as the circumstances of the case required, he admits that "it were idle to deny the new survey, whatever may be the imperfections which attach to it, has been productive of good. A reduction of rates for a determinate period, and carried to such an extent as to let the farmer touch the profits of farming"—and there can exist no reasonable doubt that the reduction has been carried to this point by the survey—"is an improvement to be hailed by every well-wisher of the country," and "its value cannot well be over-estimated;" the author, moreover, proves that under the revised settlement, the circumstances of the ryots "have improved."

Page 323.

Pages 325, 326.
Page 357.

62. The survey system is probably not perfect, and may very possibly admit of beneficial modifications; the author, however, after evidently taking no little trouble with the subject, has, I think, totally failed to make out a good case against it, while, notwithstanding its defects as he views them, he is obliged to bestow no small share of commendation on the results of the measure.

Chapter II.

63. At the beginning of this chapter, the author asks "of what avail will it be either to Government or the cultivators to stimulate agriculture, and multiply agricultural produce by reducing, equalizing, and giving some degree of permanency to the assessment, if, when the immediate end be gained and produce be multiplied, it remain a drug in the hands of the producer, from his inability to find a market for it either at home or abroad? The inevitable answer to this question shows the absolute necessity for a liberal expenditure in the construction of roads, if the survey is to have a fair chance of realising to the people the advantages which are contemplated by those who are advocates of the new system. Whether or not the survey is a half measure in the sense contended by the author in a previous chapter, it will assuredly fail to produce the beneficial results which it is calculated to secure, if a vast improvement in the means of communication throughout the country does not accompany, or speedily follow a revision of the assessment. Advantages are clearly shown which roads in the Deccan running east and west, must have over those taking a northerly and southerly direction; the former make the coast most readily accessible from the interior, and avoid formidable obstacles, in the shape of hills and streams, which the latter must cross in their course; the arguments brought forward on this point are, in my humble opinion, worthy of much attention. Concurring, as I do, generally, in much that is written in this chapter regarding the want of roads, I need make no further remarks on the subject here.

Chapter III.

64. That immense advantages might be secured to the Deccan by increased irrigation, is evident to all who have travelled in the country; the want of artificially-applied moisture is seen and felt on all sides throughout the parched plains of the interior; neither proofs nor arguments are wanted as to the existence of the requirement; that this want might be abundantly

abundantly supplied by a grand system of irrigation arranged and carried out by engineers competent for the task, is suggested immediately by the contemplation of the river system of India so well described by the author, to the minds of those, who, year after year, have seen volumes of life-giving water poured eastwards to mingle uselessly with the sea, while, a few months later the plains through which these noble streams rolled lately, full from bank to bank, are seen scorched and withered for want of the element which was so short a time before in overflowing abundance in their neighbourhood and was allowed to pass on uselessly, unarrested in its course. This subject has been sufficiently often noticed, and is trite enough, perhaps; still it is not irrelevant here, and can hardly be brought forward too frequently.

65. There is little room for doubt that many highly favourable positions for large bunds of solid masonry are to be found along the courses of our rivers; dams constructed in such situations, however great expenditure the works might immediately entail, would lead to an extension of irrigation, and consequent increase of revenue which it is difficult to estimate. The river system of the peninsula assuredly seems to show that a grand scheme of irrigation, which might embrace enormous tracts of now waste or half-cultivated land in the interior, is as feasible as it would be profitable.

66. On putting down the volume of which the contents have been now considered, the reader cannot, I think, help feeling deep regret that the author did not live to draw up his general report embodying the results of all his inquiries. It is not difficult to see that these papers would never have been given to the public by the writer in their present shape. The editor tells us that he has ventured to condense and to alter, taking care that the meaning and arguments of the author were not in any case affected. However diffuse the original reports may have been, it is, perhaps, to be regretted that they were not given to the world as the writer left them.

67. The President of the Manchester Chamber of Commerce informs us that the commissioner "was instructed to elicit the truth without fear or favour, and to send to this country (England) only such reports of the condition of India as could be implicitly relied on." That the author honestly endeavoured to elicit the truth, and not unfrequently perhaps succeeded, while he undoubtedly observed, when he could see for himself, widely and correctly, is, I think, not to be doubted; but that these reports are such, in all their parts, as can be implicitly relied on, is not for one moment to be admitted.

68. In the concluding para. of his preface the editor writes, that "the Chambers of Commerce, concerned in the appointment of the mission, have fully attained the object they had in view;" if so, their object must have been a much narrower and more limited one than their commissioner probably proposed to himself as the end of his labours. The perusal of Mr. Mackay's work, while in some respects disappointing the expectations of those who had the pleasure of meeting and conversing with him in India, leads the reader to the conclusion expressed by the President of the Manchester Chamber of Commerce that, "if Mr. Mackay could have been spared to have entirely completed all his intended investigations, there would have resulted from his labours revelations beyond the anticipation of his employers."

69. Having brought these remarks, which have extended beyond my wishes, to a close, I must apologise for the delay which has occurred in transmitting them to you. A press of business requiring from me immediate and constant attention, has interfered to prevent my taking that early notice of the Government letter quoted at the commencement of this communication, which I should otherwise have paid to the instructions conveyed to me.

Superintendent's Camp,
2 May 1854.

I have, &c.
(signed) *F. Fanning*,
Supt. Rev. Survey and Assessment, Goozerat.

(No. 50 of 1854.)

From *A. Rogers*, Esq., Settlement Officer in Goozerat, to *E. G. Fawcett*, Esq.,
Revenue Commissioner, Northern Division.

Sir,

IN accordance with the instructions of Government, conveyed to me in Mr. Secretary Goldsmid's letter, No. 654, of the 28th January last, I have the honour to submit the following observations that have occurred to me on a careful perusal of the reports on Western India, by the late Alexander Mackay, Esq.

2. For the sake of convenient reference, I propose noticing the several subjects discussed in the reports in the order observed in them in their printed form, marking the numbers of the chapters and pages, containing the passages I refer to in the margin.

Chapter I.

3. Mr. Mackay's first chapter treats more especially of the object of his mission, "cotton," its production, preparation for the market, and sale. There is nothing that appears to require any remark in this report as far as page 45, so that I will pass thus much of the chapter
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Pages 45 and 46.

with a general assent as to its correctness. The question of the introduction of the culture of exotic cotton into Guzerat, discussed in pages 45 and 46, is one of great importance, and one with which Mr. Mackay, it appears to me, could not have had much practical acquaintance, or he would not have passed it over so cursorily. I examined last year several fields in which New Orleans seed had been planted in the Dholka Purgunnah, and the produce in these was such as not to encourage the extension of its culture: the soil of the fields was the usual kind in which indigenous cotton had attained to fair average perfection; but in the exotic description, although the staple retained its characteristic length and beauty, the yield was far below that of the former variety, and the plants were low and stunted. I was given to understand that this result might partly be traced to the seed not having been sown exactly at the right season; but, from the few specimens I saw, I should doubt the probability of the culture of New Orleans Cotton proving remunerative in the ordinary cotton-growing soils of the collectorate, *i. e.* in the common unirrigated black; on the contrary, I think it would be well worthy of experiment to attempt its culture in the Gorat (here called Goraroo), mentioned in page 41 as an irrigated crop; my reason for saying this is, that a few seeds were sown in the Assistant Collector's garden, at Dholka, several years ago, and the trees from them had last year attained a height of some six feet, with wide-spreading branches, producing most luxuriantly, during the whole of the fair season, in quantities, cotton, the specimens of which, that I took to Surat with me, were pronounced by Mr. Landon, of Broach, the finest he had seen in India. The roots of these plants, however, must have been almost constantly moist, as they were on the edge of the main water-course leading into the garden, and the soil, moreover, had the advantage of being well manured; the expense of this kind of cultivation would be consequently heavy, but I have little doubt as to its proving remunerative in the end. These now adduced are mere solitary instances that have come under my own observation; but from all that I have heard in different quarters of the result of the experiments with exotic seed in this collectorate, I do not think cotton raised from it is likely to answer as an unirrigated crop, as it would only in very favourable seasons procure from the rains alone the amount of moisture that it would appear to require to bring it to perfection.

4. The question of the preparation of cotton for the market, from the time of its being gathered in the fields, through the process of cleaning, until it is in the hands of the Bombay merchant for shipment, is next entered into at length. The remarks in pages 46 to 48, as to the method in which the cotton is picked, are generally correct; that as to the deficiency of labour at the commencement of the picking season on account of grain ripening at the same time is not, however, applicable throughout the province. In addition to all the causes of adulteration during picking enumerated by Mr. Mackay, there is one very fruitful source that I have often seen put in practice, which is, that of the pickers making little hollows in the fields, as they go along, to put the cotton in, as they pick it, and placing clods of earth on the top of it to prevent its being blown away; there it is left until the evening, when a cart goes through the field for the cotton to be carried away in, and then, of course, a quantity of dirt goes with it. Adulteration during the process of gathering is less prevalent in the districts on the west of the Gulf of Cambay, owing to the cotton being of the close-podded sort, called "kala," described by Mr. Mackay in page 44: the system of pitting cotton after it is gathered, which, if proper care be taken, I think is the best plan for preserving it previous to sale, is probably owing to the same cause, not in force in those districts. As to a reform in the system of adulteration pursued by the original producers of the cotton, I do not think it can ever be effectually prevented by the intervention of Government officials, it is only one commencing at the trunk of the tree, the merchant shipping from Bombay, by his not taking adulterated cotton, that will spread of its own accord to the producing cultivators, who are its most remote branches, by teaching them that "honesty is the best policy." The next person into whose hands the cotton goes is the "wukharia," the meaning of whose appellation is really warehouse or storeman (from the word "wukhar," or store). In the frauds practiced by this class, the interference of official authority, armed with powers of punishment by the legislative, may have, and has had, as Mr. Mackay acknowledges in the case of the late Mr. Davies, of Broach, a most beneficial effect. Regulation III. of 1829, had been allowed to lie dormant ever since it was passed, and I well recollect trying, as an assistant magistrate, the first case that had been prosecuted under it, at the instance, I believe, of a partner of Mr. Landon, in the presence of the latter gentleman. Similar interference in the end of A. D. 1851, has led to similar results at Dhollera, and the Government have lately abolished, by proclamation, the levy of numerous vexatious imposts on cotton imported to that town from inland places, then reported by me, which were formerly in a great measure the cause of great adulteration made by the producers, to remunerate themselves for the loss they thereby sustained.

5. The state of the case as to the comparative merits of the "churka" and the saw-gin is fairly stated by Mr. Mackay, and needs no remark from me.

Page 57 to 63.

6. I now come to the proposals contained in the end of Mr. Mackay's first chapter for the prevention of fraud in cotton dealing. There can be no doubt that if bad or adulterated cotton exported by native dealers up the country did not find a market in Bombay, it would not be exported, and good unadulterated cotton, which would find a market, would be exported instead; the native up-country buyers taking very good care to get from the producers a marketable article, which they are now not so particularly careful about, as cotton in Bombay, found not fit to be shipped home, can, at all events, be palmed off upon the
China

China market. The Bombay cotton trade is, to a very great extent, one gigantic system of fraud; the producer cheats the wukharia, who buys it from him to clean and export to Bombay; the wukharia cheats the Bombay merchant, and the Bombay merchant cheats the home or China buyers. What can the most stringent rules Government may make, effect towards putting a stop to such a system as this? I will go further, and say, "What right have the parties to such a system, who allow themselves to be cheated in hopes of remunerating themselves by cheating others, to expect that Government should interfere in the matter?" Such a system could not exist in England, simply because bad goods would not find a market; then why should it exist here, and who but the parties themselves in the trade are the proper and natural instruments through whom reform should be accomplished? I entirely agree with Mr. Mackay's remarks in the paragraph at the head of page 59, but do not think that Government are at all called upon to go to the expense of appointing district inspectors, as recommended in page 61, because the Bombay merchants themselves could in every case, if they chose to do so, point out to the proper authorities the up-country dealers from whom they have received adulterated cotton. The report of a jury held in the presence of one of the police magistrates in Bombay, condemning the cotton for specific reasons would be sufficient authority for the Mofussil magistrates to proceed against the party who supplied it as good, according to Regulation III. of 1829, and a few examples made would very soon put matters to rights. Before concluding this part of the subject, I would beg to call attention to the wording of section 1 of the above-quoted Regulation, which very properly makes penal, not the "false packing," or "adulteration" of cotton, but the selling or offering for sale such falsely packed or adulterated cotton fraudulently as good cotton; if parties defrauded, or attempted to be defrauded, then, will not come forward and complain of such injuries, how can the Mofussil authorities legally presume that the penal part of the offence has been committed, in order to proceed against the packers or adulterators; and if the injured parties do not complain (and I have never heard of a Bombay merchant doing so), to the proper Mofussil authorities, is it not fair to presume that they do not care for being injured?

Chapter II.

7. The general subject of the second chapter is the "Tenures of Guzerat:" the distinction between "tulput, or "khalsa" (not kholsa), and alienated lands, and the definitions of the different kinds of the latter given by Mr. Mackay, are tolerably correct, the only fault that I have to find being in page 67, where he says that the entirely alienated villages are generally of the "wanta" kind. In the Ahmedabad Collectorate there is no such thing as a wanta village, the only alienated villages being in hamee, properly presented, probably, on account of service performed, or to be performed, and corresponding with the "jageer" villages of Surat, and devasthan, or dhurmadeo, those given for the support of religious or religiously charitable institutions; there are large quantities of wanta lands, whose origin is correctly given in the same page, except that their proportion to the tulput, or Government lands, was not by any means always one-fourth, one-third and one-half being as common proportions. The kind of "pussaeta" mentioned in page 68, is what is generally termed "chakurnat pussaeta," or service land, in contradistinction to the "nukara," or free "pussaeta," held mostly by Brahmins, Bhats, Charuns, Biragees, or other religious mendicants, to whom the charitable notions or religious prejudices of Patels and others, who, under native rule, had the control of the internal administration of their villages, prompted them to give them, and whose possession it was found expedient, on the introduction of our direct system of village management to leave undisturbed. Suffice it to say, with reference to these alienated lands, and especially those referred to in page 66, as liable to forfeiture on non-performance of service, that the subject is not one that has escaped observation, and arrangements are in progress, in connexion with the revenue survey of the province, to bring it to a satisfactory issue.

Pages 64 to 68.

8. The Nerma and Bhagdaree tenures and village management are correctly described in pages 68 to 72, the integrity of the system has been more particularly violated, probably by the local authorities without reference to Government, in the Nerma villages of the Kaira Collectorate, where, instead of maintaining the principle of the several and joint responsibility of all the sharers for the demands of Government, (which Mr. Mackay has omitted to state have been fixed from of old), the shares of defaulting sharers have been, in some instances, separately resumed and managed directly by the revenue authorities. The subject will be specially reported on when the introduction of the survey into any of them may bring it under the notice of this department.

9. The definitions of the other village tenures given in the pages noted in the margin, are not altogether correct; villages in which the bhagwuttaee, or division of produce system prevails, as well as those where that described in page 74 as the "hullvers" (a misprint for hullvera, plough-tax) exists, should all have been included in those where the cultivators are the immediate tenants of Government. The term "asamee," used in page 74, I am unacquainted with; it is probably a misprint for "swadin," an indirect method bequeathed to us by preceding native Governments of levying rent from alienated lands, by taxing their cultivators; "tateechas" is a misprint for "phatachas." The word "gametee," in the same page, is entirely misapplied; the word is in reality "gametee," properly signifying the holder of a "gam," or village, and is the word used now to express the holder of a village under

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under the talookdaree tenure in the districts of Dhundooka and Gogo; the "gametee" is the man, not the system under which he holds, and the leases have as often been given for 10 or 15 years, or even 30, as seven. The origin and nature of the tenure is fully discussed in the printed Bombay revenue selections, and has been lately defined by Government, after lengthened discussion, to be that of hereditary renters or leaseholders, during the pleasure of Government.

Pages 75 to 89.

10. The other question discussed in the second chapter is the relation that the cultivator bears to the soil in Guzerat; that the cultivator's right is not a fee-simple, with absolute power of disposal over his land, is owing to the institutions of the country, by which by far the largest part of the State income is derived from the land revenue. It is, therefore, not with reference to the interest of the cotton trade alone, or any other trade, that his tenure can be lightly altered. Grant that it is a mere tenancy at will, which it is not in practice, however it may be made out to be so in theory, yet it is the one fact alluded to in page 89 as aggravating the evils of the system, viz., that of its being such a tenancy under one, instead of numerous proprietors, that robs the tenure of most, I cannot say all, its defects. The "Sirkar," or Government, to use a native's word, or any father and mother, is it for the interest, to take no higher ground, of the State to oppress those by the labour of whose hands it may almost be said to exist? Mistakes may occur, as in the unfortunate instance of Broach, so harped upon throughout the chapter; but it is the general tendency of the system that should be looked at, and not solitary instances, where it has been badly administered. Will it be argued that if the greater part of the State revenue in Great Britain were derived from the Crown lands, the cultivators of them would be allowed a fee-simple, with absolute power of disposal over their lands, subject to no restrictions for the preservation of the demands of the State? The idea appears absurd. Can it, then, be said, that the natives of this country could be more safely entrusted with such a power than the inhabitants of the most civilized country in the world? The experiment of constituting the patels of villages and others an intermediate class between the State and its cultivators, and leaving the internal administration of their villages in their hands, has been tried, and we now see the effect of it in the immense quantities of alienated lands in the province that contribute nothing to the State; for every beegah of them, with the exception of the wanta and wuzeefa, has been alienated by these parties as landlords, the Governments of the time being caring only for the realisation of a sum in the lump from the villages. The general drift of the chapter seems to be, that the Guzerat cultivator's relation to the soil is that of a mere tenant at will of the Government, because the latter can raise his rent to any extent it pleases, so that the cultivator may be unable to pay the assessment imposed, and consequently be evicted; it is, however, acknowledged that the individual ryot is protected from particular oppression under this system, and that it is only when some general measure of raising the rents of whole districts or villages is carried out, that he need fear injury. The remedy proposed is that a guarantee be given that no increase of rent shall be exacted without the consent of the cultivator, equivalent to saying that it shall never be increased at all; for, of course, when the power of ejection from land is taken from the Government, no man would be fool enough to agree to pay a higher rent, when he could, in spite of them, keep his land by paying a lower.

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11. The whole question appears to me to lie in this: is the Indian Government fit to be entrusted with the ordinary powers of an English landlord or not? Mr. Mackay has adduced one solitary instance, that of Mr. Kirkland's assessment in Broach, to prove that it is not. I have now before me a copy of the late Mr. Davies' report to the Revenue Commissioner, No. 206, dated 12th June 1848, on the revision of the Broach assessment, which clearly proves that the increase of assessment determined on in A. D. 1835-36 by Mr. Kirkland was so under the discretionary power then reposing in the officers of Government, in the absence of any fixed assessment, and failed of successful realisation by the subsequent rapid fall in the value of cotton, the great staple of the collectorate, out of which its revenues had, till then, been entirely paid, and with it of the value of almost all other agricultural produce. This was a circumstance that could not have been foreseen; and the failure of an assessment marred by such an accident is, therefore, not a fair case by which to judge the competency of Government in their capacity as landlords. To say that under the present system, in which a discretionary latitude is not allowed to local officers to alter rates of assessment, the Government are capable of raising rents so high as even to check cultivation in the slightest degree, is to accuse them of being capable of suicidal folly, and the world may be challenged to bring forward another instance of raising rents similar even to the accidental case quoted. The institutions of the country are in a state of transition; the education and enlightenment of the people are proceeding with rapid strides, and every exertion will now be made, I admit not too soon, to open out the resources of the country. This must all be done by the Government itself, for English capitalists will not venture on the unknown sea of Indian enterprise without Government guarantee. Is it, then, an unsafe power to be left in the hands of Government, to allow them to have a door left open by which they may be enabled to reimburse themselves for their expenditure in improving the resources of the country, when they know that any abuse of that power will but tend to the disadvantage of themselves by checking improvement? Or will it be asserted that the Indian Governments among them cannot command talent enough to perceive what is really for their advantage, and what is not?

12. The system of assessment in Guzerat is, every body will admit, in urgent need of a thorough and comprehensive reform; and however tardily that reform has been commenced,

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we may look back with regret, but we look forward with hope, trusting in a higher than earthly wisdom to guide our counsels to what is best. The guarantee for the permanency of the survey settlements, when made for 30 years, will no doubt, from the lightness of the assessments, give the land a saleable value of at least the nature allowed in page 307 of the Reports, and experience of the results of the present system will be a good guide at the expiration of the term to enable Government to judge of the expediency, or otherwise, of allowing its ryots' tenure to approach nearer to, or become in reality that of a fee-simple, with absolute power of disposal over their lands, such as that called for by Mr. Mackay. By what I have said above, I, of course, do not by any means intend to advocate a certain increase at the end of the 30 years, as circumstances may occur that will render, on the contrary, a decrease necessary, but only that the social and financial position of the country does not appear to me such as to warrant the Government in giving a guarantee for the perpetuity of the settlements now commenced.

13. Before concluding my notice of this chapter, it will be as well to correct any false impressions that may arise from the statements made in pages 79 and 80, as to Government claiming the power of altering a ryot's tenure at pleasure, by stating the circumstances under which what are called "pieces of land between Dhollera and the sea" were given in lease as they were granted, subject, of course, to the sanction of Government, by myself, when in temporary charge of the Ahmedabad Collectorate in A. D. 1850. They were these: the pieces of land are really seven separately recognised and inhabited villages, called the Bhata Villages, on the west coast of the Gulf of Cambay, near its head. They were villages managed directly by the Government officers, on the ryotwaree division of produce system; but the chief revenue derived from them was not from the land under cultivation, but from large tracts of land included in them, producing grass, in the following way: a cart, with four bullocks, going to take grass, was charged so much, and one with two bullocks, so much, whilst a person cutting a bundle of grass was charged in like proportion so much less, the rates varying according to the quality of the grass cut in the different villages; the whole of the seven villages were under the management of two tullaties, or accountants. The system I saw was one that left a door open for extensive fraud, as there was no way whatever of checking what the tullaties chose to show as the grass revenue; and as a revision of assessment was in contemplation, I offered the villages in lease to the patels, or head men of them, with the usual engagement that the village rates, at which a share of produce was levied from the cultivators, should not be exceeded, on the terms that the lease should continue only until the contemplated revision of assessment should be carried out, or, if it were not carried out before, for a certain number of years, seven or ten, I forget which. They were perfectly at liberty to accept these terms or not, and they did accept them, at a considerable increase over the average receipts of Government from the villages when under its direct management; it was a mere palliative measure to check fraud until something better could be done, and Mr. Mackay could not have been aware of its real nature, or he would not have construed it into a proof of the claim of Government to alter its ryots' tenures at will.

Chapter III.

14. As it is no doubt the sincere desire of all connected with India to see it well governed, I have no hesitation in saying that I perfectly agree with Mr. Mackay in his remarks as to the want of previous judicial training in young assistant magistrates, when first set to the duty of trying and deciding criminal cases, being a serious defect. I say so, because I found it to be such in my own case, and am convinced that any man who has commenced his career in the civil service with a real wish to do his duty will say so too. The judicial training of an assistant magistrate, when he receives the power of awarding three months' imprisonment on his own authority, or one year's, with the confirmation of the magistrate, is in most cases that of passing an examination in the Regulations, and being declared in the Government Gazette competent for the transaction of public business. There is no necessity for an education in a lawyer's office, as so many people in England would probably attempt to make out, to effect a reform in this particular; the Bombay criminal regulations are generally simple, and it requires only the exercise of common sense and discretion to apply them with justice; so that I think it would be sufficient training for an assistant magistrate, before being allowed to adjudicate in a criminal case himself, to be obliged to attend the sittings of some session, or other criminal court, as Government might direct, for a certain time, at the expiration of which, in addition to the usual report of his having passed in the Regulations, the magistrate whose assistant he might be should be required to furnish a certificate that he had in the latter's presence adjudicated some criminal case sent up by a district police officer, and that from questions addressed to the assistant in its various stages, in such a way as to ascertain whether he thoroughly understood what was going on, and could adjudicate it himself without assistance, he considered him fit to be entrusted independently with the powers of an assistant magistrate. If the magistrate in this examination did his duty, there would be no room left for complaint, on the score of want of experience, on the part of young assistant magistrates.

15. The next point that appears to me to require notice is the remark made in page 94, as to the probability of the tulatee or village accountant becoming the mere creature of the patel, on account of the smallness of his remuneration. I do not mean to say that the tulatee's pay should not be increased, although I am not prepared to say to what extent

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extent it might be advisable to increase it; but I can confidently assert, and I think the experience of any one who has paid attention to the subject in Guzerat will bear me out in saying so, that so far from the present scale of his emoluments having had a tendency to make him the creature of the patel, the institution of his office has had the effect of very materially lessening, if not, in many cases, of destroying altogether the influence of the latter, and the patel is much more the tulatee's creature, than the tulatee his. Notwithstanding the low scale of the tulatee's present emoluments, which are regulated generally by a per-centage of the revenues of their villages, the appointments to such places are eagerly sought for, and that is a better test of the sufficiency of the pay of them than English ideas of the money value of 8*l.* or 15*l.* a year. With reference to the pay of tulatees in talookdaree villages being often in arrears, I may as well mention that arrangements have been made to put them on the same footing as those indirectly managed as khalsa villages.

Pages 94 and 95.

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16. The remarks in pages 94 and 95, as to the services of the hereditary district officers, such as dessaees and muzmoondars, being almost entirely dispensed with, notwithstanding that their official emoluments are continued to them, are incorrect; it is only in the Surat Collectorate that the performance of the duties of the former class is but nominal even.* There is another class of officers in that collectorate, the shekdars, who perform the duties of village examiners legitimately belonging to the office of dessae, and the latter consequently is only called upon to perform such trifling revenue duty as the mamlutdar may call upon him for. In the other Guzerat Collectorates the dessaees or ameer patels, a similar class, are responsible as village examiners for the accuracy of all entries in the cultivation registers of the different villages allotted to them, and for the details of returns on which the Government land revenue is collected, duties in themselves most important, and which entail very considerable labour and responsibility on those who have to perform them. The muzmoondars, on the other hand, are responsible jointly with the mamludars, or head stipendiary district revenue officers, for the accuracy of the former officers' accounts, as well as of those village accounts of collection and disbursement on which they are framed; they are, moreover, the parties who are called upon to furnish all detailed statistical or other information connected with the revenue of their respective districts, so that their offices are by no means the sinecures represented: a revision or re-arrangement, when found necessary, of the duties of all classes of hereditary revenue officers, is one of the subjects that will be considered in the progress of the revenue survey.

Pages 96 to 99.

17. I now come to notice the description, in pages 96 to 99, of the annual revenue settlement in the Guzerat Collectorates, which, although correct in some of its main features, is, as a whole, far too highly coloured. The mamlutdar and district officers have no power to fix the jumabundy or annual settlement, even subject to the approval of the Collector; they examine the village accountant's returns of cultivation, and other papers on which the revenue is calculated for the current year, according to a certain standard, which is fixed for each village, field, or description of crop in it, and see that the calculation based on that standard, the total of which forms the current year's revenue, is correct. If petitions are made by individual cultivators of failure of crops, or other circumstances that they consider entitle them to remissions are represented, an investigation as to their truth is made generally by the mamlutdar, or other officer, on his responsibility, and the result reported. This is all that they have to do with the fixing of the settlements, which is really made at the jumabundy; when the mamlutdar hands in his statements, by the Collector, or his assistant, who ascertains their correctness, and, if he sees cause, grants remission below the standard rates, which even he cannot alter, to individuals for the current year. This standard is well known to all the cultivators, and it is only on a petition from them, that failure of crops, or other cause, will not enable them to come up to that standard in their payments, that inquiries are made to ascertain the truth of their statements, so that it is nonsense to say the tulatee goes home, and tells each man what he has to pay; when they petition for remissions, they almost invariably attend at the settlement to back their petitions by verbal representations, and to see whether they are granted or not; if they do not want remissions, they know the standard at which they will have to pay. I do not mean to say that the system is not one that leaves a door open for fraud, or that the standard is not in many cases too high, or the mode of assessment very faulty; these are all points that merely await the introduction of the regular revenue survey and assessment for complete reform, and my object in the above remarks is only to show, that even under the old system the power of subordinate native officers is not so great as Mr. Mackay has represented.

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18. In page 99 Mr. Mackay has given as an instance of too onerous magisterial duties interfering with the performance of revenue duties, that of the Acting First Assistant of Ahmedabad. As I was myself holding that appointment when Mr. Mackay was in Guzerat, it would have been more satisfactory to me, if he had given the results that occurred, "as might have been expected," instead of putting forward, no doubt unintentionally, a loose and vague insinuation of something having gone very wrong: now, all that I need say is to challenge an inquiry into the revenue administration of Dholka and Veerungaum whilst I had charge of them; that during that time many reforms were effected in a most absurd system of revenue management, that I had not then the power to strike at the root of, will be seen from my jumabundy reports for A. D. 1850-51 and 1851-52. That the work was too much I acknowledged in the latter report, in which I also showed the

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the result of the press of other business (not merely magisterial) was such as looking as narrowly as I could have wished into the accounts of separate villages is the only result that "might have been expected" that I admit. The First charge in Ahmedabad has now been much reduced, and is confined to the magisterial at of Gogo; the revenue and magisterial business of Dhundooka, with revenue charge on Khalsa villages, but few in number contained in it; with this there is no reason why work should not be efficiently performed.

19. I now come to Mr. Mackay's remarks as to the manner in which the revenue is collected in Guzerat. It is not the case that throughout the Ahmedabad Collectorate it is the custom to collect the rent in kind. In the Mewassee and Talookdaree villages of the collectorate, which form a very large proportion of the purgunnah of Puranteij, Veerumgaum, Dholka, Dhundooka, and Gogo, it is almost invariably the rule to do so, and nothing can be done towards amending this state of affairs, from its having been the policy of the Government, from the introduction of our rule (see Bombay Revenue Selections, page 683) not to interfere with the internal administration of their villages by the talookdars, who are obstinately wedded to old native systems. These villages number 479 out of 1,028 villages in the whole zillah, and to them may be added 57 inamee villages, in which the same system also prevails. In addition to these, the system prevails, though not universally, in 82 out of 492 khalsa, or directly managed Government villages; so that, with the exception of the villages mentioned above, which are not under the management of the revenue authorities, the great bulk of the collectorate pays rental not in kind, but in money: the only reason why the principle of money payments has not been introduced long ago, is the want of European agents, who had leisure from the details of ordinary business to enable them to give that undivided attention to a general system of reform in the revenue management of the collectorate, that the complexity of the system bequeathed to us by former Governments, and the importance of the interests involved in the change required. To attempt sweeping reforms on haphazard data is a dangerous experiment, and Government on that account wisely discourage such attempts on the part of the local authorities, preferring to have the reforms effected on more reliable grounds of procedure by the regularly trained agency of the revenue survey and assessment; and that this was not extended to Guzerat before, is only owing to the want of trained Europeans who could be entrusted with the conduct of such important operations.

20. Before leaving this part of the subject, I must not omit to give a short account of what progress has been already made towards carrying out a thorough reform of the revenue system of the province on the principles of the revenue survey. By the end of the present season, probably before this letter reaches England, the whole of the directly managed villages of the Dholka and Dhundooka districts, with parts of Duskhroie, Jetulpore, and Veerumgaum, will have been regularly surveyed; these will include some 150 or 200 villages. Of these, an experimental assessment has been in force for the last year in seven, and the experience gained in these and other indispensable inquiries, too lengthy and intricate to be enumerated here, will, I hope, enable me, in less than six months' time, to lay before Government a plan for the assessment of the whole Dholka purgunnah, and its introduction during next season into as many villages, perhaps 40 or 50, as our at present small qualified establishment will enable us to have the lands properly classified. As more men are trained, the work will advance more rapidly, and we hope that four or five years may see every vestige of what is not inaptly called by Mr. Mackay the extraordinary jumble of confusion in the revenue system of Ahmedabad swept away.

21. In the remarks concerning the position of the cultivators in the Bagdaree and Nerwadaree villages, I in the main concur, though Mr. Mackay's picture is overdrawn. He seems to have got into his head, with reference to the positions of landlord and tenant in Guzerat, the sole idea that the former invariably screws, and the latter is as unresistingly screwed out of, and seems to have forgotten the applicability to their case of the moral of the fable of the goose that laid the golden eggs. However tightly the screw may be applied (and I admit that in many cases it is so), and however perseveringly the native cultivator will cling to his village and the field his forefathers have tilled, the commonest rule of political economy teaches us that there is a point beyond which the screw cannot be applied, namely, that which leaves the cultivator a subsistence for himself and his family, and wherewithal to continue his occupation as a tiller of the soil. Wherever this is not the case, the man is not the real, although the nominal occupant of the soil; and the capitalist, the village banian, for whom and as whose labourer, and by means of whose capital he cultivates, is the real cultivator, who pays the rent and the labourer, by allowing him and his family out of the proceeds enough to subsist on. In the case of the bhagdars, it must be recollected that the cultivators who are out of their own family are not tied down to the village they inhabit, but are, in many instances, strangers, induced to settle in them by the offer of easy terms on the part of the bhagdars; and I have often known bhagdars let out their lands at less than the Government rates, to induce their cultivation, or retain them so when once brought under tillage; whilst, on the other hand, I admit that I have also known bhagdars whom I have been obliged, in seasons of failure, to force to grant remissions to their cultivators by the threat of their getting in seasons none themselves, whom no other inducement would have persuaded to unloose the screw.

22. Mr. Mackay has understated the evils of the talookdaree system, for talaties are only appointed to those villages which are placed under attachment, on account of decrees of the

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civil courts for the debts of the talookdars, on account of non-payment of rental, or in cases of disputed succession. Their tenure is that of hereditary renters or leaseholders during the pleasure of Government; but they are leaseholders over whom the authorities have no control in their relation with their tenants, further than that contained in a clause of their leases, that they are not to levy more from them than the established rates of the village, on pain of forfeiture of lease. Thus they may do, or may not do; but we are none the wiser, for we have no control over the internal administration of the estates. The way in which this state of affairs has arisen is this: on the introduction of our Government, rajpoots, coolies, and others, were found in possession of villages in different parts of the country, for the possession and enjoyment of which they contributed only so much to the revenues of the State as they could be forced by annual military expeditions to pay. The paramount power wanted money, and did not care who paid it, so long as it was forthcoming; consequently the parties holding these villages were independent, in so far that they were left to manage them without further interference on the part of the State than that of having a sum in the lump, differing according to their address or powers of resistance, to pay for them annually. If this were not paid, the village was burnt about their ears, and the army marched on, leaving the holders independent till the next year, when the army came again, and the scene was re-enacted. Thus far, then, they were independent "sovereign princes," who paid only tribute. Some of them, however, had to provide contingents in times of war. When our rule was introduced, before the country was properly settled, the same principle of annual settlements, made in a more civilised and conciliatory manner, was at first adopted; but as quieter times ensued, it was thought that it would tend to conciliate the feelings of these classes if leases for terms of years were given, instead of the annual settlements. It must be borne in mind that their pretensions to sovereign rights had been from the first disallowed, and sovereignty declared to vest in the Company alone. Then it had to be settled what was a fair proportion of the net revenues to allow the leaseholders, in consideration of their services as agents on the part of the State, or middle-men between it and its cultivators; and this was, after discussion, fixed at one-third of the net revenue, leaving two-thirds to be paid to Government by them. This is the origin of the 70 and 30 per cent. Village accountants had been placed in the talookdaree villages of Dholka, and in some similar villages in the Kaira Collectorate. The former were removed at the recommendation of the Bombay Government in A. D. 1821; but in Kaira they remain to this day. Such is the course of circumstances that has placed the talookdaree villages in their present anomalous position. Whatever may have been originally the proprietary rights of these rajpoots and other classes, it cannot be said that, with the system above described, they were in force at the introduction of our Government. The present tenure is a compromise between the two extremes of acknowledging them to have proprietary rights and their payment to be a tribute, and of treating them exactly as farmers of the Government revenue. The compromise is one, however, that has not disabused the talookdars of the idea that they are still proprietors, if not of the villages, at all events of 30 per cent. of their revenues; and as they are, from the extent of country under their control, an influential class of men, though not capable of combination for any particular purpose, the experiment of at once abolishing the system of non-interference in the management of their villages is one that requires mature deliberation. It has, therefore, been determined to ascertain our rights in the villages by survey, and on the data thus acquired to grant them long leases of 30 years, to give them every chance of maintaining their position of respectability; whilst, at the same time, the steady process of absorption will be applied to them by no succession to such estates being allowed, except to direct male heirs. Measures have also been taken to prevent, for the future, the indiscriminate placing of attachments from the civil courts on these estates that has been heretofore allowed, and every means will be employed, by the granting of liberal terms in their leases and in other ways, to make them good landlords, by making it worth their while to be so.

23. I now come to notice the most difficult part of Mr. Mackay's book to deal with, viz. his most elaborate calculations to ascertain the proportion that the assessment bears to the produce of the soil in three of the four Guzerat Collectorates, from page 107 to end of the third chapter. He commences with the present assessment of Broach, of which, after abstruse calculation, he makes out (page 109) that the land actually producing cotton is rated on an average at Rs. 2. 2. the Broach beega, whilst that capable of producing it, that is, the "regur," or black soil, is rated at Rs. 1. 15. on the same area. In arriving at these rates, he has taken as the basis of his calculations the returns of revenue for a single year, built it up with a superstructure of assumptions of his own or other people's, and thus arrived at a general average. In the first place, the method of reducing the returns of revenue, so as to get at the quantity of land capable of producing cotton and its assessment, is erroneous. The exact amount of assessment on the different kinds of lands deducted from the cultivated area, in page 108, might have been ascertained; and as it has not, the calculations are untrustworthy; moreover, two very important classes of soil, which are in most cases highly rated, viz. the "Gubhan" and "Gorat," which are not generally capable of producing cotton, have not been deducted, which of course makes the calculations still more untrustworthy. Having thus shown why the data should be false, I will now prove that I am borne out in my statements by actual facts. I have made careful averages of the actual rates leviable on black soil, (which, as I have already stated, is the cotton soil, as cotton is but very rarely grown on any other), for every village in the Broach Collectorate, and these averages reduced on account of the different standards of measurement in different parts of the zilla to that of the revenue survey beega, give on that standard

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an average of *Rs. 2. 1. 11.*, and a fraction over, or say *Rs. 2. 2.* The Broach beega, expressed in terms of the survey beega, being 86, the average assessment on the former amounts to *Rs. 1. 13. 2.*, instead of *Rs. 1. 15.* With this must be compared the average yield of a beega. Now, as it would be a most hazardous experiment to guess at the average returns from a beega of land in a total area of 1,352 square miles, I will content myself with those arrived at by Mr. Mackay, in page 115. The average selling price of "kuppas," or seed cotton, in Broach, in the four years from A. D. 1849-53, was, according to returns furnished me by the Collector, about 27 seers the rupee. This would give the value of 120 seers, or pounds, the produce of an unfavourable year, at *Rs. 4. 7. 1.*; so that the assessment would then be, on an average, about 41 per cent. of the average produce. If we take the average produce of the favourable year, 150 seers the beega, we have its value at the above price, *Rs. 5. 8. 10.*, and not quite 31 per cent., as the average assessment. The survey beega, mentioned above, is, in terms of an English statute acre, 1.7015625, or about $1\frac{1}{4}$.

24. The calculations made in the paragraph in which the rate on lands actually producing cotton is shown to be *Rs. 2. 2.*, in contradistinction to *Rs. 1. 15.*, as the rate on lands capable of so doing, are grounded on the merest assumption; for instance, 5,85,905 beegas is the quantity of land assumed to have been under cultivation with cotton in the year referred to, whilst, by reference to page 42 of the book, it will appear that the real quantity was 4,17,590, a difference of 1,68,315. Again, it is assumed that one-sixth of the land capable of producing cotton is annually not cropped with it, and the average rate of assessment on that one-sixth is calculated at 12 annas the beega less than the general average. I have calculated the averages of the three classes into which the black soil of Broach is divided separately, as well as all together, and the average of the third, or lowest, which would most probably contain most of the land left out of cotton cultivation, is about 8½ annas only below the general average.

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25. I have put together the above facts, not from hostility to any fair inquiry into the average proportion that the assessment may bear to the produce of the soil in Guzerat, but to show the utter untrustworthiness of any generalisations, such as those ventured upon by Mr. Mackay. He has taken the rental of a single year as the standard on which to calculate the average pressure of the Government rental on lands growing cotton generally in all years, and has assumed grounds for his calculations which I have shown to be incorrect, even for the year in which that rental was levied. It stands to reason that averages calculated on a single year's rental, even if they were accurately calculated on trustworthy data as to the area of the land in cultivation, would not fairly represent the average pressure on the beega in another year: first-class soil in a bad year would be in proportion more valuable than third-class soil would be in a good one; for in the bad year its intrinsic qualities would enable it to overcome natural difficulties, which the third-class soil could not overcome, from want of those qualities; whilst in a good year, when the want of such qualities would be mostly atoned for by natural facilities, which would not proportionately increase the value of the first-class soil, their relative values would approximate, and the pressure on the worse land be lessened. The test of the fairness of an assessment is not contained in averages such as these, but in the ease with which it is collected, and the general prosperity of those assessed under it. The data on which to fix a fair assessment are not such as one might fancy from this book can be picked up anywhere, but must be diligently sought for in a hundred minutæ, to find which, depends much more upon the common sense and habits of observation of the person fixing it than on all the abstract ideas that could be collected from elaborately worked-up figures. It is to the want of some general system to go upon, that I attribute the apparently little progress the revenue system of Guzerat has made towards being placed on a proper footing under our administration. I believe the work of revision has never ceased since we first got possession of the country, and this may be said more especially of Surat, where, one after another, in different parts of the collectorate, revisions have followed upon revisions, which in their turn have proved ineffectual to produce any striking progress towards reform, owing to their being local and partial. The work has now been commenced systematically and in earnest, and may it prosper.

26. My remarks in the 23d para. as to the errors in the method which Mr. Mackay has adopted to arrive at an average of the assessment on cotton-growing lands in Broach, apply with greater force to the averages arrived at for the Collectorate of Surat, as in his calculations with reference to the latter, every kind of land deducted from the total cultivated area, together with its assessment, is guessed at. I have taken an average of the rates of assessment on black soil in as many of the purgunnahs of the collectorate as the rates can be properly ascertained in, and it comes to nearly *Rs. 2. 14.* the survey beega; but to suppose that this gives anything like an approach to the actual pressure on cotton-growing lands would be absurd, for in most of the districts certain portions of uncultivated lands are allowed to be held rent free by cultivators holding Government lands. The proportions in which these lands are held differ in the various districts, but in several I know that the lands held rent free equal those paying assessment, which would very considerably reduce the pressure on the latter. This fact, and numerous others, Mr. Mackay has entirely overlooked; this was his misfortune, and not entirely his fault; for the short time that his failing health allowed him to remain in this country, was not more than sufficient to enable him to look at the outside surface of affairs, far less to become practically acquainted with details, which would, I have no doubt, have made him alter very considerably his first crude opinions if he had become acquainted with them. With keen habits

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habits of observation and honesty of purpose; he has, in many points, arrived wonderfully nearly at the truth; and it cannot be thought surprising that he should have failed in some, when it is recollected that all his intercourse with the natives had to be carried on through an interpreter, and all these estimates that he has made of assessment and produce were framed from general annual returns of revenue that he obtained from the Revenue Commissioner's office, or the different Collectors, without having any one practically acquainted with the subject, who could point out to him how far they could be trusted for his particular purpose, and how far they could not, to consult. I have been thus particular in showing that Mr. Mackay's reports are only to be trusted so far as his own eyes and his own intellect could keep him right, as the single phrase at the head of page 121; that he wished to put himself beyond the reach of being met by mere assertion, would be quite sufficient with the English public to make them believe implicitly all that he has put forward.

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27. Mr. Mackay's reasoning, with reference to the excessive amount of rental exacted from alienated lands, or lands liable to the begotee assessment when sublet, beyond that exacted from Government lands, appears to me to defeat its own object. He estimates this excess at 20 per cent., and seems to think he is considerably within the mark when he says the excess taken by the bhagdars is 10 per cent. He makes out, in another place, that the profits of a cultivator of Government land are little, if anything, in the average run of seasons, more than the wages of a labourer. Now, is it probable that if a man by cultivating alienated land would gain 20 per cent. less than an ordinary labourer's wages, such lands would be cultivated at all? The rental exacted from alienated lands in the Broach Collectorate was not a subject that I paid sufficient attention to when I was employed there to enable me to speak from my own knowledge to the inaccuracy or otherwise of Mr. Mackay's statements; but I can distinctly affirm, from my own knowledge, that in the western districts of the Ahmedabad Collectorate, the rental exacted from cultivators of alienated lands is less than that taken from the holders of Government lands.

28. The manner in which it is attempted to be shown that, notwithstanding the reduction of assessment in Broach, the condition of the cultivator is such that his profits from his occupation do not amount to more than a labourer's wages, is most vague and untrustworthy. The returns of cotton and other produce of the collectorate are stated on the merest assumption; in the outlay, the first item is the rental of a single year; and the second item is calculated on the assumption that all bhagdars take from everybody cultivating in their villages 10 per cent. more than the rental fixed by Government (whereas it is only from those who are not "zuptee kheroot," or old established cultivators, that they can exact a fraction more), and that the whole of the villages in the Broach Collectorate are held on the bhagdaree tenure; whereas, out of the 400 Government villages in the zillah, 156 are managed direct under the bigotee system. The calculations in pages 130 and 131 are founded on equally vague data, and are consequently equally untrustworthy. On the attempt made, in page 137, to suggest a fair average rent per beega for Guzerat, I need only remark, that the area of the province is given (page 41) at 8,504 square miles. I agree with the general principle laid down, in the same paragraph, as to the proportion the assessment should bear to the gross produce of land, and will state, more to show the coincidence as a curious one than anything else, that in the seven villages of the Dholka purgunnah, experimentally assessed last year under the revenue survey system, the average maximum rates on first-class dry crop soils in the three first classes of villages were Rs. 1. 12. the acre, or about Rs. 1. 3. the survey beega; and if the same proportionate rates were carried on to the two last classes of villages in the district, the average maximum would come down to between 1 rupee and Rs. 1. 1. the survey beega. The average assessment on all classes of dry crop soils, among which there are few, if any, of the first or 16-anna quality, would, of course, be very considerably below this. The remainder of the chapter, and the notes to it, appear to require no further remark, as they contain little but repetitions of what is brought forward in the first part of the chapter.

CHAP. IV.

29. The 4th chapter treats of the cost of the cultivation of cotton in Guzerat, and compares the price at which it can be laid down in Liverpool with that at which American cotton can be sold in the same market now, and what, in his opinion, the former could be brought into market at, were all the reforms in our revenue system, and in other particulars, that he considers necessary carried out. With reference to the cost of cultivation, I agree with him as to the great difficulty there exists of getting at a fair average from either official or non-official sources. The reason, however, is obvious, for the cost must vary considerably, according to the degree of adhesiveness in the soil to be cultivated, the greater tendency that weeds have to spring in moist localities, with many other causes that may affect the cost in different parts of the country, among the principal of which must, of course, be counted the scarcity or otherwise of labour. Thus the average given in page 158 may be fair enough for the Broach districts, where, I fancy, most of Mr. Mackay's inquiries were made, but it might not be by any means so for another part of the country. Some time ago I got four of the ameen patels of Dholka, all practically acquainted with the subject, to give me separately their ideas of the cost of cultivating a beegah of black soil; the average of their estimates, which differed to the amount of 6 annas only from the highest to the lowest, was Rs. 2. 8. 1., and an estimate, jointly made by the same four men, afterwards came to Rs. 2. 7. This was, however, framed on the supposition that the cultivator would have to

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hire all his farming implements, but have bullocks of his own, so that the mere expense of cultivation would be considerably below this. Supposing, however, the rate of Rs. 1. 10. per beega to be correct for Broach, I do not think the estimate for cultivating 16 beegas, supposed to be capable of producing a candy of cotton, given in page 159, gives the fair idea of the question. It is framed on the supposition that the average assessment is Rs. 2. 2. the beega; whereas, I have shown the average rate in black soil, which, in my opinion, in the absence of proper data, it is fairer to take than that arrived at after various assumptions in page 109, to be Rs. 1. 13. 2.; that the rate of assessment in the collectorate is always enhanced 20 per cent., which I have also shown to be a false assumption; and that every cultivator is obliged to borrow money to cultivate with; this, too, it must be admitted, is an unfair assumption to introduce into a calculation of this nature, and I will accordingly take the liberty to alter the account, as follows:—

Government assessment, Rs. 1. 13. 2. per beega - - -	Rs. a. p.
Cost of cultivation, at - 1. 10. 0. " - - -	29 2 8
	26 - -
	<hr/>
	Rs. 55 2 8

This gives the cost of production at 1½ d. per lb., or ¼ d. per lb. less than what Mr. Mackay's unfair assumption had brought it up to. I am not practically acquainted with the subject of the cost of production of cotton in America, nor have I materials by which to trace the increase in the price of Guzerat cotton, before it can be laid down in the market at home. The assertion in page 166, that unless the average price of cotton rose above 90 rupees, its production in Guzerat would soon be annihilated, is not borne out by Mr. Mackay's own figures; for the average price for the five years, from 1846 to 1850 (inclusive), given there, is only 81 rupees; whereas the value of the cotton exports from Broach (the chief cotton port) for the same five years, as given in page 235, appears to have increased by nearly 7 lacs of rupees.

30. The only person on this side of India competent to give a trustworthy opinion on the matters discussed in this chapter, is the Mr. Landon, of Broach, mentioned in page 167; for he understands them from actual experience. In his factory at Broach he buys the cotton direct from the cultivators, cleans it in saw-gins worked by steam-power, and screws it on his own premises; he then ships it to Bombay direct, without the intervention of other native agency but the men paid on his own establishment; and I have myself heard him say, that by looking after things himself, and thus exercising a wise economy, he fears not a native dealer in the field against him. The Chambers of Commerce, under whose auspices this book has appeared, would learn more of the true state of affairs from an hour's conversation with that gentleman than from any number of commissioners they could send out; and as he is now, I believe, on his way to England, it is to be hoped they will not lose the opportunity of doing so. This I say without an idea of disparagement of the lamented author of the present reports; for I have already shown that the mistakes he has fallen into were made through his misfortune, and not through any want of zeal or ability on his part.

CHAP. V.

31. This chapter treats of the important subject of irrigation. Mr. Mackay's premises as to the scantiness and uncertainty of the monsoon in the province of Guzerat, are perfectly correct; but the conclusions he draws from them, that the Government have only to exert themselves in constructing, or causing to be constructed, works of irrigation for those defects of climate to be remedied, are not, in my opinion, borne out by facts. Let us first take the case with reference to tanks. The country comprised within the four Guzerat Collectorates may be said, with but few exceptions, to be one vast plain; of course the general rise from the sea-coast inland need not be taken into account, as it is in all cases gradual, and to the eye imperceptible. Such a country affords no opportunity of forming embankments for the retention of sufficient of the surface drainage to allow of irrigation all the year round: the natural consequence, and not the fault of the country's rulers, is, that the tanks are no more than natural or dug hollows, with embankments of earth higher than the level of the surrounding country, calculated to raise the water as high as possible, i. e., as high as the level of the ground from which the water flows will allow it to rise without spreading itself in a sheet on all sides; if the hollows are deepened too much, the water contained in them, being lower than the level of the land below the tank, becomes useless for the purposes of irrigation, and can only serve for drinking purposes. The result is, that throughout the province the only irrigation carried on from tanks is for the raising of rice crops in the monsoon months, when only two or three waterings are taken to supply the want of moisture from the heavens: when the monsoon is heavy, rice grows in many situations, where the beds lie low, without any aid from other sources at all. To speak, then, of tank irrigation supplying the deficiencies of scanty monsoons throughout the year to the cultivator, is simply absurd, because the nature of the country will not admit of tanks fit for such being constructed. The next resource for the irrigation of the country is the construction of wells: now a moment's reflection will convince any one of the impracticability of the Government undertaking the gigantic task of attempting to introduce, with its own capital, and under the

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superintendence of its own officers, a system of irrigation throughout the country by means of such works as these, the best of which could not be made to irrigate more than from 30 to 40 beegas of land; such works must evidently be undertaken, as a general rule, by private enterprise. So long, then, as it cannot be shown that the tanks of a collectorate are in such a dilapidated state as to lead to the decrease of rice cultivation, it cannot be said that Government have neglected their duty in not attending to works of irrigation in them, where other facilities, for instance, the damming of rivers, do not exist, and have not been turned to account.

32. The only large rivers that could be turned to account by the construction of canals for irrigation are the Taptee and Nerbuddah, the former running through the Surat, and the latter the Broach Collectorate. It would, indeed, be a great blessing for parts of those two zillahs if the canals proposed by Colonel Grant, and noticed in pages 193 to 199, could be carried out; but it appears to me that Mr. Mackay has overlooked the practical part of the question, that is, whether when the canals were finished, they would be of any use in irrigating the black plains through which they would flow. If the soil were "besur," a mixture of black and goraroo, or light white sandy soil, they would undoubtedly answer; and it is not from any desire to throw cold water on the project that I make the practical suggestion that I have never seen purely black soil used for raising irrigated crops, and have often been told by cultivators, on inquiry into the cause, that it would cake too much into thick mud; this is borne out by the remark in page 198, that a hot weather crop is scarcely known in Surat or Broach, for it is not possible that if such could be raised in countries composed chiefly of black soil, they would not have been at some time or other: the gravelly tracts of Ahmedabad are misnamed, for they are those where the lighter kind of sandy soil exists, in which sweet water is procurable near the surface; whereas that found in black soil is almost invariably more or less brackish.

33. The only other rivers of any size that could be applied, were the difficulty on account of the soil mentioned in the preceding paragraph satisfactorily solved by experiment to any extent, to irrigation, are the Myhee, on the north of the Jumbooseer purgunnah, in Broach, and the Saburmuttee and its tributaries in parts of the Ahmedabad and Kaira Collectorates: an embankment, to be of any use in the former, must be formed beyond the limits of our rule in the territories of his Highness the Guicowar; for the influence of the tide from the Gulf of Cambay extends, I fancy, too far up to allow of one being made in our own territories: the quantity of water beyond the influence of the tides is too small to allow of a canal being made. The water in the Saburmuttee and its tributaries is similarly too small in quantity to admit of irrigation, except to a limited extent, by means of an embankment thrown across it. I doubt much if this even is practicable, on account of the sub-soil being generally pure sand, which would not hold the water, and the cost of embanking a river of this kind, where foundation would, if found at all, be found with difficulty, over a sandy bed that averages, beyond Ahmedabad, I should say, a quarter of a mile in breadth, would be something very great. Without a professional survey for the purpose, it would be rash to hazard an opinion on the subject of works of this nature; for even in the gates set up on the Kharee River (which runs into the Saburmuttee) a sudden rush of water has been found repeatedly to set at naught the calculations of able engineers as to the stability of the works they had erected.

34. The introduction of the survey assessments, with their comparative fixity of tenure, will do away with the objections urged by Mr. Mackay against the 30-years' lease system for the encouragement of irrigation from wells: under it the dry-crop rate will be absolutely guaranteed against increase for the period of 30 years, the benefit of all improvements during that period secured to the cultivator, and the necessity for scrutiny into his affairs done away with. On this last score, however, I must say that Mr. Mackay's objections are rather chimerical; they would be valid if urged with reference to a highly civilised community of European traders, by whom the gift of language might be used "to conceal their thoughts;" but to urge the same objections with reference to the ignorant members of a native village community, who know each other's circumstances as well as they know their own, is about as absurd as to imagine that with a little teaching they might become civilised enough to wear stiff stocks and long-tailed coats.

35. I am free to admit, notwithstanding the above remarks, that more might be done in the Guzerat Collectorates than there is in the way of attention to the repair of wells and tanks, by the introduction of more systematic and regular inspection, than is now exercised. You are aware that the Collector of a zillah is allowed on his own order, without reference to higher authority, to expend on the repair of a well or tank, the sum of 200 rupees, so long as his whole expenditure in the year does not exceed 3,000 rupees; a first assistant can similarly expend 1,800 rupees, and a second or other assistant in charge of districts, 1,200 rupees; unfortunately, however, civilians are not also civil engineers; and if they were, it would be generally impossible for them, under the pressure of other business, to superintend the execution of such works as the above, with a view to proper economy being exercised in their construction. I think, therefore, that as the progress of the revenue survey will do away with the necessity for the establishments now entertained in each collectorate, under the name of surveyors and builders, these should be converted into a kind of small road and tank department in the zillahs, on the strength of whose establishments they are borne; they should then be required constantly to traverse the districts, and report on the state of tanks, wells, and roads, either by orders on petitions issued by the
Collector,

Collector, or his assistants, or of their own accord make estimates, and see that the expenditure sanctioned on works of this nature was carried out as economically as might be compatible with the durability of the works; they would in this manner save to the State far more than the actual amount of their pay, and the wells and tanks would be systematically repaired. I believe the Collector's survey establishment in Surat are partly employed in this way now, and would beg to suggest that the plan be extended at once to the other collectorates. Suggestions for works of greater importance made by the members of these establishments, who would be able to make them from systematically examining the country, could be referred to the executive engineers of the different stations for report, and could then be referred, and, if found necessary or advantageous, carried out.

36. Before quitting this chapter, I must notice the remarks in its last paragraph, which would lead one to suppose that the remains of extensive works of irrigation, constructed in olden times, existed throughout Guzerat; now, all I can say is, that I have visited most parts of the country, and it would be strange if they had been anywhere that I should not have seen them. There are in the neighbourhood of many of the large towns magnificent tanks, built of stone, some of which may be applied to some small extent to irrigation, and there are many very fine wells and "bawurees" (wells with flights of steps down to the water) all over the country; but every one of them, I can assert with confidence, was constructed on the caprice of some private individual for religious or charitable purposes, or for the mere love of ostentation and self-glory. I have never seen a single work of any extent that would not be considered, with our more practical and utilitarian ideas, to have been constructed by an enormous waste of money.

CHAP. VI.

37. With most of what Mr. Mackay has stated in this chapter with reference to the roads in Guzerat, I am afraid that every one who has travelled much in the province must cordially agree: here he saw with his own eyes, and has only recorded faithfully what he saw; for, with the exception of the small pieces mentioned in page 218, the roads in our territories in Guzerat have been left to nature, and are mere tracts worn by the constant passage of cart-wheels. If nothing more were done to them than to have the ruts constantly filled in, and the tracts kept level under the superintendence of the establishments mentioned above, traffic would be much improved, and I think the 30 rupees a mile granted lately by Government would be sufficient for this purpose annually. For all but the grand trunk roads leading to important ports, this would, with the bridging over of deep nullahs, be all that was necessary to be done until the resources of the country were more fully developed, and more roads wanted. Such grand trunk roads from Ahmedabad to Gogo will be passing through Kaira, Baroda, and Broach, have already been proposed, and speedily set to work.

38. I trust I shall not be deemed disrespectful, when I speak generally with Mr. Mackay the apparent want of sympathy with this province, by the heads of Government. The true reason I believe to be, that it does not lie between the Presidency and other places of fashionable resort, but that its climate is considered very unhealthy; its bad name is such that one's Deccan and Bombay friends always pity one for having to reside in such an awful country. Every one who has lived in Guzerat knows that, at all events, the climate from December to February is most delightful, and these three months would afford ample time for an occasional gubernatorial tour; and where, to an intelligent mind, could be found a spectacle better worth seeing than the magnificent cultivation of Broach and parts of the Kaira Collectorate? Guzerat has not been visited, I believe, with the exception of the short visit of Sir J. R. Carnac to Baroda on political considerations, by the heads of the Bombay Government since A. D. 1821 by the Honourable Mr. Elphinstone, and I earnestly hope such may not be the case much longer. If I speak warmly for the province, my sympathies have been enlisted for its cause by the whole time of my service, with the exception of a few months at Poona, having been passed in it, and this must be my excuse.

CHAP. VII.

38. The seventh chapter is devoted to a description of the harbours of Guzerat, and their various advantages and disadvantages; and having constantly visited them all, with the exception of Bowliaree, I can testify to the correctness of Mr. Mackay's statements. The three to which, in my opinion, the attention of Government should be particularly directed, are those of Surat, Broach, and Gogo: the difficulties connected with the navigation to all the others are so serious, that I think it would be advisable, by making good roads, and any other means in the power of Government, to divert the course of trade now flowing to other ports to these three; that is to say, that of the country on the east of the Gulf of Cambay to the first two, and that from the north and west of the Gulf, and from Kattiarwar to Gogo: steamers and large country craft ply regularly to Gogo and Surat at all times of the year but about two months, at the commencement of the south-west monsoon, and native boats for the same time to Broach, although, as a small steamer has once been up there, means might be employed, by dredging, &c., to make the approach to it more easily navigable by vessels of larger tonnage. Next to these comes Tunkaria Bunder, the difficulty of the navigation to which is shown at page 255. I see no reason why the trade thence should not be diverted to Broach. Cambay is out of the question, as, in addition

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to the difficulty of access to it, goods landed or shipped there have to be carted over about a mile and a half of mud, overflowed at spring tides. Dehgam is an unimportant little place, on which no country is dependent as a place of export for its produce, as it is situated at the mouth of the Myhee, opposite Cambay.

39. The most important port at present in Guzerat, on account of the great value of its imports and exports, is Dhollera, whence goods reach the gulf by the villages of Khoon and Bowliaree. The creek leading to the former, which is the estuary of the River Bhadur, but is only navigable thus far, has been known to change its course many times within the memory of man, and has, as you are aware, one now that might be represented by a zigzag line, drawn eastward to the Gulf of Cambay, from the point where Br. (standing for Bunder), is marked on the map. Unfortunately the Bhadur is divided, about four miles above Dhundooka, into two channels, and for the last few years, notwithstanding the exertions that have been made, by the erection of temporary bunds or embankments, to direct the water in the monsoon freshes, which formerly had some effect in keeping the channel of the Khoon creek clear, into its former and legitimate course, it has made its way into the other channel, which flows but a few miles in a continuous and well-defined stream, and then spreads itself over the face of the country, until it reaches thus the Gulf of Cambay, near its head. Whether the want of water, flowing down from the Bhadur, be the cause however, or whether it be that the nature of the soil on the banks of the creek allows them rapidly to fall in, and block up the channel, certain it is that it is now only navigable for pattimars of large burden at the highest of the spring tides, and appears to be getting worse every day, so that unless something be speedily done towards remedying this state of affairs, the trade from Khoon is in danger of falling off even more rapidly than it has increased. Whether the remedy should be that of erecting a solid embankment where the water is carried off above Dhundooka (which you will recollect our visiting together), or of constructing sluices near the place where the goods are shipped, so as to keep a certain channel clear, or of diedging at the mouth of the creek, I am not competent to determine; but it appears certain that something must be done immediately, or the bunder be left to its fate. The port of Bowliaree is a much more permanent and trustworthy one, but has still the great disadvantage that it can only be approached by country boats. For these reasons, I think it is highly desirable that the trade now flowing to Dhollera should be diverted to Gogo, by the construction of a good macadamised road, for which abundant materials would be procurable close at hand, from Dhundooka, by the higher road, through Bheemnath, Burwalla, and Wulleh. This could be constructed at a comparatively trifling cost, and it would only require the bridging of three or four small streams, only one of which is affected by the tide, to keep the communication open throughout the monsoon. If this were done, the extension of the Dhollera tramway to Dhundooka would be of no advantage whatever. As it is, that down to the place of embarkation has never beaten the country carts out of the field, although it has lowered the scale of their charges, notwithstanding the wretched tracks they traverse through the mud at its side, and it is now, from the absence of superintendence of its concerns by Europeans, going fast to ruin.

40. It would seem superfluous to describe Gogo to you, who are so well acquainted with it yourself; but as this report will go beyond your office, and be seen by those who have perhaps scarcely heard of such a place, I will do so briefly. Its situation is shown on the map at the commencement of the book, on the west of the Gulf of Cambay, due west of the mouth of the Nerbuddah. It is sheltered from the violence of the south-westerly gales by the mainland bending outwards for about four miles down the coast, and by the island of Perim, on which is a lighthouse, commencing a little below the projecting point, and running southwards about two miles, at the distance of a mile or two from the shore; steamers can approach it at all times of the tide, and a good pier or mole, of from half a mile to a mile in length, would enable large pattimars to load even at low water, and ride out in safety the heaviest gale in the monsoon. It has a creek, into which large craft can conveniently enter at high water, and lie perfectly securely in all weathers; loading from the south bank of this creek is, too, safe and commodious. With all these advantages, and that of being on the direct route from the Presidency to Kattiawar, Cutch, and Scinde, I think its vast superiority to all others, as the best port on the west of the Gulf of Cambay, is established; and its importance could be increased by the direction to it of the Dhollera trade, no expense that the Government could incur in making it a first-rate harbour would be too great. Strange to say, no notice of this important port but the mere mention of its name is taken in Mr. Mackay's work. I have omitted to mention that the great disadvantage of Bhownuggur, as a port, is its having to be reached by a shallow tidal creek of nearly two miles.

41. I have now gone through the chief topics discussed with reference to Guzerat in the first part of the work, compiled from Mr. Mackay's reports, and should at once close this letter, were it not that some observations on the revenue survey system, in the second part of the work, appear to call for remark. The cavilling tone in which the liberal intentions of Government under this system are suspected, is unfair, and, as can be shown from Mr. Mackay's own words, uncalled for; for a more complete contradiction to what he here recommends, viz. binding down the cultivator to taking his lands for a certain term of years than the arguments put forth further on, in pages 313 to 315, on the liability to change in the relative value of villages and lands, could not well be given. I have already made some observations on the subject of Government being fit to be entrusted with the powers of a landlord, for landlord let it still be called, if people wish it, which are applicable to the arguments used in pages 303 to 307, and need now only allude to those in page 309, on the subject

subject of annual inspections, in order to correct any misapprehension on the point. Annual inspections under the system will only be necessary to protect the State from being defrauded of its rights, in order to ascertain whether waste lands, that nobody may have agreed to take up, have been cultivated or not without such agreement having been given; and you might as well say that a landlord at home would check improvement on a farm that he had let out to A., because he looked out to see whether B. had cultivated a common outside it, as that such an annual inspection under the survey system here is a blot on its features. The reason of the provision objected to in page 306 Mr. Mackay does not seem to have understood; it was by degrees to create a better species of tenants, by bringing together, in separate small farms, land sufficient to be cultivated with one plough and a pair of bullocks, by which standard the size of the survey fields is regulated, and get rid of the present hand-to-mouth system of cultivation of patches of ground by men who have not that amount of agricultural stock to cultivate upon, and ought consequently to take the rank of common labourers.

42. The one point that, I think, is liable to question in the survey system is that of its not guaranteeing the tenant the benefit of improvements made in his land during the course of the 30 years' fixed rental after the expiration of that time: thus, although the invariability of the rental for a certain period would tend to courage the improvement of land by those who had capital, and were prepared accordingly to embark in agricultural enterprise on the first introduction of the system, it would, on the contrary, unless some distinct pledge be given on the subject by Government, have the reverse effect with those who might obtain the means of engaging in such undertakings when more than half of the period for which the fixed rental is guaranteed may have expired. I think the benefit of all material improvements in land, such as the sinking of new wells in it, should at all events be secured to the tenant for the full term of 30 years, at whatever period of the currency of the present 30 years' lease they might be made; but as this is a point that I intend to bring specially to the notice of the local Government, it need not be enlarged upon here.

43. The question of tenant-right is one that is now engaging at home the attention of the most able men of the day; but as its solution here is a more simple matter than it can ever be in a country like England, where the relations of men to the soil are so widely different, I wish to make a few remarks on the subject. In England the Legislature have to reconcile the conflicting interests of the landlord and his tenant; if legislation lean to the former, the latter clamours for protection that he may not lose the benefits of capital expended and labour bestowed; if it favour the tenant, the landlord exclaims against the wanton interference with the rights of property. Here the State being both legislative and landlord, is in a position in which it rests with itself either to take all the advantage to itself, or bestow it all on its tenants. A wise policy, however, would not adopt either of these extremes, but endeavour to steer a middle course, leaning liberally towards its tenants, if not from any higher motive, at all events with a view to self-interest, as a trifling sacrifice in its land revenue would be more than made up to it in the improvement of its other resources that would arise from the increasing prosperity of its subjects. Agriculture will never improve in India as long as the land is cultivated by impoverished agriculturists, who borrow money to cultivate with, and whose surplus profits are in consequence wholly absorbed by those from whom they obtain the means of cultivating; liberal measures, securing to capitalists a lasting benefit from material improvements in the soil, will be the best inducement for them to come forward in their own names, and invest their money in speculations that would in the end yield them more profit than the interest they can now obtain by lending it out on agricultural securities. The tendency of the survey system is to raise by degrees a better class of peasant proprietors, with hereditary rights in the soil, subject only to the payment of my reasonable demands of the State (for it is ridiculous to suppose that these demands on land hereafter be made so unreasonable as to operate to its own detriment), and with that on land hereditary rights in the soil I think should be combined hereditary rights in the cultivation of made in it, so as to attract capital to it permanently, and not temporarily of which it is well that may interfere to a very great extent in the relations between all sorts of land, and all India, if it be not at once guarded against by an Act of Parliament, and as operating against tendency that the right of property in improvements in which of cotton have diminished, improvements to be sold in execution of the decrees of which would be the cause of the decline to cultivate the land in which they are situated; and in the price of the commodity this, the revenue authorities, whose orders are, of the other, and it would continue so to are helpless; and in order to secure the fix of the assessment reduced or even abolished, cause must be done away with; one of two things must be done.

an Act should be passed to prevent improvements being thrown lands out of cultivation, then a civil court, apart from the right to cultivate the land, should be applicable, but for the Government to guarantee, that a Mr. Willoughby would be applicable, but remain in possession of the lawful heirs of the land in the cultivation of cotton should not them, its demands for revenue will not be generally.

The former of these two plans I think will not diminish the saleable value of land, and would still not prevent, in all cases, authorities would be perplexed to determine the fair proportion to

(signed) Falkland, 10th Dec. 1834
W. Cottrell to
D. A. Friswell
any
amber
of each
of each

44. Without some further improvements of a permanent nature, of afforded by the guarantee given years

III.
Bombay.

that such improvements will be but rare, and that works calculated to last only during the period of the settlement will be constructed instead. I refer more particularly to wells, which are as yet almost the only permanent improvements that can be made. You are aware how apt the water of the best of these, especially in the Ahmedabad Collectorate, is to turn brackish; so that, in addition to the expense of making a well, there is a risk of the money laid out going for nothing in a few years. Under these circumstances, with only a 30 years' guarantee, a man might be inclined to make a well calculated only to last about that time, as he could easily by using chunam mixed with mud, or mud alone, instead of good mortar. The following terms appear to me sufficiently liberal to effect the object we have in view, as it is yet a disputed point whether a tenant is entitled to claim from his landlord more consideration on account of improvements in land let to him, than such as to allow him a fair rate of interest for the capital he may have invested in them, and, in case of neglect, compensation for the improvements effected: "The dry crop rate of assessment of a survey field to be guaranteed to be levied for a term of 30 years from the year in which a permanent well dug in it may be brought into use, and on any survey field to which the water from the well may be taken for the purpose of raising irrigated crops. At the expiration of this period, for another 30 years the dry crop assessment to be similarly levied, with the addition of 50 per cent. of whatever may be then settled as the water-rate on such field or fields, or on the well; and at the expiration of the second 30 years, the dry crop assessment to be similarly levied, with the addition of 75 per cent. of the water-rate. On the expiration of these 90 years, the lands watered from the well to be subject to full assessment."

45. In conclusion, it may be asked why I have contented myself with refuting, wherever I could, the assertions contained in Mr. Mackay's Reports, without entering into detailed explanations to show the exact state of the case, especially with reference to the pressure of the assessment in Guzerat. My answer is, that if I had attempted to do so without the proper return, to obtain which it would be necessary to search the books of each village separately for a series of years, I should have fallen into exactly the same mistakes as Mr. Mackay has, and have been much more to blame, because I should have done so with my eyes open. I have done my best in what I have said to avoid all appearance of harshness, from respect to the memory of the lamented and able author of the Reports, and with a clear conscience, to show faithfully, as far as I was able, the true state of matters, which he, in the exercise of his mission, I believe, as honestly objected to.

I have, &c.
(signed) A. Rogers,
Settlement Officer in Guzerat.

Gogo, 9 May 1854.

Territorial Department, Revenue, 10th February (No. 12) 1851.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

With reference to paragraph 11 of our Acting Secretary's letter to the address Revenue Commissioner, Northern Division, No. 1471, dated 27th February which copy accompanied our despatch, No. 36, dated 13th March to forward our further proceedings as noted in the margin, of the assessment in Goozerat on the cotton cultivation of

We have, &c.

(signed) Falkland,
J. Grey.
J. P. Willoughby.
D. A. Blane.

In the Territorial Department, Revenue,
18614 to 18622.

to Mr. Secretary Goldsmid.

471 of 27th February 1849,
on the western ports
honour to lay before
the

TO PROMOTHE CULTIVATION OF COTTON IN INDIA. 1131

III.
Bombay.

the Right honourable the Governor in Council two letters as per margin,* from the Collectors of Ahmedabad and Surat.

2. The Collector Ahmedabad attributes the falling off in the export of cotton to the extended cotton cultivation in Kattywar, and not to any over assessment on the land in his collectorate.

3. The Collector Surat submits a table from 1834-5 to 1848-9, showing the area of land that was brought under cotton cultivation, and does not attribute the decrease to the assessment, but that it is owing to the fall in prices, which he states to have declined upwards "of 50 per cent."

4th. Cotton is grown to a very limited extent in Kaira. The collector of Broach, who also was consulted, refers to his answer † to the 6th query circulated with Government circular, No. 1688 of 11th March 1848, forwarded to Government by my predecessor with his letter, No. 63 of 11th February 1849, and which for facility of reference I beg to quote here.

"6th. The margin statement gives the cotton cultivation in the Government lands of the Broach zillah for the last 13 years. The average is about (2,60,000) two lacs and sixty thousand beegahs, or half that number of British acres, adding the supposed quantity of alienated lands under cotton cultivation for the same period (80,000) eighty thousand beegahs, the whole would amount to (3,40,000) three lacs forty thousand beegahs growing cotton."

"With regard to the extension of this surface under an assumed enhanced demand for cotton, I am not of opinion that any increase could take place. It is notorious that the cultivation of cotton has been already pushed to its extreme limits in the Broach zillah, and I find that it bears an average proportion of 40 per cent. to the entire tillage of the district; comparing this fact with the established hypothesis that cotton can only be cultivated with success for one year out of three in the same ground, (in other words that it ought not to bear a greater proportion to the whole cultivation than 33 per cent.) and knowing the capabilities of the various districts, it would not appear that there is any room in Broach for the extension of cotton."

5. Since the report of Mr. Jones, the Deputy Collector of continental customs and excise, extensive improvements have taken place in our cotton experiments at Broach, and a considerable reduction in the rates of assessments. Government has it also in contemplation immediately of employing planters in the Surat and Ahmedabad districts, from which measures I anticipate much benefit to the cotton trade will be derived, but it must be borne in mind, that there is a daily increasing competition coming into action against Goozerat, caused by the improvements introduced by the revision of assessment, and construction of roads in the Decdan and Southern Mahratta country, a subject which I have alluded to in my letter, No. 2405 of 17th September last, wherein I have proposed a general revision of the rates of assessment in Goozerat.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

Revenue Commissioner's Camp, Tanna District,
Indapoor, 19 November 1850.

(No. 226 of 1850)

From E. L. Jenkins, Esq., Acting Collector of Ahmedabad, to A. N. Shaw,
Revenue Commissioner, Northern Division.

Sir,

WITH reference to your endorsement, No. 572, dated the 11th inst., and the certain information relating to the export of cotton from the port of Broach called for by the Government letter No. 1471, dated the 27th inst., I have the honour to inform you that from the information which I have on the subject, I have no reason to think that the quantity of cotton which can be said to have either increased, or decreased, of late years.

2. There is no doubt, however, that it is likely to be diminished by the fall of rain, experienced in the places where it is grown, the reason for which is, that a heavy fall is detrimental to the growth of wheat on the same land, and vice versa.

3. From the reports of the mamluts, it does not appear that the rates of assessment are excessive, and the fact of the quantity of cotton in the states of Jhallerwar and Kattywar, which are in the collectorate, may, I think, be easily ascertained.

* From Collector of Ahmedabad, of 29th 1848

† Collector's letter, No 110, of 11th March 1848

‡ These amounts were given for the cultivation of these years

Years.	Cotton Cultivation.
1834-35	1,98,015 Beegahs.
1835-36	2,74,609 "
1836-37	2,42,086 "
1837-38	2,81,667 "
1838-39	3,22,640 "
1839-40	3,07,591 "
1840-41	2,89,182 "
1841-42	2,59,499 "
1842-43	2,68,760 "
1843-44	2,17,546 "
‡ 1844-45	2,73,480 "
‡ 1845-46	2,77,043 "
1846-47	1,77,011 "

1132 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

extending over a greater tract of country in those states, the soil of which would appear to be for the most part more fertile than that of our districts.

4. With reference to the latter point, I beg to state that I am assured that a greater quantity of cotton is brought to Gogo for exportation from Jeetpoor, Dhorajee, and other places in the interior of Kattywar; and in a report of the mamlutdar of Gogo, which I have now before me, it is asserted that in the Gogo district, in which from 10,000 to 12,000 beegahs are sown with cotton annually, the return is estimated to be from one maund to one and a quarter per beegah; whereas, in the neighbouring states of Jhalewar and Kattywar, it is said to be from two and a half to three maunds in the inferior land, and from four to six in some of the best.

5. It may perhaps be as well to remark that the only places in this collectorate where cotton can be said to be grown to any great extent, are the district which I have just been mentioning, with parts of the districts of Dholka and Dhundooka; and under all the circumstances above mentioned, I beg respectfully to state that it does not appear to me to be at all surprising that upwards of two-thirds of the exports of the western ports are the growth of Jhalewar and other foreign states, as is stated to be the case in the 11th paragraph of a letter from Mr. A. W. Jones, an extract from which accompanied the Government letter under reference.

I have, &c.
(signed) E. L. Jenkins,
Acting Collector.

Ahmedabad, 30 September 1850.

(No. 315 of 1849.)

From E. G. Fawcett, Esq., Collector of Surat, to A. N. Shaw, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

In acknowledging the receipt of your circular endorsement, No. 572, dated 24th March last, requesting my opinion and report on the subject of the cotton cultivation, I have the honour to inform you that the subject noticed by Mr. Jones, which gave rise to the present reference, bears reference to the cotton cultivation in Goozerat and other parts of that country, and not to this collectorate; but on inspecting the statements of cotton cultivation in this collectorate for the past several years, I find that the last three years show a considerable decline, which seems owing principally to the very great fall in the price of late years, and also, I am told, to the exhaustion of the soil by taking crops continuously off the same land. I am also told that it is on the decline in the districts of his Highness the Guicowar in this neighbourhood, which, as far as I can gather, is attributable to the same causes.

2. The rates of assessment there seem to be generally about three and a half rupees (Rs. 3. 8.) per beegah, which is about the same as it is here; but as the Guicowar villages are mostly farmed, any accurate information on this head is not obtainable. Appended to this letter, I beg to submit a statement of the amount of cultivation for the last 15 years, and the prices prevailing for the same period, derived from information given by wealthy monowkars, from which it would appear that the prices have declined upwards of 50 per cent. the mainla

Perim, on wh southwards abv approach it at all length, would enable heaviest gale in the monso at high water, and lie perfect this creek is, too, safe and com direct route from the Presidency to all others, as the best port on importance could be increased by the Government could incur in making it to say, no notice of this important port Mr. Mackay's work. I have omitted to mention as a port, is its having to be reached by a shall	YEARS.	Extent of Cotton Cultivation in Beegahs.	Rate per Bhar of 24 Maunds.
		B. w. w.	
		42,321 4 8	From 50 Rupees to 77 Rupees.
		49,216 17 15	" 47 " 52 "
		39,877 - 15	" 50 " - "
		845 - 1	" 30 " 35 "
		19 18	" 52 " - "
		1 2	" 20 " 30 "
		1	" 40 " - "
		1	" 30 " 35 "
			" 27 " - "
			" 42 " - "
			" 30 " - "
			" 28 " - "
			" 27 " - "
			" 26 " - "
			" 27 " - "

41. I have now gone through the chief topics first part of the work, compiled from Mr. Mackay in letter, were it not that some observations on the rev. of the work, appear to call for remark. The cavilling of Government under this system are suspected, is Mr. Mackay's own words, uncalled for; for a more complete recommends, viz. binding down the cultivator to taking his than the arguments put forth further on, in pages 313 to 31 the relative value of villages and lands, could not well be given observations on the subject of Government being fit to be landlord, for landlord let it still be called, if people wish it, which ments used in pages 303 to 307, and need now only allude to

I have, &c.
(signed) E. G. Fawcett,
Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1133

III.
Bombay.
V. 18616.

MINUTE by the Right Honourable the Governor, subscribed to by His Excellency the Commander-in-Chief and the Honourable Mr. *Blane*.

THE imposition of a light and equable assessment will, no doubt, be followed by the ryots growing as much cotton as they can dispose of to advantage; and our local officers will then, if they interfere at all, rather have to guard against the cultivators being prompted by the high prices which may be obtainable during any one year, to cultivate more land with cotton than a due regard to the strength of the soil, and whatever requirements would allow of their appropriating for this one description of crop.

I shall refer to the Goozerat assessment when I take up Mr. Shaw's reports and propositions on the subject, and in the meanwhile have but further to observe that, so long as competition on the part of the native States is not favoured by the imposition of a heavier or more unequal assessment in our own districts, the extension of cotton cultivation in the former is to be desired and rejoiced at, inasmuch as it will advantage the general trade of India, the shipping interests, also the cultivators and landholders of large tracts of country, whose condition it is our earnest desire to see improved.

(signed) *Falkland.*
W. Cotton.
D. A. Blane.

9 December 1850.

MINUTE by the Honourable Mr. *Willoughby*.

V. 18617.

THE question of revising the assessment of Goozerat being about to be discussed, it will be best to defer an opinion, as to whether its amount has caused a decline in cotton cultivation until that question is disposed of. But I would now remark that the collector of Ahmedabads opinion that the assessment has not caused a decline, but that this is attributable to a decline of the value of cotton, may be, and probably is, erroneous; for it must be obvious that land producing cotton may pay a high rent when the price of cotton is high, which it cannot pay when the price of cotton has been reduced about one half. Under such circumstances an adjustment of the rent is necessary, in the same manner as wise landlords are now reducing in England their rents, in consequence of the depreciation of agriculture produce owing to the abolition of the Corn Laws.

13 December 1850.

(signed) *J. P. Willoughby.*

FURTHER MINUTE by the Right Honourable the Governor, subscribed to by His Excellency the Commander-in-Chief, and the Honourable Mr. *Blane*.

V. 18618.

THAT the assessment of land in Goozerat requires revision, there can be no doubt; I hope in a few days to be able to place before the Board an opinion on this subject, which is one that cannot but occasion me much anxious thought. But as regards the Minute of my colleague, the Honourable Mr. Willoughby, I should observe, that if the assessment on land of the description used for the cultivation of cotton is heavy as compared with that on land not adapted for that kind of crop, and if there have been a falling off in the cultivation of the former, not only as regards cotton, but other crops to the growth of which it is well suited, or if there have been a general decrease of cultivation of all sorts of land, and all kinds of crops, when the assessment may be deemed too high, and as operating against the production of cotton: if, however, though the cultivation of cotton have diminished, the land has been used for other crops, the assessment cannot be the cause of the declension of the cotton culture, which must proceed from the fall in the price of the commodity having rendered it a less profitable product than some other, and it would continue so to be, other circumstances remaining the same, were the assessment reduced or even abolished altogether.

If the declension in the culture of cotton have thrown lands out of cultivation, then the case of the corn laws cited by the Honourable Mr. Willoughby would be applicable, but does not appear to me to be so, if the decline in the cultivation of cotton should not been accompanied by a decline of cultivation generally.

(signed) *Falkland.*
W. Cotton.
D. A. Blane.

16 December 1850.

1134 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.
V. 18619.

FURTHER MINUTE by the Honourable Mr. Willoughby.

I ADHERE to my opinion, which is, that land paying a rent, say of 20s. per acre, when the price of cotton is 100 rupees the candy, may not be able to pay that rent, if from any cause the price is reduced to 50 rupees per candy. The land will either be thrown out of cultivation or be cultivated by some produce that will remunerate the farmer.

(signed) J. P. Willoughby.

17 December 1850.

V. 18620.

FURTHER MINUTE by the Right Honourable the Governor, subscribed to by His Excellency the Commander-in-Chief, and the Honourable Mr. Blane.

THERE is nothing in the Honourable Mr. Willoughby's last Minute opposed to the opinions I have expressed; I beg to refer my honourable colleague to the following extract of a letter written under date 23d September 1848 by Captain Wingate to Mr. Prideaux, and quoted before the Select Committee by Mr. Prideaux (in his evidence of 6th April 1848)*. "The only case then in which the land tax of India can impede the extension of the cotton cultivation, is when it is in excess of the rent. But even in this case it has no tendency to injure the cotton cultivation more than any other species of cultivation. Upon land actually under tillage, the assessment, however heavy, has no tendency either to encourage or discourage the cultivation of cotton, or any other particular crop. The farmer, whether his assessment be heavy or light, will cultivate the crops which pay him best, and wherever the cotton cultivation in India has fallen off, and been succeeded by that of other crops more remunerative to the farmer, no reduction of assessment, nor indeed the abolition of the land tax altogether, would avail to alter this state of things. The change might make cotton a profitable crop, but this would not be enough while another crop remained more profitable still, as the consideration of the farmer is not merely what will pay him, but what will pay him best."

(signed) Falkland.
W. Cotton.
D. A. Blane.

23 December 1850.

V. 18621.

FURTHER MINUTE by the Honourable Mr. Willoughby.

I have no further remark to offer.

25 December 1850.

(signed) J. P. Willoughby.

18622.

(No. 9975 of 1850.)

From Mr. Secretary Goldsmid to the Revenue Commissioner, Northern Division.

Sir,

THE Right Honourable the Governor in Council has directed me to communicate to you the following observations on the correspondence, submitted with your letter, No. 2978, dated 19 November last, relative to the effect of the assessment in Goozerat, on the cotton cultivation of that country.

2. The imposition of a light and equable assessment will, no doubt, be followed by the ryot's growing as much cotton as they can dispose of to advantage, and the local officers will then, if they interfere at all, rather have to guard against the cultivators being prompted by the high prices which may be obtainable during any one year to cultivate more land with cotton than a due regard to the strength of the soil and rotation requirements would allow them of appropriating for this one description of crop.

3. The question of revising the rates of assessment in Goozerat is engaging the consideration of Government. In the meanwhile I have been instructed to observe that so far as competition on the part of the native states is not favoured by the imposition of a

4. Or more unequal assessment in our own districts, the extension of cotton cultivation first preferred is to be desired and rejoiced at, inasmuch as it will advantage the general letter, of India, the shipping interests, and also the cultivators and landholders of large of the country, whose condition it is the earnest desire of Government to see improved.

of Govern.

Mr. Mack.

recommend

than the ar Castle, 31 December 1850.

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observations o.

landlord, for la

ments used in pages 30:

I have, &c.

(signed)

H. E. Goldsmid,

Secretary to Government.

Page 299.

* See printed Report, page 334.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1135

Territorial Department, Revenue.—1 February (No. 5) 1847.

III.
Bombay.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

We do ourselves the honour of laying before your Honourable Court copies of the documents noted in the margin,* having reference to the introduction of the saw-gin for cleaning cotton in the districts of this Presidency, and the best means whereby this most desirable object could be effected.

Cotton Experiments.
Belgaum and Dharwar.

2. We would particularly draw your Honourable Court's attention to the letters on this subject, dated respectively the 1st June and 16th October last, from the Government cotton planter (Mr. Channing) in Belgaum, and the Acting Collector of Dharwar. From the former, which takes an intelligent view of the subject of which it treats, and contains some valuable suggestions for the attainment of the important object of introducing a cheap and simple description of saw-gin, your Honourable Court will observe, that Mr. Channing considers, and we see no reason whatever to doubt the correctness of his opinion, that saw-gins may be constructed in this country better adapted to the circumstances and wants of the cultivators than those hitherto imported from Europe or America, and this at a price much lower (less than one-half) than the latter. In compliance with Mr. Channing's request, we have sanctioned his constructing two machines on the principle suggested by him, and we have authorised his being supplied with the tools, &c. which he requires for the purpose.

3. From the letter from the Acting Collector of Dharwar it will be seen that Mr. Mercer, the late cotton planter in that district, has, with the assistance of the village artificers, already succeeded in making up, at a very small cost, a saw-gin containing 25 saws, which is considered by competent judges to be very superior to the gins imported from America. We have caused copies of the papers on the subject of Mr. Mercer's experimental gin to be sent to Mr. Channing, in order that the latter may bring the results of the united experience of Mr. Mercer and himself to bear on the accomplishment of the object in view, in the most efficient manner.

4. The only portion of the gin machinery regarding the construction of which in this country any doubts are entertained, are the zinc washers, iron grates, and more particularly the circular saws; Mr. Mercer intended to attempt the construction of the two first articles, but the circular saws it is considered impracticable to make up in this country. In compliance with the suggestion of Mr. Mansfield, who stated that there were large supplies of the above articles lying useless at Broach, we have issued the necessary instructions for their being, if not required at Broach, transferred to Belgaum and Dharwar. But with the prospect which the papers herewith forwarded hold out of the feasibility of constructing saw-gins in this country sufficient for all our present wants, we consider it advisable to have a quantity of saws on hand, and we therefore avail ourselves of this opportunity to request that your Honourable Court will be pleased to issue the necessary instructions for our being furnished with a supply with as little delay as possible, and we would further suggest that a few might perhaps without much inconvenience be sent out by the overland route.

5. Your Honourable Court will further observe from the papers forwarded, that the Acting Collector of Dharwar, considering it necessary that a mechanic should be engaged to superintend the construction and repair of the saw-gins at Dharwar, we have made a reference to the Military Board to ascertain whether the services of such a person are procurable here, and if so, at what rate of remuneration.

We have, &c.
(signed) George Clerk.
L. R. Reid.
J. P. Willoughby.

Bombay Castle, 1 February 1847.

* Letter from the Collector of Belgaum, No. 342, dated the 4th June last, with enclosure. Mr. Channing. Letter to the Collector of Belgaum, No. 295, dated 28th ultimo. Letter from the Acting Collector of Dharwar, No. 1410, dated 16th October last, with enclosures. Letter from the Collector of Dharwar, No. 292, dated 1st ultimo. Letter to Mr. Mercer, No. 293, dated 1st ultimo. Letter to the Military Board, No. 294, of the same date.

1136 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

(No. 342 of 1846.)

From the Collector of Belgaum to Mr. Chief Secretary *Pringle*.

Sir,

IN acknowledging the receipt of your letter, dated 23d ultimo, No. 2376, and accompaniment, I do myself the honour of forwarding copy of a letter from Mr. Channing on the subject of the introduction of the saw-gin into this district, with the view to the extensive use of that machine in cleaning cotton; and I would respectfully request permission to try the experiment of setting up two machines as a test of the cost at which they can be made up by the public.

2. It is certainly highly probable that if the gearing of the machine can be obtained by the people themselves at a moderate cost, they would be ready to purchase the saws, which it is presumed would soon find their way into the market.

3. Should his Honour in Council concur in the propriety of trying this experiment, I have to request that the saws for two 25-gins may be supplied to me, and permission to submit an indent for the tools mentioned by Mr. Channing as necessary.

Belgaum, Collector's Office,
4 June 1846.

I have, &c.
(signed) *H. W. Reeves*,
Collector.

(No. 5 of 1846.)

To *H. W. Reeves*, Esq., Collector of Belgaum.

Sir,

IN respectfully replying to your letter, No. 325 of 1846, dated 27th May, with its accompaniments, forwarded for my information, and calling for any observation which such may suggest on the subject of introducing saw-gins, I beg to state that my experience among the natives of this part of the country leads me to conclude that the machine, in every way satisfactory to the Honourable Court's wishes, would be generally adopted, if reduced to a price within the means of the ryots and petty dealer to purchase, which, whilst the ready-made article has to be imported, cannot be accomplished; and I humbly suggest, for the information of his Honour the Governor in Council, that no necessity exists why such should be imported, as the resources of the country are such as to admit of their being made up in the districts where they are required for use, at a rate so much less than the price now paid for them, as to be a great saving to Government; and their being so made up would tend greatly to facilitate their introduction, and prevent the risk of injury by transporting them which now exists, rendering them often unserviceable at the very time they are most required, independent of their generally requiring some alteration to adapt them to the cleaning of native cotton; and then deficient of fly-wheel and other necessary gearing, which has to be made up to make them complete, and adds greatly to the expense of the machine. In making the above statement, I beg to observe, I do so with confidence. Having during (20) years past been constantly with native artificers, I am aware of what they can accomplish with proper instruction; and feeling the necessity of reducing the price of the saw-gin, so as to place it within the reach of the native purchaser, I have taken every means of ascertaining the practicability of doing so; and having obtained from Messrs. Millington & Co., of Sheffield, the best makers of cotton gin-saws in England, the price of the saws, which is the only portion of the gin necessary to be imported, being above the skill of the native artificers to fabricate, I am enabled to state that the machine can be made up complete in all its gearing, and ready for work, for a sum less than one-half of what is now paid for the same incompleté at Bombay, and of equal if not superior material and workmanship. As the saws are articles which pack in a very small compass, and are very reasonable in price, the purchase and freight of 1,000 would be but an item of the expense now incurred by transporting the machines ready made through the country. Under these considerations, and with a view to facilitate the introduction of the saw-gin throughout this collectorate, I respectfully solicit the permission of his Honour the Governor in Council to my constructing two of these machines, as *musters* of what can be done; the necessary saws being, I am led to believe, available both at Broach and Dharwar, in sufficient quantities to admit of my setting furnished with 25 from each place, and on the gins being completed allowing them to be tested by committee, and compared with those now imported from America, by a fair day's work; when, should they be approved of, I have no hesitation in recommending that the cost of each complete, with every necessary, will not exceed the following estimate, more especially after one or two are made, and the workmen become acquainted with the method of constructing them.

Page 299.

ESTIMATE.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1137

III.
Bombay.

ESTIMATE.

	Rs.	a.	p.
25 saws, original cost at Messrs. Millington's at 2s. 6d. each, 3l. 2s. 6d. - - - - -	31	4	-
Freight from England (supposed) at 20 rupees per 1,000 - - - - -	-	8	-
Carriage from Bombay, 20 rupees per 1,000 - - - - -	-	8	-
Timber, "well seasoned teak" - - - - -	20	-	-
Screws of sorts - - - - -	3	-	-
Iron (country) - - - - -	25	-	-
Lead - - - - -	4	-	-
Zinc } for boxes, cylinders, and oil cups - - - - -	15	-	-
Brass } - - - - -	8	-	-
Buffalo hide for belt - - - - -	3	8	-
Shoemaker's work for ditto - - - - -	1	4	-
Charcoal - - - - -	8	-	-
Chaff - - - - -	1	-	-
Bratlees (cowdung cakes) - - - - -	2	-	-
Carpenter's work - - - - -	30	-	-
Smith's ditto - - - - -	30	-	-
Sawyer's ditto - - - - -	5	-	-
Coolies, hammermen, &c. - - - - -	10	-	-
TOTAL - - - Rs.	198	-	-

2. In submitting the foregoing estimate, I beg to state that it is framed after careful and due consideration and experience, and that I feel confident of being able to reduce it considerably, if a sufficient number of the machines are ordered to be made, to prevent waste of material. The only obstacle which presents itself at first being want of efficient tools, I respectfully solicit, should my suggestion meet the approbation of his Honour the Governor in Council, being furnished with the following articles from the Ordnance Department at Belgaum, viz.:-

One smiths' anvil, medium size; one sledge hammer, ditto; one standing vice, ditto; one chest of smiths' tools (country); one ditto of carpenters' tools.

3. These tools will be sufficient for the construction of 100 gins if required, and their value divided among that number will add but little to the cost of each, say five rupees at the utmost, which, when compared with the price of the incomplete machine, would be little more than half, without risk of damage by carriage or other extra expenses, which I am led to hope will be taken into consideration, and induce my being permitted to carry my suggestion into execution; as reducing the price of the machines to that amount would, I have every reason to hope, be the means of their being generally adopted.

I am, &c.
(signed) T. W. Channing,
Cotton Planter.

Naginhal, 1 June 1846.

(No. 295 of 1847.)

From Mr. Chief Secretary Pringle to the Acting Collector of Belgaum.

Sir,

I AM directed by the Honourable the Governor in Council to acknowledge the receipt of Mr. Reeves' letters, Nos. 342, 699, and 786, dated respectively the 4th June, 19th October, and 24th November last, on the subject of the introduction of the saw-gin into your collectorate; and, with reference to the first of these communications, to observe, that the letter from Mr. Channing, therewith forwarded, takes an intelligent view of the subject of which it treats, and contains some valuable suggestions for the attainment of the important object of introducing a cheap and simple description of saw-gin. The Governor in Council considers Mr. Channing's experiments, with this view, to be deserving of all the aid which Government can afford, and he desires me to forward herewith copies of a letter, dated the 16th October last, from the acting collector of Dharwar, and its accompaniments, on the subject of certain similar experiments made by Mr. Mercer in that district, and to request that you will communicate them to Mr. Channing, in order that he may bring the results of the united experience of Mr. Mercer and himself to bear on the accomplishment of the object in view in the most efficient manner.

2. The Governor in Council sanctions the construction of two machines on Mr. Channing's principle, as suggested by Mr. Reeves. The Military Board will be requested to cause the articles enumerated in the 2d para. of Mr. Channing's letter, dated 1st June last, to be supplied to him with as little delay as possible; and Mr. Mercer, who is now in Belgaum, will be requested to report whether any of the spare saws, which it is understood are now in the hands of the Military Board, can be made available for the two gins proposed to be constructed.

Bombay Castle,
28 January 1847.

I have, &c.
(signed) R. K. Pringle, of each
Chief Secretary, each.

III
Bombay.

(No. 1410 of 1846.)

From the Acting Collector, Dharwar, to Mr. Chief Secretary, Pringle.

Sir,

I HAVE much satisfaction in reporting, for the information of Government, that Mr. Mercer has succeeded in making up a saw-gin containing 25 saws. As Captain Wingate, has turned his attention to the subject, I requested him to inspect and report on it, and I now beg to forward a copy of his letter.

2. From that officer's report you will perceive that Mr. Mercer has, with the assistance of the village artificer, succeeded in constructing a gin very superior to, and at a much smaller cost, than those imported from America; the price of the American gins of this calibre being 350 rupees, that of Mr. Mercer 150 rupees. Captain Wingate truly says, that the importance of being able to construct the saw-gins in this country can hardly be over-estimated, as the chief obstacles to their general introduction, viz, their cost, and the inability of the artisans in the district being unable to construct, or even repair them, are now removed.

3. With some of the gins spare sets of zinc washers, iron grates, and circular saws were forwarded, and Mr. Mercer is now employed in making up as many gins as these spare sets of articles will allow him, which, I believe, will be sufficient for five or six more gins.

4. The Honourable the Governor is aware the cultivation of the New Orleans cotton and the introduction of the saw-gin must progress simultaneously, for the cultivation cannot increase unless there are sufficient number of saw-gins to clean the cotton. With the gins that are now in the collectorate the whole of last year's crop will not be cleaned till the 1st of February, and therefore, unless we have more gins we shall not be able to buy more New Orleans cotton than we did last year; but a much larger quantity has been planted, and there are no purchasers at present besides Government, and the cultivation of it by the ryots having been undertaken under the supposition that Government will purchase it, we shall be obliged to do so, and it is therefore highly desirable, nay imperatively necessary, that we should increase the number of gins as much as lies in our power, and fortunately this can be done at a very little expense to Government, for I understand there were large supplies of spare sets of zinc washers, iron grates and circular saws forwarded to D. Burn, which have never been applied to any use, and are now rusting in the Government stores at Broach. With the exception of the above articles, all the other component parts of the gin can be made up by Mr. Mercer, and I therefore beg to recommend that no time should be lost in transmitting those articles from Broach to this collectorate.

5. Under whose superintendence the cotton experiment in the Southern Mahratta country will be conducted hereafter is at present uncertain, but whether the American cotton planters remain here or not, the services of a good European mechanic will be required to superintend the making up new machinery and keeping up the old ones in repair; and I request that no time may be lost in placing one at my disposal for employment in the cotton experiment.

6. From Captain Wingate's report you will see there will be no difficulty in manufacturing every part of the saw-gin except the circular saws; but as there are large supplies of zinc washers and iron grates lying useless, belonging to Government, and spoiling from rust at Broach, I request they may be forwarded.

7. The successful result of Mr. Mercer's labours to instruct the village artisans in the art of making and repairing the saw-gin, as well as the reduction he has effected in its cost, entitle him, in my humble opinion, to very great credit.

8. I beg to forward a memorandum of the cost of Mr. Mercer's gin.

Collector's Office, Camp Hooblee,
16 October 1846.

I have, &c.
(signed) S. Mansfield,
Acting Collector.

(No. 149 of 1846.)

To S. Mansfield, Esq., Acting Collector, Dharwar.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1271 of 22d ultimo, requesting my opinion as to the efficiency of a saw-gin made up by Mr. Mercer.

The new gin has 25 saws, and during our late visit to Khoosigul made for the purpose, compared its rate of working with one of the American gins of a like number of saws, Mr. Ma has only been for a few months at work, and is considered by Mr. Mercer to be respect as good as any other machine of the same class in this collectorate. Both than the as were well set up with their driving gear in good order, and were worked by the relative at winches on either side of the driving-wheel; the first trial was made with observation seed cotton, and the men made to work at their ordinary rate of speed, without landlord, for exertion. The 56 lbs. of cotton were cleaned by Mr. Mercer's new gin in 37 minutes, being a difference in favour of the former

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1839

III
Bombay

former of 7½ minutes, or nearly 25 per cent. Another trial was made with 20 lbs. of seed cotton, and the men were made to use their utmost exertions and work the machines with every possible speed; the 20lbs. were cleaned by the new gin in 8½ minutes, and by the American in 9 minutes; but the men at the latter were evidently more distressed than those at the former, and two of them had been replaced by fresh men during the experiment.

3. The superiority of the new gin over the best of the American gins is thus most decisively established, and is to be accounted for by its parts working more truly and being better fitted together than those of the American gins; the framing also of the new machine, being of teakwood and carefully put together, is much stronger and more durable; than the pinewood frame of the American machine, and in addition to this superiority in point of performance and durability, the new gin has the further recommendation of being cheaper. According to an estimate shown to me by Mr. Mercer, the cost of the new machine will not exceed 150 rupees, which, I believe, is less than one-half that of the American. Mr. Mercer is about to attempt the casting of the zinc washers used in the construction of the cylinder of circular saws, which forms the most important part of the gin; and should he succeed in this, the only article connected with the machine not to be found on the spot will be the circular saws themselves, which being now made in England in large quantities for the American market, and admitting of being packed in very small bulk, could be landed in this country at little over prime cost, and in the event of the saw-gin coming into general use here, would doubtless be regularly imported into Bombay like other articles of hardware.

4. The importance of being able to construct the saw-gins in this country can hardly be over-estimated, and I cannot refrain from an expression of satisfaction at this successful issue of Mr. Mercer's exertions, which removes the chief obstacles to the introduction of the saw-gin, connected with the high original cost of the machine and the objections to the use of an article which the artisans here were unable to construct or even keep in repair.

I have, &c.

(signed) G Wingate,
Superintendent Revenue Survey and Assessment,
Southern Mahratta Country.

Superintendent's Office, Dharwar,
6 October 1846.

STATEMENT of Cost of a Gin.

	Rs.	a.	p.
Teakwood	5	6	-
Brass	4	1	6
Iron bar	1	3	-
Iron	4	-	-
Charcoal	4	-	-
12 Dozen screws at 2 annas per dozen	1	8	-
1 Bottle cocoa-nut oil	-	3	6
1 Carpenter's hire for 2 months	20	4	-
1 Ditto ditto ditto	6	-	-
2 Coolies assisting gin apprentice for 2 months at Rs. 3. 8. per month	14	-	-
1 Coolie assisting carpenter for 2 months, at Rs. 3. 8. per month	7	-	-
54 Coolies sawing wood at 2 annas per each	6	12	-
Cowdung cakes	-	3	9
Brass wire	-	2	-
Glue	-	2	-
4 Tin boxes for oil at 1 anna 6 pies per each	-	6	-
Paid to coolies for bringing different articles from Hooblee and Dharwar	1	8	-
1 Gin apprentice's pay for two months	24	-	-
25 Saws at 1 rupee per each	25	-	-
26 Washers at 8 annas per each	13	-	-
1 Iron bar	2	8	-
2 Iron tops at 1 rupee per each	2	-	-
1 Iron screw	-	12	-
26 Grates at 2 annas per each	3	4	-
TOTAL	147	3	9

(signed) W. R. Mercer,
Superintendent of Cotton Experiments of each
South Mahratta Country 3d. each.

Khoosigul,
16 October 1846.

296—Sess. 2.

III.
Bombay.

(No. 292 of 1847.)

From Mr. Chief Secretary *Pringle*, to the Collector of Dharwar.

Sir,

I AM directed by the Honourable the Governor in Council to acknowledge the receipt of Mr. Mansfield's letter, dated the 16th October last, No. 1410, with its enclosure, reporting on the subject of a saw-gin constructed by Mr. Mercer.

2. In reply I am desired to observe that this report is very satisfactory, as leading to the expectation that by reducing the cost of the saw-gins to a point within the means of the poorer classes, and simplifying their construction so as to bring them, as respects most of their parts, within the ability of the ordinary village artificers, the general extension of the use of those machines by the natives of the country may be attained. The attention which Mr. Mercer has given to this subject, and the success which has attended it, are, in the opinion of the Governor in Council, very creditable to him.

3. Adverting to the 4th para. of Mr. Mansfield's letter under notice, I am directed to remark that if the saw-gin is, as that gentleman states, indispensable to the preparation of the New Orleans cotton, it is to be regretted that he should have encouraged the people to cultivate, and pledged the Government to purchase during the present season, more of that species than he had a certainty of being able to procure gins for.

4. Before directing the transfer from Broach to Dharwar of the spare zinc washers, grates, and saws, said to be at the former place, the Governor in Council has considered it advisable to make a reference to Mr. Mercer, whose experience of the wants of both districts will enable him to advise Government on the subject. Without reference, however, to the receipt of these articles from Broach or not, an immediate application will, I am directed to state, be made to the Honourable the Court of Directors for a supply of saws.

5. With reference to Mr. Mansfield's 5th para., I am desired to observe that Mr. Hawley will doubtless be able to superintend the construction and repair of the machinery in Dharwar during the time he may remain there; and that in the meantime the Military Board will be requested, after communicating, if necessary, with you, as to the qualifications required, to ascertain and report whether a fit person is procurable to conduct those duties after Mr. Hawley leaves.

Bombay Castle,
28 January 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

(No. 293 of 1847.)

From Mr. Chief Secretary *Pringle* to the Superintendent of Cotton Experiments at Broach.

Sir,

I AM directed by the Honourable the Governor in Council to transmit, for your information, the accompanying extract (para. 4) of a letter from the Acting Collector of Dharwar, No. 1410, dated 16th October last, and to request that you will report whether there are, as therein stated, spare zinc-washers, grates, and saws at Broach; and if so, whether, with reference to the wants of both Broach and Dharwar, of which your former and present position will enable you to judge, these articles can be conveniently transferred to the latter district.

Bombay Castle, 28 January 1847.

I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

(No. 294 of 1847.)

From Mr. Chief Secretary *Pringle* to the Military Board.

Gentlemen,

I AM directed by the Honourable the Governor in Council to transmit, for your information, the accompanying extract (para. 5) of a letter from the Acting Collector of Dharwar, dated the 16th October last, No. 1410; and to request that you will, after communicating, first necessary, with that officer, as to the qualifications required, ascertain and report whether services of a fit person to superintend the construction and repair of the machinery of the cotton experiments in that collectorate, are procurable in Bombay, and of what rate of remuneration.

Mr. Ma
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I have, &c.
(signed) *R. K. Pringle*,
Chief Secretary to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1141

REVENUE LETTER from the Honourable the Court of Directors, dated 28 April,
No. 7 of 1847.

(No. 7 of 1847.)

Our Governor in Council at Bombay.

1. We learn from your letter, of the 1st February last (No. 5), that Mr. Mercer has succeeded, with the aid of the village artificers only, in constructing a saw-gin for cleaning cotton, at a cost of about 150 rupees, which is considerably below that of the gins supplied from America; and also that Mr. Channing, the Government cotton planter in Belgaum, has been furnished with materials for constructing two saw-gins, on a plan proposed by himself, the cost of which he estimates at 198 rupees each. Captain Wingate's report of the powers of Mr. Mercer's saw-gin is very favourable, and we anticipate the greatest advantages, both from the reduction of the cost of the machines, and from the circumstance that native artisans are able, not only to keep them in repair, but to construct them in the first instance.

2. The only parts of the machines which it is stated cannot be manufactured in India, are the circular saws, and we have resolved to comply with your application for a supply of these articles to the extent of 500; 100 of which will, agreeably to your request, be forwarded by the overland route.

We are, &c.
(signed) *H. St. G. Tucker.*
J. L. Lushington.
&c. &c.

London, 28 April 1847.

Territorial Department, Revenue, 15 October (No. 48) 1847.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WITH reference to our despatch, No. 5, dated the 1st February last, and to your Honourable Court's reply, No. 7, dated the 28th April following, intimating your intention to send out to this Presidency a supply of 500 circular saws for saw-gins, 100 of which you stated would be forwarded by the overland route (none of which, we beg to remark, have as yet arrived), we beg to forward, for the information of your Honourable Court, the accompanying copy of a letter with its enclosures from the Revenue Commissioner, Southern Division, dated the 2d ultimo, submitting an application from Mr. Channing, the Government cotton planter in charge of the experiments in progress in the Southern Mahratta country, for 2,500 circular saws, with which he proposes to make up 100 gins of 25 saws each.

2. With reference to this communication, we request that your Honourable Court will be pleased, for the reasons therein given, to cause the supply of these articles which you have determined to send out, to be increased to the above number, and that they may be procured of the size and dimensions, and from the manufacturers (Messrs. Millington & Co., of Sheffield) indicated by Mr. Channing.

3. The Government of Bengal, having, in a letter dated the 27th ultimo, intimated in pursuance of the instructions communicated to that Government in your Honourable Court's despatch, No. 4, dated 14th July 1847 (para. 4), that 130 circular saws, now in store there, are available for transmission to this Presidency, we beg to state that, as the size and description given of them appear exactly to correspond with those of the saws proposed to be obtained from England, and as Mr. Channing is very anxious to receive an early supply of those articles, it is our intention to request the Bengal Government to send these 130 saws to be forwarded to Bombay with as little delay as possible.

Cotton Experiments.
Southern Mahratta Country.
Requesting a further supply of circular saws for saw-gins.

We have, &c.
(signed) *L. R. Reid.* of each
J. P. Willard. each.

Bombay Castle, 15 October 1847.

III.
Bombay.

(No. 2183 of 1847.)

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

Sir,

WITH reference to para. 3 of my letter of 6th July last, No. 1518, I have the honour to transmit one dated 11th ultimo, from the Collector of Dharwar, with enclosure from Mr. Channing, and to recommend for the immediate adoption of Government the proposition therein contained, viz. the procuring from England by the earliest opportunity 2,500 saws, of the size described in paragraph 2 of Mr. Shaw's letter, and all of the same size, for the reason assigned in Mr. Channing's letter (para. 3).

2. With reference to the 5th para. of the Collector's letter, I am doubtful of the advantages of authorising Mr. Channing to apply direct for saws, or of ordering more than the first supply, till it is seen whether those made from it are really purchased by the natives. Should they continue anxious for them, more can easily be procured, but I would rather see the supply below, than above their demands.

3. In para. 3, the Collector states his opinion of the advantages of transferring the gins to native dealers, and quotes para. 12 of my letter of 12th April, to show that such is not my opinion. In my letter* of 21st June last, to Government, No. 1347 (para. 2), I deprecated the above interpretation, to which, however, it would seem that the Collector still adheres.

4. Mr. Channing has at present materials to construct seven new gins; Government, in their letter of 30th July last, No. 3186, sanctioned the Collector's indenting on Belgaum for the necessary tools, and this the Collector promises (paragraph 4) to do immediately.

5. The circumstances stated in Mr. Channing's last para., will, I trust, be viewed by Government as encouraging: a detailed statement accompanies, showing how Mr. Channing forms his estimate of the cost of the gins, viz., Rs. 168. 6. 4. each, of twenty saws.

Poonah,
Revenue Commissioner's Office.
2 September 1847.

I have, &c.
(signed) E. H. Townsend.
Revenue Commissioner, S. D.

No. 1258 of 1847.—Territorial Department, Revenue.

To E. H. Townsend, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to submit for your consideration an original letter addressed to me by Mr. Channing, Government cotton planter, requesting the sanction of Government to his being permitted to make up in this country 100 saw-gins, to be sold to such of the inhabitants as would, in the opinion of Mr. Channing, readily purchase them, if tendered at the price for which he estimates they can be presented in the market, viz. Rs. 168. 6. 4., each gin containing 20 saws.

2. For the above purpose, Mr. Channing begs that Government will commission from England 2,000 or 2,500 saws of the following dimensions, stated in the margin,† which he calculates will cost, including charges of freight and carriage, from about 2,600 to 3,200 rupees, as it may be determined to construct the gins of 20 or 25 saws; but he does not appear to have included package or insurance, and perhaps a few other trifling items in his estimates. He recommends that the saws should be procured from Messrs. Millington & Co. of Sheffield, and gives his reasons for so doing, and a statement exhibiting their prices.

3. I have always advocated the measure of transferring the saw-gins into the hands of such native proprietors as would purchase them, and am of opinion, if a machine can be manufactured, which, in the item of saving of labour alone, will pay for itself in two or three years, that there can be no doubt such an article will meet with a ready market amongst the cotton merchants of this country. Those of Gudduck have recently proposed purchasing twelve of the Government saw-gins, but to which proposition I have as yet given no reply, first I am inclined to think, from the tenor of the 12th para. of your letter to Government, letter No. 692, of the 12th of April last, that the measure might not be considered by you of the advisable. I have myself little doubt but that the merchant, or ryot, who will come of Government and purchase a saw-gin, will take care of it, and use it much more carefully than Mr. Mould could one hired from Government. On the one hand he uses his property, and knows recommending it with a screw loose, or when requiring a slight repair, he is injuring himself; than the observation on the relative

landlord, for was forwarded to the Collector on 5th ultimo, No. 1877.
ments used diameter, ten inches. Diameter of centre for shaft, two inches. Seven teeth per inch.

on the other hand he is using the property of Government, and his object being to clean as much cotton as he can with it, a loose screw, or wanting nail, which did not immediately disable the machine, although ultimately working a serious injury to it, gives him no great concern.

4. Mr. Channing alludes to there being at present sufficient saws left at Khoosigul to construct seven new gins, of 20 saws; but before he can commence upon the work of making them up, it is necessary to be furnished with the tools applied for by him in May last, noticed to your department by my letter of the 15th idem, No. 766; this sanction from Government has been received by your endorsement of the 5th instant, and the indent will be accordingly made on the arsenal in Belgaum.

5. It appears unnecessary to proceed through the details of Mr. Channing's letter; his remarks seem to me judicious; and I trust, as he will shortly have the assistance of Mr. Vary's services, that Government will sanction the application he has made for saws to the extent of 2,000 at present, with an annual supply of 500, and as it would be desirable to avoid unnecessary delay, I would venture to suggest that Mr. Channing, after having consulted with Mr. Vary, should be allowed to order from Messrs. Millington & Co. the quantity of saws above specified, viz. 2,000, with an annual supply of 500. Submitting his application open to Government for its approval and transmission, and that Messrs. Millington & Co. should be instructed to forward the articles at once to Bombay, either to the care of Government or their private agent, by which means I am of opinion that an agency for the supply of saws, wholly independent of Government, might soon be established in India, tending greatly to facilitate the introduction of saw-gins into common use in cleaning cotton.

I have, &c.
(signed) A. N. Shaw,
Collector.

Dharwar, Collector's Office,
11 August 1847.

(No. 49 of 1847.)

To A. N. Shaw, Esq., Collector, Dharwar.

Sir,

In accordance with your directions, I respectfully forward you a statement showing the amount for which 100 gins can be constructed, the whole of the material (saws excepted) procurable in the country, and I would solicit your attention to the fact, that a (20) twenty-saw-gin may be constructed in the country on the estimate I have furnished, for Rs. 168. 6. 4., and that, at that price, native sowcars would not fail to become owners of machines, and bring them generally into use for clearing their staple, both native and exotic, as I have repeatedly heard them express themselves as being prevented from purchasing only from the high price of the machine.

2. From 50 to 60 gins, I have no doubt, would be immediately purchased by different sowcars, and after the first season the demand would continue for a very simple reason viz., the facility with which they could throw cotton into the market with such machines in their own possession, as at the opening of each picking season, should prices rule high, I have every reason to believe the sowcars of Beteegheree alone would purchase almost any number of gins at the above price, so as to forward a part of the new crops to Bombay before the setting in of the monsoon, which would be, perhaps, from 10 to 20 per cent. more valuable, besides giving a ready return for the capital expended, to say nothing of the saving of expenditure in housing, watching, and destruction from damp, and the advantage arising from new cotton (the produce of the Southern Mahratta country), reaching Bombay in the months of April and May, a thing never yet succeeded in from the length of time necessary to clear it from seed by the foot-roller, and the machinery having been employed exclusively in cleaning of exotic cotton only. There are at present thousands of bales of indigenous cotton at different places on the road to Compta and Vingorla (some of them the produce of 1845-46) which were despatched with a view of reaching the bunders in time for transmission, nearly the whole of which may have done so had machines been in general use, and of which the dealers now seem to be fully aware.

3. I have stated saws alone as the only portion of the gin necessary to be obtained from England, and respectfully insert in the margin,* an extract of a letter from Messrs. Millington & Co., of Sheffield, obtained by me for the purpose of ascertaining the prices of different articles required in constructing a gin, and on carefully calculating the expenses of making brushes and zinc cylinders, find they can be made in the country equally good for a price little above what the freight and carriage alone would amount to, which, added to their price in England, would so materially swell the price of the machine as to prevent natives from purchasing them. In the event of Government deciding on making up any number

* Extract from a letter received from Messrs. Willington & Co., Sheffield. The price of each separate article you have inquired for are as follows:—Best cast steel gin-saws, 2s. 6d. each. Shaft for 25 saws, 3l. each. Zinc cylinders, 1s. 6½d. each. Brushes, 2s. 6d. each.

III.
Bombay.

number of gins, I would respectfully solicit, that in ordering saws from England they should be directed to be of one pattern and size (as per margin),* the great utility of which would be enabling every gin to be constructed on one plan and size, and, in the event of a saw breaking, another being immediately substituted in its place; whereas the gins at present in use, being fitted up with saws of different patterns, as to centring, &c., the greatest difficulty is found in replacing a broken saw; the same objection exists towards the whole of the gins received from America, which, independent of the final material of which they are composed, are invariably of different sizes and shapes, so that no portion of a broken gin, however good in itself as an article, can be used in repairing another machine. I have no hesitation in recommending Millington's saws as the best to be procured, as those of his manufacture now in gins working since I first joined the cotton experiment are, as good as the first day, whilst some in the American gins, at work only since March last, are useless, from the inferior material they are composed of; the freight I have assumed at 20 rupees per 1,000, a sum, I have no doubt, much above what it will actually cost, as saws pack in a very small space, and would take many thousand to make a ton, either by weight or measurement. The price of transmission from Bombay I have also shown as high as it is possible to be charged, to prevent disappointment, and which, I have no doubt, will be found much less.

One or two great advantages will arise in making up any number above five or six gins; first, the great saving of material; secondly, the practicability of hiring workmen for the cutting out and preparing the different portions, at a lower rate than would be available if one or two machines only were made, the superior workmen being employed in putting them together, and giving the necessary finish to the work. This will, I am led to believe, reduce the price of each machine at least 10 per cent., and I trust much more.

There are at present sufficient new saws of the requisite pattern at Khoosigul to construct seven gins of 20 saws each, and this size, I would beg to state, would be found the most profitable and advantageous, as they can be worked with (6) six men, whilst anything larger requires (8) eight, and would be more portable an article for removing from one village to another. The time required for making 100 gins will depend on the season the work commences, as village artificers are more available in September, October, November, and December than at any other time, and it will be necessary to have the gins ready by January, when the gin-learners should be present to set up the machines, on the proper performance of which a great deal depends, and for which allowances are made in the statement of cost. With the material once in my possession and the tools applied for (as per margin†) provided, I have every reason to expect 10 gins per month, to be finished and ready for transmission to any place they may be required.

The number of saws required from England to construct 100 gins would be 2,000 or 2,500, according to the size decided on, with from 50 to 60 extra, in case of breakage or damage on the voyage, with an annual supply of 500 afterwards, to keep up the regular supply. The country supplies as per statement are, I am led to believe, always available in the markets of Hooblee, Dharwar, and Belgaum, and would, as soon as a demand appeared, be procurable in any quantity.

The price of cleaning indigenous cotton by the foot-roller varies in different parts of the Southern Mahratta country; the average I believe to be 500 lbs. of kuppas per rupee. A good 20 saw-gin will clean 30 maunds of 28 lbs. each per day, at an expense of (Rs. 1. 2.) one rupee and two annas, including oil and repairs to belts. This may be considered as a fair average of its daily work for one season (if properly set up), working from March till October, when some slight repairs will be necessary, for which, if 10 rupees be allowed annually, which is more than sufficient, except in case of removal to any distance, will admit of its having cleaned 1,56,240 lbs. of kuppas for 220 rupees, or 710 lbs. per rupee, saving to the owner Rs. 92. 7. 8. each season, and thereby paying for itself in two seasons, and remaining in a good sound state, if proper care has been taken of it.

In conclusion, I would respectfully state that the ryots appear delighted since the issue of orders for their selling to whom they choose, and will likely plant to a great extent; those of Hoolgoor, in the Bunkapoor talooka, are consulting together regarding buying a gin among them, for the purpose of cleaning their own produce on the spot, which will be much more profitable to them. Should they decide on doing so, I may hope to see their example followed in many villages, and the machine brought into general use for cleaning both native and exotic cottons, for which they will be certain of finding purchasers, as the dealers will be always glad to buy it ready cleaned to their hand.

I have, &c.
(signed) T. W. Channing, Cotton Planter,
Southern Mahratta Country.

4 August 1847.

* Outer diameter, ten inches. Diameter of centre for shaft, two inches. Seven teeth per inch.

† One turner's lathe, sanctioned by Government in their letter, No. 1016, dated 21st April 1847, to Revenue Commissioner. Twenty-four files of sorts; two rasps; one screw-plate, with taps large, Europe; one ditto, ditto, small, Europe; one braces, carpenters', with bits, Europe; one ditto, smith's, ditto, Europe; one sawhand; six chisels, carpenters'; six ditto, joiners'; applied for in the 6th para. of my letter, No. 28, dated 13th May 1847.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1145

III.
Bombay.

STATEMENT showing the Cost of Constructing from one Saw-gin to 100, complete with Driving-wheel and Stand, Flue, Seed Box, Belts, &c., the whole Material (Saws excepted) procurable in the Country, and the Machine fitted up in a condition for work.

	One Gin		100 Gins of 20 Saws.	100 Gins of 25 Saws.
	Of 20 Saws.	Of 25 Saws.		
	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
Saws, at 1 a. 4 p. each	25 - -	31 4 -		
Freight from England - supposed at 20 rupees per 1,000	- 6 9	- 8 -		
Carriage from Bombay	- 6 9	- 8 -		
Timber, well seasoned, first class, sufficient for flue, seed box, and driving-wheel, frame, and body of gin	20 - -	20 - -		
Screws, of sorts	3 - -	3 - -		
Iron, of sorts	25 - -	25 - -		
Brass	8 - -	8 - -		
Zinc	15 - -	15 - -		
Lead	4 - -	4 - -		
Buffalo hide for belts	3 8 -	3 8 -		
Shoemakers' work	1 4 -	1 4 -		
Charcoal	8 - -	8 - -		
Chaff	1 - -	1 - -		
Bratlees (cowdung cakes)	2 - -	2 - -		
Carpenters (Gin learners employed as carpenters and smiths)	24 - -	24 - -		
Smiths - About 25 days' work for each gin	29 - -	29 - -		
Sawyers	5 - -	5 - -		
Coolies as hammermen, bellows-boy, and with carpenter	10 - -	10 - -		
Six days' work to each gin by one gin learner, in setting up and fitting for work	2 8 -	2 8 -		
	187 1 6	193 8 -		
Deduct 10 per cent., if more than 5 or 6 are made	18 11 2	19 5 6		
TOTAL - - - <i>Rs.</i>	168 6 4.	174 2 6	16,839 9 4	17,415 10 -

4 August 1847.

(signed) *T. W. Channing*, Cotton Planter,
Southern Mahratta Country.

Territorial Department, Revenue, 10 January (No. 1) 1848.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

We do ourselves the honour to report, with reference to our despatch, dated 15th October last, No. 48, that we have received, through the agents of the Peninsular and Oriental Steam Navigation Company, 100 of the 500 circular saws which your Honourable Court intimated your intention of forwarding for the use of the cotton experiments under this Presidency.

We have, &c.
(signed) *George Clerk.*
Willoughby Cotton.
L. R. Reid.
J. P. Willoughby.

Bombay Castle, 10 January 1848.

III.
Bombay.

Territorial Department, Revenue, No. 13 of 1848.

To the Honourable the Court of Directors for Affairs of the Honourable,
East India Company, London.

Honourable Sirs,

IN continuation of our letter to your Honourable Court in this department (No. 1), dated the 10th ultimo, reporting the receipt of 100 of the 500 circular saws which your Honourable Court intimated in your despatch (No. 48), dated the 15th October last, your intention of forwarding for the use of the cotton experiments under this Presidency, we beg to state that the remaining 400 saws were received per "Malabar," and have been found to be in perfect order, and ready for use.

2. Three hundred and fifty of these saws have been despatched to Dharwar, and the remaining 150 to Khandeish, for the use of the cotton experiments in those collectorates.

3. We also beg to report that more saws being urgently required, we have obtained the promise of 132 from Calcutta, and purchased for 750 rupees, sixty saw-gins in the possession of Messrs. Remington & Co. of this place. We earnestly solicit the early attention of your Honourable Court to the request made in paragraph 17 of our letter of the 31st ultimo, No. 11, for a large addition to 5,000 saws which we understand from your despatch of the 8th September last, No. 17, to be now on their way from England.

We have, &c.
(signed) *George Clerk.*
Willoughby Cotton.
L. R. Reid.
J. P. Willoughby.

Bombay Castle, 10 February 1848.

REVENUE LETTER from the Court of Directors, to the Government of Bombay,
dated 12 January (No. 1) 1848.

Para. 1. WE now reply to your letter in this department, dated the 15th October (No. 48) 1847, informing us that you had not at that date received the 500 circular saws for saw-gins, promised in our despatch of the 28th April last (No. 7), and submitting an application for a further supply of 2,500 circular saws, to be made up into hand saw-gins by Mr. Channing, the Government cotton planter in the Southern Mahratta country.

2. Of the 500 saws alluded to in our despatch of the 28th April, 100 were despatched overland by the steamer "Indus," on the 16th June last, and the remaining 400 were shipped in the "Malabar" on the 11th August.

3. In our despatch of the 8th September last (No. 17), we informed you that we should forward to you with the least practicable delay, a further supply of 5,000 gin-saws. Of these, 2,000 have been shipped on the Lloyd's under despatch, and the rest will be forwarded as they are completed.

4. The pattern on which these saws should be made was arranged by Messrs. Mercer and Blount, in communication with Mr. Laird, when they were at Liverpool on their way to America. Mr. Blount, on his return, recommended some slight alteration to be made in the shape and set of the teeth, and 1,500 of the saws will be furnished according to his suggestion.

London, 12 January 1848.

(signed) *H. St. George Tucker.*
J. L. Lushington.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 11⁴⁹

III.
Bombay.

REVENUE LETTER to the Court of Directors from the Government of Bombay,
dated 14 January (No. 5) 1848.

WITH reference to para. 12 of our despatch, dated 31 October 1846 (No. 41), reporting proceedings connected with the removal of Dr. Burn from the office of superintendent of cotton experiments in Broach, we have the honour to forward the accompanying copy of a letter from the Revenue Commissioner, Northern Division (No. 2014) dated the 23d ultimo, from which your Honourable Court will observe, that there existed no real foundation for the accusations brought against the officers of the Broach Collectorate.

(signed) *George Clerk.*
Willoughby Cotton.
L. R. Reid.
J. P. Willoughby.

Bombay Castle, 14 January 1848.

(No. 2014 of 1847.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government,
Bombay.

Sir,

I HAVE the honour to acknowledge the receipt of Mr. Chief Secretary Pringle's letter, No. 3503, of 7th October 1846, relative to certain allegations contained in Dr. Burn's Progress Reports on the cotton experiments at Broach.

2. Availing myself of my present visit to ascertain the sentiments of the present Collector, Mr. Davies, since appointed to the office, he assures me that he has seen no reason to believe that any want of cordiality in promoting the introduction of the saw-gins is, or ever has been, entertained by his establishment, neither has any suspicion to that effect been expressed by Mr. Mercer or Mr. Simpson, who have since had charge of the experiment. Seeing also that in the reports in question, Dr. Burn expresses himself hardly less guardedly towards Government than towards the Broach authorities, the allegations against the latter may safely, I think, be attributed to his infirmity of temper rather than to any more real foundation; and as the matter is now one of old date, it is not, I assume, the desire of Government that I should enter into any detailed investigation.

I have, &c.
(signed) *D. A. Blane,*
Revenue Commissioner, S. D.

Revenue Commissioner's Camp, Broach District,
Unclesur, 23 December 1847.

Territorial Department, Revenue, 8 April (No. 26) 1848.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

WITH reference to paragraph 19, of our despatch, No. 19, dated the 1st May 1847, we have the honour to transmit for the information of your Honourable Court, the accompanying copies of correspondence quoted in the margin,* relative to the employment of Mr. Vary (the engineer alluded to in the above quoted paragraph), who was placed in charge of the cotton-cleaning machinery at Dharwar, under the orders of Mr. Channing.

Cotton Experi-
ments, Dharwar.

Reporting a gra-
tuituity of 300 rupees
to Mr. Vary, Engi-
neer, in conse-
quence of his
removal from the
cotton experi-
mental farm at
Dharwar.

2. Mr.

- * Letter from Mr. Vary, dated 16 March 1847.
- Reference to the Military Board, dated 18 March 1847.
- Reports by the Military Board, No. 1927 and 2534, dated 21 April and 12 May 1847.
- Extract Paras. 1 and 2 of Government Letter to Military Board, dated 9 June 1847, No. 2357.
- Extract Paras. 1 to 3 of a Letter from the Military Board, 25 June 1847, No. 3716.
- Reply to Military Board, dated 22 July 1847, No. 2903.
- Letter from the First Assistant Collector in Charge, Dharwar, dated 8 March 1848, No. 439, with Enclosure.
- Minute by the Honourable the Governor, dated 17 March 1848, subscribed to by the Honourable Board.
- Reply to the Collector of Dharwar, dated 21 March 1848, No. 1638.

III.
Bombay.

2. Mr. Vary was employed on a salary of (250 rupees) two hundred and fifty per mensem, being the same as that assigned to Mr. Laidlaw, the engineer, under the superintendent of cotton experiments at Broach. In addition to his salary, Mr. Vary applied for house-rent and horse allowance, but as neither of these allowances had been granted to Mr. Laidlaw (who had applied for, and been refused house-rent), they were not conceded to Mr. Vary, since we were unwilling to grant to the latter individual any advantages not enjoyed by the former, unless there should be some difference in his duties to render them in his case more necessary.

3. Mr. Vary's services have since been dispensed with entirely, in consequence of the arrival of Mr. Frost from England under engagement with your Honourable Court, and his appointment to the charge of our cotton experiments at Dharwar. As, however, Mr. Vary received no pay until he joined his appointment, and no travelling allowance, and as a prospect of a grant of horse allowance in arrears had been held out to him, and the time during which we were able to retain him in employ was very short, in consideration, moreover, of an accident which has occurred to him, and which will prevent his obtaining service for some time, we have resolved to grant him a gratuity of (300 rupees) three hundred, and we hope this measure will meet with the approbation of your Honourable Court.

Bombay Castle, 8 April 1848.

We have, &c.
(signed) *L. R. Reid.*
J. P. Willoughby.

Territorial Department, Revenue, 14 April (No. 30) 1848.

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

Honourable Sirs,

Cotton experi-
ments, Dharwar.

WITH reference to the 3d para. of our letter to your Honourable Court, No. 26, dated the 8th instant, intimating that in consequence of the arrival of Mr. Frost we had dispensed with the services of Mr. Vary, engineer attached to the cotton experiments in Dharwar,* we beg to report that in reply to a call made upon him to state whether there was work for two engineers in the cotton experiments in the Southern Mahratta country, the Revenue Commissioner, Southern Division, submitted a letter from the Collector of Dharwar, handing up one from Mr. Blount, cotton planter, stating that in the present state of the cotton gins there is ample work for two engineers in the operations under his control. The Revenue Commissioner and Collector concurring in this opinion, we sanctioned the re-employment of Mr. Vary for the present.

Bombay Castle,
14 April 1848.

We have, &c.
(signed) *L. R. Reid.*
J. P. Willoughby.

EXTRACT of a Letter from the Court of Directors to the Government of Bombay,
dated 4 July (No. 6) 1848.

Cotton.

Para. 1. WE now reply to your letters of the dates noted in the margin,† which report your proceedings connected with the measures in progress for improving the cultivation of cotton under your Presidency.

2. We

* Reporting the re-employment of Mr. Vary, Engineer. Rev. Cons. 1848, 2 February, V. 1259; 16 March, V. 1917 & 1918. From the Revenue Commissioner, S. D., No. 1157, dated 5 April 1848, with Enclosure. Reply to Revenue Commissioner, S. D., No. 2129, dated 12 April 1848.
† Letter dated 30 November (No. 50) 1847. Letter dated 10 January (No. 1) 1848. Letter dated 14 January (No. 4) 1848. Letter dated 14 January (No. 5) 1848. Letter dated 29 January (No. 9) 1848. Letter dated 31 January (No. 11) 1848. Letter dated 10 February (No. 13) 1848.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1149

III.
Bombay.

2. We approve the arrangements reported in your letter of the 31st January last (No. 11) for supplying us in the current year with as large a quantity of saw-ginned cotton from the districts of Broach, Khandeish, Dharwar, and Belgaum as can be cleaned by the machines which are now available for that purpose. It is by no means our wish that Government should continue to enter the market as purchasers to a large extent of the New Orleans cotton, if it finds a ready sale at a price proportionate to its relative value over the native cotton among the local dealers. We had indeed rather that you should abstain from any unnecessary interference with the regular course of trade, being satisfied that when the superiority of the New Orleans cotton is generally recognised, as appears to be now the case in the Southern Mahratta country, it may be safely left to make its own way, and that the Government may confine its operations to the supply of seed, and the introduction of improved methods of cleaning cotton. For the present, however, we think it desirable that we should be supplied annually with a moderate quantity of saw-ginned cotton, of both the indigenous and American descriptions, in order that we may possess the means of bringing it from time to time directly under the notice of the manufacturers of this country.

3. We have made arrangements for supplying you with the least possible delay with an additional number of 5,000 gin-saws.

No. 73 of 1849, Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

We do ourselves the honour to lay before your Honourable Court copies of the proceedings noted in the margin,* having reference to certain gin-saws and files received by us from England, per "Owen Glendower" and "Eliza."

2. These saws and files appear to be those promised in para. 3 of your Honourable Court's despatch, No. 6, of the 4th July last, and in reporting to us their arrival, the superintendent of stationery stated, that the number of gin-saws received per "Owen Glendower," was short by three of the number shipped, namely, 2,000; and that 75 saws per "Eliza," had been destroyed by salt water. The other saws were reported to have been all more or less damaged, but they could, he stated, be cleaned previous to their transmission to their destination.

3. Mr. Malet was requested, in conformity with the regulations for examining civil stores, printed on the packing list, immediately to obtain and submit the fullest information regarding the short delivery, the appearance of the cases, and the damage done to the contents, and whether every precaution noticed in these regulations was observed on this occasion. Instructions were issued by us for the saws which had been slightly damaged, being cleaned, and for the sale, for what they would fetch of the 75 saws stated to have been destroyed, provided they were past all use.

4. Under date the 3d March last, Mr. Malet replied, that the boxes containing the saws were apparently received in good condition, and bore no appearance of having

* Rev. Cons., 31 January 1849, V. 983 to 83 D. Rev. Cons., 1 March 1849, V. 2604 to 2608. Rev. Cons., 21 March 1849, V. 3783 to 3785. Rev. Cons., 4 April 1849, V. 4016 and 4017. Rev. Cons., 2 May 1849, V. 5611 to 5615. Letter from the Superintendent of Stationery, No. 123, dated 13 April 1849. Letter from ditto, No. 98, dated 23 March 1849. Letter from the Accountant-general, No. 101, dated 17 March 1849. Letter from the Honourable Company's Solicitor, No. 153, dated 23 March 1849. Reference to the Accountant-general, No. 2084, dated 24 March 1849. Report by ditto, No. 26, dated 13 April 1849. Reference to the Honourable Company's Solicitor, No. 2585, dated 14 April 1849. Report by ditto, No. 190, dated 16 April 1849. Reference to the Accountant-general, No. 2599, dated 16 April 1849. Report by ditto, No. 32, dated 27 April 1849. Minute by the Honourable Board, dated 4 May 1849. Letter to the Accountant-general, No. 3073, dated 9 May 1849.

III.
Bombay.

having been opened before. These were opened in the presence of the Captain of the ship, when the deficiency alluded to was discovered; and the precautions noticed in the regulations had been duly observed.

5. The 75 saws stated to have been destroyed were entirely useless for the purpose for which they were intended, and, under the circumstances reported in the document stated in the margin,* it does not appear to us that the owners or underwriters of the ship can be called on to make good the damage done to them; they have been sold for Rs. 28. 2.

6. In order to guard against loss in future, we beg on this occasion to recommend for adoption the suggestion made in the 3d para. of the letter from the superintendent of stationery, No. 79, of the 3d March last, that the packing notes be put in each box of civil stores, as is done in the case of stationery boxes.

7. The number of gin-saws and files received from England is as follows:—

	Gin Saws.	Files.
Per "Owen Glendower" - - - - -	1,997	144
Per "Eliza" - - - - -	2,989	—
Total - - - - -	4,986	144
Deduct, damaged by salt water, and sold by auction - - - - -	75	—
Total - - - - -	4,911	144

8. They have been distributed in the following manner:—

To the Collectorate of Khandeish - - - - -	1,200 saws.
" " Broach - - - - -	811 "
" " Belgaum - - - - -	1,200 "
" " Dharwar - - - - -	1,700 "
Total - - - - -	4,911 saws.

and the files have been furnished to each collectorate in the proportion they bear to the saws.

We have, &c.
(signed) *J. P. Willoughby.*
D. A. Blane.

Bombay Castle,
12 May 1849.

Territorial Department, Revenue, No. 105 of 1849.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

Rev. Cons., 1849:

2 May, V. 5522
and 5523. 16 May,
V. 6143 to 6145.
13 June, V. 7534
to 7537. 11 July,
V. 8869 to 8873.

WE have the honour to acknowledge the receipt of your Honourable Court's despatches, Nos. 4 and 5, dated respectively the 7th and 14th March last, the former intimating the shipment to this Presidency, on board the "Duke of Lancaster," of eight cases, containing two cottage saw-gins each, and forwarding a report submitted on them by Dr. Royle, and the latter enclosing an invoice of these machines, and a memorandum by Mr. Petrie, explanatory of the proper mode of setting them to work.

2. On the arrival of these gins the superintendent of stationery convened a committee for the purpose of examining them, and your Honourable Court will observe

* Letter from the Accountant-general, No. 101, dated 17 March 1849. Letter from the Honourable Company's Solicitor, No. 153, dated 23 March 1849. Report by the Accountant-general, No. 26, dated 13 April 1809. Report by the Honourable Company's Solicitor, No. 2585, dated 14 April 1849. Report by the Accountant-general, No. 32, dated 27 April 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1151

observe, from their report (copy of which forms an accompaniment to this letter), that the iron parts of those noted in the margin were broken in several places. We have issued instructions to our Mint-master for the repair of these machines, and would take this opportunity to bring to the special notice of your Honourable Court the cause assigned by the Committee for the damage sustained by the gins in question, viz. the careless manner in which they had been packed.

III.
Bombay.

A, No. 2. B, No. 1.
B, No. 2. B, No. 3.

3. According to the invoice received from your Honourable Court, 14 of these gins are of iron, and two of wood, the former being for distribution, and the latter for models. As it appeared from the last para. of Mr. Petrie's memorandum, that they were adapted only for American cotton, we have not deemed it necessary to send any of them to Broach, and have resolved to distribute them as follows:—six iron gins to Dharwar; five iron gins to Belgaum; three iron gins to Khandeish; one wooden gin, with spare parts, to Dharwar; one wooden gin, with spare parts, to Belgaum.

4. We have instructed the collectors to whose districts these gins are to be sent, to submit, after the necessary trial, the report required in para. 3 of your despatch of 7th March last, and to report how, in their opinion, the views expressed in your 4th para. can best be carried out.

Territorial Department, Revenue, 16 January (No. 3) 1850.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

FROM the correspondence noted in the margin,* your Honourable Court will observe, that of the 32 cottage saw-gins received per ship "John Spencer," (the shipment of which was intimated to us in your Honourable Court's letter of 30th May last, No. 9), 21 were found broken, and had to be repaired by our Mint-master.

Cotton Experiments.

2. The whole have been forwarded to the Sattara districts, in compliance with the request of the Commissioner, contained in his communication of the 31st October last, No. 138, copy of which accompanied our despatch, No. 140, dated 17th November last.

3. The superintendent of stationery is of opinion that the damage done to the saw-gins in the present and former instances, is to be attributed to improper packing, and has suggested, that in future, each machine should be carefully packed in a strong box. We beg to recommend that this suggestion be acted upon.

We have, &c.

(signed) *Falkland.*
Willoughby Cotton.
J. P. Willoughby.
D. A. Blane.

Bombay Castle, 16 January 1850.

Territorial Department, Revenue, No. 12 of 1850.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

IN continuation of our letter, No. 3, of 16th ultimo, we beg to inform your Honourable Court that we have duly received per ship "Orleana," the thirty (30) saw-

* Rev. Cons., 3 September 1849, V. 11321. Rev. Cons., 26 September 1849, V. 11612. Rev. Cons., 18 October 1849, V. 12669 to 12673. Rev. Cons., 19 December 1849, V. 15333 and 15334. Letter from the Superintendent of Stationery, No. 526, dated 18 December 1849.

III.
Bombay.

(30) saw-gins, of whose transmission we were advised in your despatch of 15th August last, No. 15.

2. Thirteen (13) of these saw-gins were received in a broken state, and are being repaired at our Mint.

We have, &c.
(signed) *Falkland.*
Willoughby Cotton.
J. P. Willoughby.
D. A. Blane.

Bombay Castle, 14 February 1850.

Territorial Department, Revenue, No. 16 of 1850.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WITH reference to para. 8, of your despatch No. 16, dated the 12th September last, regarding the injury done to the staple of cotton cleaned by the saw-gin, we do ourselves the honour to transmit, for the information of your Honourable Court, the accompanying copy of a memorandum, No. 312, dated 30th ultimo, from the Revenue Commissioner, North Division, with its enclosed communications from the Collector of Khandeish and the Assistant Superintendent in charge of the cotton experiments in that province.

We have, &c.
(signed) *Falkland.*
Willoughby Cotton.
J. P. Willoughby.
D. A. Blane.

Bombay Castle, 15 February 1850.

EXTRACT Para. 8 of Revenue Letter from the Honourable the Court of Directors, dated 12 September, No. 16 of 1849; alluded to in Revenue Letter, dated 15 February, No. 16 of 1850.

Para. 8. We observed that many samples of cotton received by us, which have been cleaned by the saw-gin, have been reported to have had their staple much cut by the gin. We think that this may be owing to too great velocity being given to the gin in the process of cleaning. At all events, it is of much importance that the proper mode of working the instrument should be carefully ascertained by experiment, since the power of a cutting instrument is greatly increased by the velocity with which it is made to act.

(No. 312 of 1850.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

SUBMITTED, with reference to Mr. Secretary Goldsmid's letter, No. 7146 of 30 November last, as containing the information therein called for. The Revenue Commissioner very respectfully begs to remark that, speaking on this subject with Mr. Landon, he informed him that in America cotton is ginned with much greater velocity than has been usual in this country, and that from an experiment he himself tried in Broach, he found the cotton cleaned with the greater velocity was preferred in Manchester.

2. The Revenue Commissioner's impression is, that the cotton alluded to in the Honourable Court's despatch was probably injured by neglect of care in cleaning, and allowing the saws to grate against the bars, thus dragging the staple through the sides instead of passing above the saws, occasioned by neglectfully setting up the gin on uneven ground.

(signed) *A. N. Shaw,*
Revenue Commissioner, Northern Division.

Revenue Commissioner's Camp, Broach,
30 January 1850.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1153

(No. 115 of 1850.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

III.
Bombay.

Sir,

With reference to your endorsement, No. 2492, dated the 8th ultimo, calling for any remarks I may have to offer on the subject of the injury done to the staple of cotton cleaned by the saw-gin, I have the honour to submit the reply (No. 3 of 2d January 1850) of Mr. Price, the assistant superintendent in charge cotton experiments, to a reference which I made to him. From this document you will perceive the mode adopted by Mr. Price to temper the edges of the saws before subjecting cotton to their operation, and it would seem from this that the American gin, when properly used, has not the effect described, of injuring the staple of cotton.

2. I would beg to suggest that the Honourable the Court of Directors be requested to send information whether the means adopted in Candish has been effectual in obviating the injury to the staple of the cotton consigned from this zillah to the Honourable Court.

I have, &c.
(signed) *A. Elphinston*,
Collector.

Khandeish Collector's Office, Dhoolia,
21 January 1850.

(No. 3 of 1850.)

To *A. Elphinston*, Esq., Collector, Khandeish, Dhoolia.

Sir,

ADVERTING to your endorsement, No. 1826, of the 28th ultimo, and with reference to extract para. 8, of a despatch from the Honourable the Court of Directors, No. 16, appended to a letter from Government, No. 7146 of the 30th November last, to the address of the Revenue Commissioner, Northern Division, regarding the injury done to the staple of cotton cleaned by the saw-gin, and requesting my report, and to state whether I made any regulation for the velocity of new gins at first; and also did I think the using of sand to take off the roughness of new gins is necessary; I beg to state that, having blunted the sharp edges of the teeth of the gin saws by a temporary contrivance I had resorted to for the purpose, before making them up into gins, there appeared to me to be no necessity for lessening the velocity of the new gins, after the saws had undergone the necessary process of being passed for a whole day through sand, which operation I think is indispensably necessary before making use of them.

2. The contrivance I had recourse to was to fit on an iron shaft about 50 to 60 saws with thin slips of wood between each, and pinned at both sides to keep them tight, and this made to revolve on its axis, resting on the two ends of a box filled with sand, by which operation, which was continued for a whole day, I found that it had entirely removed the irregularities and roughness of the teeth of the saws, and rendered them quite smooth, and this I humbly consider is the only effectual remedy for preparing the saws for use; while to prevent the injury complained of, it is necessary that the circular saws be kept, while revolving, quite clear of the front and back grates of the saw-gin, to effect which adjusting screws have been purposely added to the late constructed gins, in order to obviate the chance of their injuring the staple of the cotton subjected to the process of being cleaned by them.

I have, &c.,
(signed) *T. Price*,
Assistant Superintendent Cotton Experiments
in Charge.

Superintendent's Office, Dhurrungaum,
2 January 1850.

Territorial Department, Revenue, No. 39 of 1850.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

In continuation of our despatch, No. 16, dated 15th February last, we have the honour to transmit the accompanying copy of a letter, No. 1911, dated 12th April last, from the Revenue Commissioner, Southern Division, with its enclosed communications from the Superintendents of cotton experiments in the Southern Mahratta country, regarding the injury done to the staple of cotton cleaned by the saw-gin.

We have, &c.
(signed) *Willoughby Cotton*.
D. A. Blane.

Bombay Castle,
9 May 1850.

III.
Bombay.

(No. 1911 of 1850).

To *H. E. Goldsmid*, Esq., Secretary to Government, Bombay.

Sir,

IN reply to your letter, No. 7145, of 30th November last, relative to the injury done to the staple of cotton cleaned by the saw-gin, I have the honour to submit the reports dated the 19th and 31st December last, from Messrs. Channing and Blount, Superintendents of the cotton experiments in the Southern Mahratta country, expressive of their opinions on the question, and received with the collector's endorsements, quoted in the margin,* which remained through oversight undisposed of in this office.

2. The remarks of the Superintendents appear practical and worthy of consideration. Mr. Channing shows that when the gins are not strongly made, or are in a position to be shaken, while being worked, or when worked above or below a certain rate of speed, there is a likelihood of injury resulting to the staple of the cotton. A long time must, I fear, elapse before the natives will be induced to attend to such niceties in the management of their gins.

3. Mr. Blount's 3d para. suggests the importance of specific information being always requested from the authorities in England, as to the particular cotton to which their strictures may refer, both as to the place of its production, the season to which it belongs, the ship by which it was imported, and the description of cotton (Indian or American), of which it consisted; particulars which will obviously add much to the value of the remarks of commercial men in England on the cottons exported from this office.

Revenue Commissioner's Camp, Nehr,
12 April 1850.

I have, &c.
(signed) *E. H. Townsend*,
Revenue Commissioner, Southern Division.

(No. 111 of 1849).

To *H. W. Reeves*, Esq., Collector, Belgaum.

Sir,

WITH reference to your letter, No. 607, dated 13th instant, forwarding me a copy of the Honourable Court's despatch, on the subject of cotton being cut in the fibre by cleaning in the saw-gin, I would beg to state as my opinion, that during six years' experience in the cotton experiment, I have always observed, that where the gin is driven in a steady manner, with a revolution of from 180 to 190 per minute, the cotton is separated from the seed with as little injury as it is possible to do it even by hand, but where the velocity is increased or lessened, some injury is done to the fibre, as the steady roll of the cotton in the fall of the gin is disturbed, for this very reason I have always been an advocate for the gins being driven by bullock or horse-power, when it is easy to regulate the motion to one determined speed, and keep it so without the alteration that must necessarily attend it at present in changing the men at the winch, &c.

2. There are, however, times when gins will cut the staple, in spite almost of any amount of care that may be bestowed on them. This is when the frames, from being frail and weak, become loose and rickety, allowing the saws to swerve against the grates; and for this reason gins should always be constructed of strong double frames, so as to withstand the pressure and strain of the belts, and should be firmly fixed to the ground, to prevent them getting out of the true position whilst working. This is one of the principal things to be looked to, where left entirely to the natives, as few of them have the least idea as to whether the machine is running square and steady or not.

3. A good strong framed gin, well set up and secured, and driven at a proper rate of speed, cannot injure the staple.

Belgaum, 19 December 1849.

I have, &c.
(signed) *T. W. Channing*,
Superintendent Cotton Experiment,
Belgaum Collectorate.

(No. 629 of 1849.)

TRUE copy forwarded to the Revenue Commissioner, Southern Division, in reply to his endorsement, No. 4623, dated the 6th instant, as he fully concurs in the opinion expressed by Mr. Channing, cotton planter.

Belgaum Collector's Camp, Boblashwar,
27 December 1849.

(signed) *H. W. Reeves*,
Collector.

* Belgaum, 27 December 1849, No. 629. Dharwar, 7 January 1850, No. 33.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1155

(No. 91 of 1849.)

III.
Bombay.

To *W. W. Bell*, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to acknowledge the receipt of the communication noted in the margin* received under cover of your endorsement, No: 1697 of 1849, and beg to remark, in reference to para. 8 of the despatch of the Honourable Court of Directors, that the district from whence the cotton came, which is reported to have been much cut in cleaning by the gins, is not specified. I cannot, therefore, tell whether the cotton complained of was from this district or not.

2. I would beg to state, I am aware that if the saw-gin is not properly constructed and worked it will injure the staple of the cotton. This fact has not been lost sight of in constructing the gins in this district, and it has engaged the constant attention of myself and the engineer attached to this establishment. I have made repeated comparisons and examinations of the cotton cleaned on the different gins worked in this district, and I cannot perceive that the staple is materially broken by the cleaning process. On comparing cotton cleaned by the gins with fibre pulled off the seed with the finger, the difference in length of fibre is barely perceptible.

3. If the cotton complained of was the produce of this district, it, I suppose, was the crop of 1847-48, and received in England in the latter year. That crop was very deficient in strength of staple; and it may have been more injured in cleaning than would have been the case had the staple been ordinarily strong. This, coupled with the fact that all the cotton of this district is unequal in staple, not only the produce of a particular section, but even in the same village, and in the same pod, this inequality of staple may be seen in all cotton; and to this fact I have no doubt may be attributed the shortness of much of the fibre, and not to having been cut by the gins.

I have, &c.
(signed) *J. M. Blount*,
Superintendent of Cotton Experiments.

Khoosigul, 31 December 1849.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 22 January 1851.—V. 779 to 783.

(No. 96 of 1851.)

From the Revenue Commissioner, North Division, to Mr. Secretary Goldsmid.

Sir,

In laying before the Right Honourable the Governor in Council the correspondence noted in the margin,† I have the honour to observe that it is a point on which some difference of opinion exists, as to the speed at which a saw-gin should be worked, and that with a view of determining this question I have endeavoured to elicit information.

V. 779-

2. I have received no reply to my calls on this subject from the collector of Khandeish, which is not perhaps necessary, but as the Indian Government has proposed an exhibition of the saw-gins in Calcutta, I would respectfully suggest that one point to be determined should be the speed, &c. &c. at which they should be worked, as, doubtless, a good machine improperly used might cut and destroy the staple and fibre of the cotton.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

Revenue Commissioner's Camp,
Tannah Districts, Kelvee Mahim,
11 January 1851.

(No. 2777 of 1850.)

To *J. M. Davies*, Esq., Collector, Broach.

Sir

I HAVE the honour to request the favour of your stating your opinion and obtaining that of the Superintendent of cotton experiments, his Assistants, and private merchants on the following questions, on which some difference of sentiment exists:

.780.

1st. What

* No. 7145 of 1849. From *H. E. Goldsmid*, Esq., Secretary to Government, with Extract, para. 8, from the Honourable Court of Directors, dated 12 September 1849, to *E. H. Townsend*, Esq., Revenue Commissioner, S. D. No. 4433 of 1849. From *E. H. Townsend*, Esq., Revenue Commissioner, S. D., to the Collector of Dharwar.

† To the Collector of Broach, No. 2777, dated 28 October 1850. From the Collector of Broach, No. 242, of 11 November 1850. From Revenue Commissioner, S. D., No. 4822, of 29 November 1850, with accompaniment. From Revenue Commissioner, S. D., No. 71, dated 4 January 1851, with accompaniments.

III.
Bombay.

- 1st. What should be the dimensions of the saw used in cleaning New Orleans cotton?
- 2d. What number of teeth to the inch should the saw contain?
- 3d. The speed at which the saw should be turned?

2. In addition to the above information, you are requested also to have the goodness to make any remarks practically applying to the working of the saw-gin, showing its defects and reasons for cutting the staple of the cotton when injudiciously used, and to draw up a few concise and short rules for setting up a saw-gin, and the manner in which it should be worked.

Revenue Commissioner's Camp,
Tannan Districts, Mahableshwar,
28 October 1850.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

(No. 242 of 1850.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 2,777, of the 28th ultimo, relative to the elucidation of certain points connected with the use of the saw-gin as an instrument for cleaning New Orleans cotton.

2. There being no longer a Superintendent of cotton experiments in Broach to whom I could make an official reference for the information desired, and being wholly unable to afford it from my own store of experience, I addressed a private communication on the subject to Mr. Landon, forwarding him at the same time a copy of your letter. Mr. Landon's answer has just reached me, and, in submitting a copy of it for your perusal, I trust I may be pardoned for remarking that, while Mr. Landon's hesitation appears to be quite reasonable, his reply has closed the only source to which I had access for the purpose of answering your letter.

Broach, Collector's Camp, Mehgaum,
11 November 1850.

I have, &c.
(signed) *J. M. Davies*, Collector.

My dear Mr. Davies,

It is my present intention to become a competitor for the Government prize of 5,000 rupees to be given in Calcutta in 1852, when I will endeavour to give, for the benefit of all concerned, a complete practical demonstration of my views upon all the points alluded to in Mr. Shaw's letter, a copy of which accompanied your note of yesterday. Should my views prove of less practical value than those of others on the forthcoming occasion, I should only be misleading the inexperienced in the meantime by explaining them now. Under other circumstances I should, I assure you, have been most happy to have complied with your request.

Yours, &c.
J. Landon.

(No. 1242 of 1850.)

To *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement, dated 7th November, No. 4560, attached to a letter from the Revenue Commissioner, Northern Division, in which I am desired to state my opinion, and obtain that of the Superintendent cotton experiments, on three questions connected with the construction and use of the cotton saw-gin, to make any remarks practicable, applicable to the working of that machine, and to draw up a few concise rules for setting it up and working it.

2. I beg to forward copy of the reply of Mr. Channing to the reference I made to him for as full an answer as I am able to afford.

3. As I am neither a mechanic nor a cotton fancier, I am unable to offer any practical remarks myself, or frame any rules.

Belgaum, Collector's Office,
19 November 1850.

I have, &c.
(signed) *H. W. Reeves*,
Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1157

(No. 144 of 1850.)

III.
Bombay.

To *H. W. Reeves*, Esq., Collector of Belgaum.

Sir,

WITH reference to the correspondence regarding saws and saw-gins, accompanying your letter No. 1206, of yesterday's date, I have the honour to submit the following replies to the questions contained in Mr. Shaw's letter.

1. The dimensions of the saws for any gin should, in my opinion, vary according to the size of the machines; those containing the smaller number, say for instance, four, should be fitted with 8-inch saws, as the fall of the gin cannot be made sufficiently large to contain work for 10-inch saws, and the kuppas becomes choked in the gin; 10-inch saws for gins from 7 to 20 saws is, I believe, the best size, as the propelling motion can be given to them better by hand-power than those of a larger size; but where cattle or steam-power can be used, and the rotary motion kept at one steady rate, gins of a larger size, and with 12-inch saws, would, without doubt, be found best adapted, but are too heavy for manual labour, and from the hold they take on the kuppas, cannot be kept sufficiently regular in their work, or going sufficiently fast by hand-power to obtain the advantage of their additional size.

2. The number of teeth to an inch of saw it is rather difficult to determine, so as to ensure the best rate of work; but those containing seven and eight teeth are as yet the best I have met with; there is, however, one thing connected with the tooth of a cotton saw which I would gladly see altered, as the present description must, from its peculiar form, tend more or less to cut the staple, until the edges are worn off; now, if it was possible to obtain saws at a reasonable price, with each tooth rounded, needle-shaped, gradually swelling from the point to the base, there would be no fear of the staple being at all injured; at present the edge of the saws are similar to those used for cutting wood. There can be no doubt that saws of the description I allude to would cost perhaps three times the amount of those at present in use, but they would prove the cheapest in the end, as whatever injury cotton does receive in ginning is caused by the cutting teeth of the saws now used.

3. The rate of speed at which gins will perform their work in the most efficient manner is from 200 to 225 revolutions of the saw shaft per minute.

4. A saw-gin, to be properly set up for work, should in the first place be set perfectly level, and square with the wheel by which it is to be driven. It should be also securely fastened, so that no movement should take place by the steam and friction of its driving power, and the screws of the journals should be often examined, to see that none are displaced, as one screw loose or out of place will throw the whole machine from its truth in work, and so cause a friction of the saws on the grates, as to cut the staple. There are several descriptions of gins, and modes of driving them; but for a small gin, the system adopted by Mr. Frost at Dharwar, viz., connecting the frames of both gin and fly-wheel together, is as yet the best I have seen, as it tends to steady the whole machine, but whether this can be adapted to larger gins has yet to be tried, and I am now erecting one of 20 saws on a similar plan, for the purpose of testing it.

I have, &c.

Belgaum, 14 November 1850.

(signed) *T. W. Channing*,
Superintendent of Cotton Experiments.

(No 225 of 1850.)

To *W. W. Bell*, Esq., Collector, Dharwar.

Sir,

IN reference to the communications noted in the margin,* received under cover of your indorsement, No. 1981 of 1850, I have the honour to forward you the following reply to the questions contained in the letter of the Revenue Commissioner, Northern Division:—

1st. What should be the dimensions of the saw used in cleaning New Orleans cotton?

It is not material; they should not be less than 8 or more than 12 inches in diameter; saws 10 inches diameter are most commonly used when driven by other than manual power. I should prefer the saws of 12 inches diameter, but for manual power I think the saws of 10 inches diameter the best.

2d. What number of teeth to the inch should the saw contain?

The number of teeth varies from 8 to 12 to an inch. The greater the number of teeth the better will be the cotton; but fine teeth saws will not perform the same work in a given

* No. 2777 of 1850. From A. N. Shaw, Esq., Revenue Commissioner, N. D., to J. M. Davies, Esq., Collector of Broach. No. 2785 of 1850. From A. N. Shaw, Esq., Revenue Commissioner, N. D., to the Revenue Commissioner, S. D., No. 4560 of 1850. From F. H. Townsend, Esq., Revenue Commissioner, S. D., to the Collector of Dharwar.

III.
Bombay.

given time as coarser ones; for this country I should prefer a saw containing 10 teeth to an inch; the cuppas here has generally more or less kunkur and dirt mixed in it, owing to carelessness in gathering it. This kunkur would soon destroy saws with 12 teeth to an inch, and therefore coarser teeth are preferable, not being so liable to injury.

3d. The speed at which the saw should be turned?

The speed at which a gin should be driven depends much on the number of teeth to an inch; fine teeth saws should be driven faster than coarse ones; a gin, with saws 12 teeth to an inch, should make not less than 400 revolutions per minute, and 10 teeth to an inch about 250. Regularity of motion is a great advantage in ginning cotton; when driven by machinery it is easily acquired; but with manual labour it is almost impossible, and the speed varies from 150 to 300; that is, the coolies generally are above or below the proper speed.

4th. In addition to the above information you are requested also to have the goodness to make any remarks practically applying to working of the saw-gin, showing its defects and reasons for cutting staple of the cotton when judiciously used, and to draw up a few concise and short rules for setting up a saw-gin, and the manner in which it should be worked.

It is impossible to point out the defects of a gin unless by personal inspection. The causes of its cutting the cotton are two—first, if the saws touch the grates between which they revolve; second, if the teeth are cut square instead of round on the under side, it will cut the fibre instead of pulling it off the seed; but this defect can be remedied by working the saws through seed mixed with sand until the cutting edge is worn smooth. If the saws touch the grates the whole cylinder can be moved by moving the bearings at each end of the spindle, or by using adjusting screws (which all gins should have) or refitting the guides. Sometimes saws get what is called buckled; the only plan, when such is the case, is to correct them with a pair of pliers or tongs. In putting up a gin for work it is only necessary to have it well secured so it cannot move, and set perfectly level; the greatest difficulty on putting a gin to work is generally experienced in adjusting the front and lint boards, which have to be moved whilst the gin is at work until the proper point is ascertained.

I have, &c.

(signed) *John M. Blount,*
Superintendent of Cotton Experiments.

Dharwar District, Bunkapoor,
13 December 1850.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Board.

V. 781.

I APPROVE of the suggestion; the Government of Fort William should be requested to make the necessary application for us on the subject to the Agri-Horticultural Society of India.

(signed) *Falkland.*
J. Grey.
J. P. Willoughby.
D. A. Blane.

15 January 1851.

(No. 475 of 1851.)—Territorial Department, Revenue.

From *H. E. Goldsmid, Esq.,* Secretary to the Government of Bombay, to *F. J. Halliday, Esq.,* Secretary to the Government of India.

Sir

With the view of eliciting information on certain points connected with the dimensions, &c. of saws used in cleaning New Orleans cotton, Mr. Shaw, the Revenue Commissioner, Northern Division, put the following questions to the Collectors, and, through them, to the superintendents of experiments in the cotton-growing districts of this Presidency:—

“1st. What should be the dimensions of the saw used in cleaning New Orleans cotton?”

“2d. What number of teeth to the inch should the saw contain?”

“3d. The speed at which the saw should be turned.”

2. In submitting the replies, which are by no means conclusive, of the Collector of Broach, and of the Superintendents of Cotton Experiments in the Belgaum and Dharwar Collectorates, Mr. Shaw observed, “As the Indian Government has proposed an exhibition of the saw-gins in Calcutta, I would respectfully suggest that one point to be determined should be the speed, &c. &c. at which they should be worked, as doubtless a good machine improperly used might cut and destroy the staple and fibre of the cotton.”

3. The Right Honourable the Governor in Council approves of this suggestion, and has instructed me to request, with reference to the notification published in January last, in the “Calcutta Government Gazette,” by the Honorary Secretary to the Agri-Horticultural Society of India, that the necessary information may be obtained.

I have, &c.

(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle,
18 January 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1159

11.11.1851
Bombay.
Bombay

(No. 72.)

From *W. Grey, Esq.*, Under Secretary to the Government of India, to *J. G. Lumsden, Esq.*, Secretary to the Government of Bombay.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 475, dated the 18th instant, and in reply to forward, for the information of the Government of Bombay, the accompanying printed copy of the "Report of the Committee on the proposed prize for an improved cotton-cleaning machine,"* together with copy of a letter on the subject addressed to the Government of Bengal, under date the 1st September 1849. The Right honourable the Governor in Council will perceive from paras. 3, 4, and 5 of the Committee's Report what the conditions are which a machine must fulfil in order to obtain the prize awarded by the Government of India.

I have, &c.
(signed) *W. Grey,*
Under Secretary to the Government of India.

Fort William,
30 January 1851.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue; dated 12 March 1851.—V. 3080 to 83.

(No. 376 of 1851.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid.*

Sir,

WITH reference to my letter, No. 96 of 11th ultimo, I beg to submit a communication from the Collector of Khandeish, with accompaniments noted on the margin, relative to the dimensions of the saw, &c., and the speed with which cotton should be ginned; questions (with many others of minor detail) of great importance, which should be determined at the exhibition of saw-gin machinery, to take place at Calcutta.

V. 3080.
No. 192 of 29 Jan.
1851, with
enclosures.

2. From the increasing demand for saw-gins, I am of opinion that the district manufacturers will scarcely be able to meet the wants of the market, and although I would in no way desire to check this manufacture in the Mofussil, I am inclined to think it would be very desirable to establish the trade at the Presidency, and would propose for consideration that, either at the gun carriage, or other public department, a small establishment under the occasional superintendence of an experienced engineer should be retained for the manufacture of gins on the most approved model, and that these should be annually distributed to the different collectors in the cotton-growing districts, and be sold.

3. Some arrangement of this sort will, I think, be necessary to ensure the circulation of improvements, and the construction of proper machines, and should, if properly conducted, be of very little or no expense to Government, and possibly a source of profit; it might also be the means of increasing and improving the manufacture of gins in the Mofussil rather than lessening it, but the matter of loss or gain is at present of no great moment. Good saw-gins are absolutely necessary to ensure the permanent success of the cotton experiments, and, the trade once thoroughly established, would be one of an increasing demand, and consequently (in all probability) soon pass into private hands.

4. The cultivation of the New Orleans cotton seems now fairly, through the perseverance and exertions of Government, to have taken root in the Southern Mahratta country (from which it will no doubt extend itself), and to be popular amongst the ryots, in spite of all their former prejudices and opposition; beyond, therefore, the protection of the commerce against frauds and adulteration, little in this respect will, after a few seasons, remain to be done by Government; and, as the whole cotton trade of the country is now undergoing a change, and nothing so likely as a ready supply of saw gins to encourage European competition, and induce merchants to retain agents in the Mofussil, I am really of opinion, if Government would only manufacture 50 or 60 gins at the Presidency on the most approved system, as models to be sold in the different cotton districts, that it would be a measure highly beneficial to the country.

I have, &c.
(signed) *A. N. Shaw,*
Revenue Commissioner, N. D.

Revenue Commissioners' Camp,
Tannah Districts, Nandgaom,
8 February 1851.

(No. 192 of 1851.)

To *A. N. Shaw, Esq.*, Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 2778, dated the 28th October last, forwarding certain queries respecting the saw-gin machinery, and in reply to submit,

V. 3081.

* See page 448 of the Bengal section of this return.

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submit, for your information, the documents noted in the margin,* containing the replies of Mr. Simpson, the superintendent of Government cotton experiments, and of Mr. Laidlaw, the engineer attached to the cotton agency of Messrs. Ritchie, Steuart & Co.

2. Mr. Laidlaw prefers saws of 12 inches diameter, with eight teeth to the inch, and thinks the maximum number of revolutions per minute should be as noted in the margin,† but does not enter into any detail as to the grounds on which he has formed these opinions.

3. Mr. Simpson thinks a saw of 10 inches diameter, with six teeth to the inch, the best adapted, and offers his reasons at some length for this preference. In his communication of the 2d instant he has entered into greater detail. Mr. Constable, in a private conversation with me, agreed with Mr. Simpson that six teeth to the inch is the best number for the saw-gin to render it quite effective and least liable to break, and I concur with those gentlemen in that opinion. The maximum number of revolutions which Mr. Simpson thinks the saw ought to perform in a minute will be seen in a table embodied in his letter of the 19th ultimo.

4. With reference to the improvement of the saw-gin machinery, Mr. Constable objects to the present flues, to which Mr. Simpson offers remarks, in his letter of the 13th instant, and on that point I would only say, that until the ryots of Khandeish can be induced to pick their crop as cleanly as according to Mr. Simpson, the American cotton cultivators are in the habit of doing, it must be very desirable to have the machines so constructed as to remedy, as far as possible, the evil effects of careless picking, and friable nature of the leaf of the indigenous cotton plant, and as it would appear that flues are yet absolutely necessary, and that their efficiency is only a matter of a few rupees extra cost for extra labour bestowed, I think that Mr. Simpson should be instructed to make a few of these machines with flues and brushes that will fully answer the purpose intended, without reference to the slight extra cost thus incurred, because the majority of purchasers would prefer having a perfect machine at a slight enhancement of price, than a cheaper but inferior article.

5. With reference to the making up of saw-ginning machinery under his superintendence, the superintendent, Mr. Simpson, states, "I did not come to this country in the capacity of an engineer, though I have for a series of years performed (unpaid) these duties, thereby saving to Government 250 rupees per month, or whatever the salary of an engineer might have been; these I beg to say, form no part of my legitimate duties as superintendent of Government cotton experiments, and I desire here clearly and distinctly to state, that if any dissatisfaction exists, or any want of confidence in my abilities to conduct this branch of the business, no time should be lost in supplying this department with an engineer to take charge of it." I am under the impression, however, that Mr. Simpson, exclusive of his travelling allowance of 300 rupees, was granted the increased pay of 700 rupees, when the other American cotton planter only got 500 rupees, as remuneration for his superior mechanical and engineering skill.

6. I have not considered it necessary to refer your queries to any other private merchant, as none of the native merchants in this province yet understand the principles of mechanism.

I have, &c.
(signed) A. Elphinston,
Collector.

Khandeish Collector's Office, Camp Dhurrungaum,
29 January 1851.

(No. 27 of 1850.)

To Alexander Elphinston, Esq., Collector, Khandeish.

Sir,

In acknowledging receipt of your endorsement, No. 2343 of the 14th instant, I have the honour to annex copy of a letter from Mr. Walter Laidlaw, the engineer, in the employ of Messrs. Ritchie, Stuart & Co., in reply to a call I made upon him at your request.

I do not feel myself competent to pass any opinion on the three questions put by the Revenue Commissioner, North Division; but there is one point of very great importance connected with ginning operations, to which I beg to call your attention, never having seen the subject noticed during my short experience in this zillah; I refer to the boxes or flues through

* 1. Letter No. 27 of 30th (instead) of 20th December 1850, from the agent to Messrs. Ritchie, Steuart & Co., accompanied by one of the 25th idem from Mr. Laidlaw. 2. Ditto, No. 315 of 19 December 1850, from Mr. Simpson. 3. Ditto, No. 3 of 2d January 1851, from Mr. Simpson. 4. Ditto, No. 15 of 13 January 1851, from Mr. Simpson, containing his comments on Mr. Constable's letter, and its accompaniment.

† Size of Saw.	Number of Revolutions.
12 inches	200 per minute.
10 "	250 "
8 "	300 "

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1161

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through which the wool passes to the lint-room. All those made over to this agency by the superintendent Government cotton experiments are, I conceive, much too short, and too roughly constructed; my reasons for thinking so, are—Firstly, that the dust and small leaf released from the fibre by the punka brush are blown beyond the box intended to receive this refuse, into the lint-room, to fall amongst the clean wool. 2ndly. The uneven and unpolished surfaces of the interior catch the light wool as it passes through, and arresting its progress, a small heap is found in the box, which receives all the dry leaf and dust which would otherwise fall through the bars below; these small heaps are at last perhaps blown out, but owing to the shortness of the flue, only to fall among the dry leaf and dirt at the mouth of the flue in the lint room.

To obviate this most serious evil, I have stationed a boy in each lint-room to keep the flues clear, and to prevent the least accumulation of clean wool near the mouths of the flues.

Mr. Simpson, to whom I spoke on the subject, appeared to think that the wood at his command is not susceptible, except at a very great expense, of a sufficiently fine polish to obviate the second evil I have noticed; he also stated that to make the flues as long and of as high a polish as I seemed to consider necessary, would very greatly increase the cost of a gin.

I propose, therefore, to make the flues entirely of tin, and at least 3½ feet in length, gradually enlarging as it enters the lint room. As it is too late now to alter all the flues, I am having a box made, which I think will in some measure remedy the evil; when this is finished and tried I shall do myself the honour of reporting to you the particulars, and the result.

Camp, Bhurgaum,
20 December 1850.

I have, &c.
(signed) A. G. Constable,
Agent to Messrs. Ritchie, Stuart & Co.

From Mr. Walter Laidlaw to A. G. Constable, Esq., &c., &c., Malligaum.

Sir,

I HAD the honour to receive a copy of a letter, No. 2778 of 1850, from A. N. Shaw, Esq., Revenue Commissioner, Northern Division, endorsed by the collector and yourself, requesting my opinion on the three points therein stated, viz:—

- 1st. What should be the dimensions of the saws used in cleaning New Orleans cotton?
- 2d. What number of teeth to the inch should the saw contain?
- 3d. The speed at which the saw should be turned?

In answer to the 1st question, I consider a saw of 12 inches diameter the best adapted.

And the 2d point, I consider such a saw ought to have (8) eight teeth to the inch at least; I have always found such pitch to answer best.

Thirdly, the speed ought to be regulated by the diameters. A saw of 12 inches diameter should revolve per minute 200 times; 10 inch saw 250; and 8 inch saw 300 times per minute. I prefer a 12 inch circular saw whose pitch is 8 teeth to the inch, and working at a velocity of 200 per minute. The cylinders ought to have set screws at each end to prevent the saws from getting against the grating. The daily outturn of gins with saws of either dimensions, and working at such speed as before noticed, will be the same if the curves of the grates be on the same principles. But I observe that although the grate is of the same curve, number of gins is made up, and by the angle the grates is placed their outturn per diem varies greatly.

Fimpre, Khandeish Collectorate,
25 December 1850.

I have, &c.
(signed) W. Laidlaw,
Civil Engineer.

(True copy).

Camp, Bhurgaum,
30 December 1850.

(signed) A. G. Constable,
Agent to Messrs. Ritchie, Stuart & Co.

(No. 315 of 1850).

To Alexander Elphinston, Esq., Collector of Kandeish.

Sir,

I HAVE the honour with reference to your endorsement, No. 2342, of the 14th instant, to state, in reply to the interrogatories of the Revenue Commissioner, Northern Division, regarding gin-saws, &c., in the following queries:—

- 1st. What should be the dimensions of the saw used in cleaning New Orleans cotton?

I think a saw of (10) ten inches in diameter is the most convenient size, not that it would have in consequence of this any advantage over a saw of 6, 7, 8, 9, 11 or 12 inches, if they were

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were all propelled at a corresponding velocity, so as to make their several peripheries pass through an equal space in a given length of time.

2d. What number of teeth to the inch should the saw contain?

The best size or number of teeth for New Orleans cotton, or indeed any other cotton, is six (6) to the inch, for the following reasons; that if the teeth are ten or eight to the inch, they are too easily broken off, and soon wear down, and become useless, and this is especially the case when carelessly picked, and dirty cotton is ginned on these machines; the number of teeth is in itself important, but this is by no means the only important consideration with regard to teeth; that of the rake or angle at which they may be cut is also of the highest moment, which could, I conceive, only be properly understood from delineations or diagrams which would have accompanied this explanation if I had had the requisite mathematical instruments for sketching them.

3. The speed at which the saw should be turned?

See remarks under the first query, and table at the end of this statement.

The principal cause why a saw-gin cuts cotton is owing to a defective construction in allowing the cylinder to oscillate, or to play endways, so as to bring the saws in contact with the iron ribs or grates, when the action of the machine on the fibre is somewhat similar to a pair of shears, when being closed on a similar substance; to obviate this, the cylinder should have an adjusting screw at each end, by which the saws may be kept in the centre of the spaces between the grates, and thereby prevent the possibility of contact and cutting. I think, however, that another contrivance to prevent this may be had recourse to, and the two principles combined would, it is believed, wholly overcome this defect; gins without adjusting screws, as above indicated, are almost entirely useless, as they cannot be worked long at a time without cutting the cotton; it matters not, however so well they may have been constructed in other respects, and I am obliged to say that the most of the gins imported into this country, as well as those made up in it, are minus these important fixtures.

With regard to setting up gins, I beg to subjoin the following memorandum which I drew up, and forwarded to the agent of Messrs. Ritchie, Stuart & Co., on making over to him 40 gins, the property of Government, from this factory on the 15th ultimo.

MEMORANDUM.

1. In setting the gins, the first thing to be attended to is, to place the two lower timbers of the gin perfectly level (after which they should be secured in masonry), upon which the gin is to be set, and if found to be plumb and level in every respect, to be fastened in its place by wedges, or otherwise, if required.

2. The flywheel frame may be either set upon buttresses* built of bricks and choonam, or well tempered mud, of the same height and form as those to be seen at the Dhurrumgaum factory, or at the other ginning establishments in the districts. The large wheel should be set on a line with the wheel of the gin, otherwise the band (or belt) would run off.

3. The gins are all fitted up with brass bearings and wooden binders; these latter may, after working a month or two, become worn and slack; in that case a slip of leather placed under the binders with a hole in the centre to let the oil through will suffice for several months; these would require to be occasionally renewed.

4. Too much stress cannot be laid upon the necessity of keeping the axles of the cylinder, brush, flywheel, and whirls well oiled, and the oil-holes kept clear (*i. e.* open,) otherwise great injury to the machine might result from a single day's neglect of this kind; a spoonful of oil to each "journal" twice a day would be sufficient.

5. Should the saws of the cylinder incline too much to either side, and thereby come in contact with the iron bars, or ribs, by turning the adjusting screws (one of which is placed at each end of the cylinder shaft,) the saws may be brought back to the centre of the space between said ribs, and made to pass freely through them, which will prevent the possibility of their "cutting" the fibre; these screws should not be turned too much, or so as to bind the cylinder, as the friction arising from such a state of things would cause the gin to work heavily to the men turning it.

The annexed Table will show the speed at which saw-gins should be worked, according to their several diameters:

* Four posts of the right height and required strength, firmly set in the ground, and braced, would answer equally well.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 163

DIAMETERS OF SAW.	NUMBER OF REVOLUTIONS PER MINUTE.
12 Inches - - - -	- - 140
11 „ - - - -	- - 153
10 „ - - - -	- - 168
9 9 - - - -	- - 187
8 „ - - - -	- - 210
7 „ - - - -	- - 240
6 „ - - - -	- - 280

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This is equal to 5 miles (nearly) per hour.

Superintendent's Office, Dhurrungaum,
19 December 1850.

I have, &c.
(signed) S. Simpson,

(signed) A. Elphinston, Collector.

(No. 3 of 1851.)

To Alexander Elphinston, Esq., Collector of Khandeish.

Sir,

It has occurred to me that perhaps I did not in my letter, No. 315 of the 19th December last, explain as fully as I might have done to the satisfaction of some minds, what was meant by regarding a gin-saw 10 inches diameter a more convenient size than those over or under, I beg here to supply the following addenda.

That if saws of 12 inches are used, the grates or ribs require to be longer, and the diameter of the brush greater, and consequently a corresponding increase in the entire structure and framework of the machine follows, which, so far as my experience goes, increases the expense to a degree, the extra amount of work, such a gin would turn out, would not seem to justify.

On the other hand, if an eight or six-inch saw be taken, that in order to make a machine of this size as efficient as one of 20 saws, ten inches diameter, 34 saws (nearly) would be required; and as the saws must be placed in the cylinder not less than three-fourths of an inch apart in all cases, it will be seen that the gin of 34 saws, six inches diameter, would consequently require to be 10½ inches wider than one of 20 saws, ten inches diameter; this greater width would entail at least a third more expense in its manufacture, and all to no purpose, whilst its axles would require to move faster in a ratio as six is to ten, and thereby cause a greater amount of friction and wearing of the moving parts of the machines. This is briefly what I meant by the expression that a ten-inch saw was the most convenient size. I may again be permitted to allude to the size of the teeth of the saws, and to say that I have daily evidence of the unsuitableness of saws with eight or more teeth to the inch; that these saws do not last over one season's work without being stripped of a third or half of their teeth, when engaged in ginning the ordinary dirtily picked country cotton from the numerous little pebbles it contains, which in working of the machine become wedged in between the grating, against which the teeth strike and are broken off or bent back so as to render them for ever after useless, and this continues to go on until the pebble is sawn out or pulverized at this expensive rate, as one single revolution of the cylinder, the work of a half second of time under the above-named circumstance, is sufficient to ruin a gin-saw that has cost from three to four shillings. On the other hand, where the teeth are six to the inch, they have stoutness enough generally to remove or to crush pebbles of the size and kind alluded to without being broken or otherwise seriously damaged. There is another matter to which I attach some importance, and take this opportunity here to allude. It is that of recommending the adoption of one uniform size of gin-saw throughout the country, in so far as Government operations go, (private individuals can do as they think fit), and which, as I have before stated, should be 18-inch saws, six teeth to the inch, with round eye or shaft hole 1½-inch diameter. The adoption of such a plan, it will be seen, is obvious from a statement of the following facts: Gins made of saws of different diameters cannot be repaired or refitted with new saws unless they are of the same size as the original saws in respect of width and size of shaft-hole. I may here give an instance in point that exists in this department. I have a gin made of eight-inch saws; the teeth of these have become broken off, as above described; the machine in every other respect is almost new, and would be good for four or six years' work, only that I have no more eight-inch saws for supplying

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it with a new set, which would be the work of 15 or 20 minutes; hence it becomes useless or until a supply of saws eight inches diameter with 1½-inch square shaft-hole can be got out from England, or, under pressing circumstances, I might be obliged to supply it with 10-inch saws; in that case a new set of grates, (or, which amounts to the same thing, the old ones worked over); a new brush and a new cylinder shaft would require to be added, and many parts of the frame extensively altered, which would cost nearly as much as a new gin. The advantages of the plan I have alluded to seems to me to be self evident; the necessity of its adoption tenfold more urgent in this country than elsewhere, as the difficulty of repairing machinery is, to that extent, less easily accomplished here, from the low state of mechanical intelligence possessed by the native artizans of the country, and every precaution calculated to overcome, or to any extent remove these difficulties, should be embraced with as little delay as possible. Much more might be said on the subject of saw-gins and the points herein alluded to, but for the present I will suspend further remark.

I have, &c.
(signed) S. Simpson,
Superintendent Cotton Experiments.

Superintendent's Office, Dhurrumbaum,
2 January 1851.

(signed) A. Elphinston, Collector.

(No. 15 of 1851.)

To A. Elphinston, Esq., Collector of Khandeish.

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement, No. 33 of the 7th instant, with accompaniments, and in reply beg to state to your first query, that it is at all times desirable to have flues sufficiently smooth to admit the free passage of the fibre into the lint room. If the flue is so roughly constructed as to prevent this and becomes choked up, in such cases the flues would be imperfect; but in no case have I seen flues that have been made up here so rough as to choke when rightly set; that is to say, set level. Without this, any flue is liable to choke; but when the cotton passes freely through, such flue performs all that it can or was designed to do. If the flue is made six feet, instead of three, the liability to choke would be more than doubly increased; and the only way of overcoming this, is to raise the speed or velocity of the brush or fanner; and to do this an additional motive power is required, and as the gins manufactured in this department have been proportioned to the physical powers of a set of four begarees, it is probable that to raise the speed of the brush, as above stated, the number of saws would require to be reduced in a like ratio, so as to equalise what is technically called magnitude and momentum. In that case the amount of work turned out per day would be much less, the expense of working of the gin the same, and the cost of manufacture more. In any case, whatever be the length of the flue, the brush must have power to blow the cotton through it, and all those particles of leaf dust, &c., whose specific gravity is no greater than the flakes of cotton fibre, must under all circumstances pass through into the lint-room, and flues can never do more than take up the heavier particles; hence a different length of flue would seem to be required, in proportion to the dirty state of the cotton that passes through it merely in the capacity of a receiver, as the amount of deposit may be more or less. But as a gin may be employed to-day on one kind, to-morrow on another, and the next day on a third quality of cotton, it will be seen that no exact length of flue can be adopted to suit precisely the condition of all the cotton that may be cleaned on the same machine. Notwithstanding, as before stated, the flues made up here answer, when properly attended to, a very good purpose, still they have been in some instances rougher than I could have wished. They have been made of the teak wood supplied from Chousalla, which average about 10 inches in diameter, and like most of the teak of this size has a great many knots in it, which the carpenters find very difficult to polish so as to prevent the cotton fibres attaching to it. All these points have and continue to receive my best attention, and gradual improvement is the result.

I may here draw attention to my letter, No. 28 of the 18th March 1847, in which I made an application for some American white pine boards, a very soft and suitable wood for gin flues, being susceptible of a very high polish. I also recollect (though I cannot at this moment cite to the letter or indent) having applied for sand paper for the purpose of smoothing the inside of the gins and flues. This, as well as the American boards, were not supplied, and the former was attempted to be made up here in 1847, and would have succeeded, only that the paper of the country was found too tender, and proved unsuited for this purpose.

I may also take this occasion to offer some general remarks upon the saw-gin and the introduction of flues, extra grates, and adjusting screws, as necessary appendages to saw-gins.

The saw-gin, as originally constructed, was without these fixtures, its chief object then as now, and must ever be, merely to separate the seed from the fibre, or, more correctly speaking, the fibre from the seed; and if the cotton was uniformly gathered free of dirt, the two former named appendages would be wholly unnecessary; but as cotton cannot either
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in this or any other country be at all times picked free of impurities; and to get rid of and overcome this defect gave rise to these adjuncts, and it is now most common with the planters in the United States of America to work their gins without them, inasmuch as they take the only safe precaution of gathering in from the field their cotton crops free of leaf dirt and other extraneous matter as is possible for them to do; and if all were to adopt a similar prudent course, flues and extra grates would be no longer required or used.

On their introduction into India, more especially the flues, I claim, in conjunction with my other countrymen, like me employed by the Honourable the Court of Directors in this country, the entire credit (if there be any attached to their advent here) as not a gin ever shipped to India from England or the United States of America were fitted up with flues; one or two may perhaps have had extra grates, or some ineffectual attempt in the way of adjusting screws. Not an engineer that ever came out in connexion with the cotton experiment knew anything about them until they, on their arrival here, saw them introduced; and I confidently affirm that up to the present hour they would have been totally unknown and unused in this country had it not been, as above stated, for my own and countrymen's agency; and I may add, that it chiefly, if not entirely, rested with myself and Mr. Q. N. Hawley, who was formerly employed in this country. Mr. H. and myself introduced them into the Madras Presidency; Mr. Hawley, single handed, introduced them at Broach, and, conjointly with Mr. Mercer, in the Dharwar zillah, and I may, beyond doubt, claim Candeish as my field of operations in the origin of their introduction here, and subsequently carried out more extensively by Mr. Price. The application of adjusting screws is wholly my own. I do not wish to take any credit to myself for this. It was my duty to do all I could for those who employed me, and it is here recorded as the plain facts of the case, to which I beg to add, that I did not come to this country in the capacity of an engineer, though I have for a series of years performed (unpaid) these duties, thereby saving to Government 250 rupees per month, or whatever the salary of an engineer might have been. These, I beg to say, form no part of my legitimate duties as superintendent of Government cotton experiments; and I desire here clearly and distinctly to state, that if any dissatisfaction exists, or any want of confidence in my abilities to conduct this branch of the business, no time should be lost in supplying this department with an engineer to take charge of it. I may add one word more, that I find the gin of seven saws very recently sent to this station from Dharwar, under the specious cognomen of improved saw-gins, has neither flues, extra grate, or adjusting screws, the work of an engineer in the cotton experimental department in that zillah; however, I do not wish these remarks to be construed to the prejudice of this machine, or to be taken in lieu of the report which will hereafter be submitted on it, but to reply to the query in its direct sense; the only way for Mr. Constable to prove the correctness or otherwise of his plan of making flues of tin is for him to try it.

To your second query I beg to state, I am unable to say what the cost of tin flues would be, not having made any in this department; it is also impossible to say what the charges would be if made of wood, he (Mr. Constable) not having specified any dimension.

To your third and last, the native artificers employed in this department gradually become more and more expert in the manufacture of saw-gins, and, like all artisans, improve by practice; and if they should be continued in this work it is probable the execution and polish of the gins may slightly improve; the principles of the machine, until further discoveries are made, must remain unaltered; however, the gins now being made here are much more efficient than any ever sent to this province from any quarter, at home or abroad, and will advantageously compare, I am bold to say, with any in all those parts made here; the gin-saws are sent out from England, some are passable and others very inferior and wrongly constructed; and with these latter no gin, however perfectly constructed in other respects, can perform expeditiously or well. This it is wholly out of the power of this department to correct, which defects have been frequently pointed out by me in my official correspondence.

Superintendent's Office, Dhurrumgaum,
13 January 1851.

I have, &c.
(signed) S. Simpson,
Sup. Gov. Cotton Experiments.

MINUTE by the Honourable Board.

If the manufacturers up country, under the management of Messrs. Vary, Channing, Blount, and in Khandeish, cannot construct as many machines as are required, and village artificers cannot be got to make machines, I have no objection to Mr. Shaw sending a model to the gun-carriage department at Bombay, in order that copies may be made with any improvements that may suggest themselves to the practical men employed in that department.

V. 308a.

He can procure the model from whichever of the manufactories he pleases, but he should ascertain either that the manufactories up country cannot supply the demand, or that the

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persons in the gun-carriage department are more likely to improve on the machines now made than the superintendents of the manufactories, who are themselves working the machines in the cotton producing districts.

We may refer the Revenue Commissioner, N. D., to para. 4 of our letter of 26th April 1850, No. 3592.

(signed) *Falkland.*
J. Grey.
J. P. Willoughby.
D. A. Blane.

22 February 1851.

(No. 1878 of 1851.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division.

V. 3083.

Sir,

I HAVE been directed to acknowledge the receipt of your letter, No. 376, dated 8th instant, with enclosures, and to inform you that if the manufactories in the districts under the management of Messrs. Vary, Channing, Blount, and in Candeish, cannot construct as many machines as are required, and village artificers cannot be got to make machines, the Right Honourable the Governor in Council has no objection to your sending a model to the gun-carriage department at Bombay, in order that copies may be made, with any improvements that may suggest themselves to the practical men employed in that department.

2. You can procure the model from whichever of the manufactories you please; but you should ascertain either that the manufactories in the district cannot supply the demand, or that the persons in the gun-carriage department are more likely to improve on the machines now made than the superintendents of the manufactories, who are themselves working the machines in the cotton producing districts.

3. I have been directed to refer you to para. 4 of Government letter of 26th April 1850, No. 3592.

4. You will have the goodness to report the result of your inquiries, and the proceedings you may adopt consequent on these instructions.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 28 February 1851.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 4 April 1851.—V. 4804 to 4807.

(No. 614 of 1851.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

Sir,

V. 4804.

In submitting the accompanying letter from the Collector of Ahmedabad, No. 66, of the 26th ultimo, with enclosure, I have the honour to request that Mr. Jenkin's proceedings may be approved by the Right Honourable the Governor in Council, and beg respectfully to remark, that it is very creditable to Mr. Price, so soon after his arrival in a new country, to have created an impression amongst the natives so favourable to the use of the saw-gins.

2. The Collector will be requested to direct Mr. Price to give every assistance to natives in setting up gins purchased, and instructing them in their proper use; he will also be required to suggest the best means of meeting all demands for saw-gins, and I would respectfully recommend, where a village or community show a disposition to use them, that the Collector might be allowed to furnish the gins, as tuccavee, to be paid for by easy instalments.

3. Mr. Price, in his letter to the Collector, observes, that one probable objection to the saw-gin is, that it cleans the cotton better than the Indian churka, and consequently lightens its weight by getting rid of much dirt; this objection was urged in Dharwar, but, by a steady enforcement of the enactments against wilful adulteration of cotton, native dealers will soon discover that carefully picked and well cleaned cotton is more remunerative than a mixed and dirty article.

I have, &c.
(signed) *A. M. Shaw,*
Revenue Commissioner, N. D.

Revenue Commissioner's Camp,
Colaba Districts, Kechim,
6 March 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1167

(No. 66 of 1851.)

III.
Bombay.

From *E. L. Jenkins*, Esq., Acting Collector of Ahmedabad, to *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

Sir,
I HAVE the honour to forward for your inspection the accompanying copy of a letter from *Mr. Price*, submitting a petition from a merchant of Burwala, praying to be allowed to purchase one of the saw-gins lately received from Candeish, and to inform you that I have given my sanction for making it over to him for the sum specified (Rs. 140. 4.), as I have reason to think that it is the intention and wish of Government that the gins should be disposed of in that kind of way, if persons can be found willing to receive them.

V. 4805.

2. I take this opportunity of informing you that the saw-gins have been set up in the manner described in *Mr. Price's* letter, which was forwarded to you on the 8th instant, and several merchants and others of the town of Dhundooka and the neighbouring villages have come to see them worked, and seem to take considerable interest in the matter. It is not known whether many of them will bring cotton to be cleaned, as the ginning season has not yet fairly commenced in this part of the country. The people, however, seem to be fully aware of the superiority of the saw-gins over the common churka, and the chief objection which *Mr. Price* thinks likely to be made to the use of the former is, that they clean the cotton "too well," and thereby greatly diminish the weight of it.

Camp, Koth,
26 February 1851.

I have, &c.,
(signed) *E. L. Jenkins*,
Acting Collector of Ahmedabad.

(No. 26 of 1851.)

To *E. L. Jenkins*, Esq., Acting Collector of Ahmedabad.

Sir,
I HAVE much pleasure in being able to hand up an original petition received from *Kuslah Lukhoo*, cotton merchant of Bhurwala Purgunnah Dhundooka, praying to be allowed to purchase one of the recently arrived gins, and to request, as I have been permitted to sell gins in Candeish at their cost price, that I be allowed to comply with the petitioner's request, and to make over immediately to him the gin complete, for Rs. 140. 4., this being the price at which I sold several in Candeish: as he is extremely desirous of having it set up in his village, and of availing himself of its use in the present ginning season.

2. With the view to obviate any difficulty which may arise in keeping the gin at work by the petitioner, I have offered to proceed to his village and to set it up for him at his own expense, and occasionally to visit his factory to impart the necessary instruction as to the best mode of working and keeping it in repair; these measures appear to me to be necessary in every instance of the disposal of a gin, in order to facilitate its introduction in the collectorate, and I hope their adoption may be approved of by you.

Superintendent's Office, Dhundooka,
24 February 1851.

I have, &c.,
(signed) *Thomas Price*,
Superintendent Cotton Experiment.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. *Willoughby* and *Blane*.

WE have already authorised the sale of saw-gins to any parties wishing to purchase them, and I have no objection to the amount being recovered as tuccavee.
I concur in *Mr. Shaw's* 3d para.

V. 4806.

10 March 1851.

(signed) *Falkland*,
J. P. Willoughby,
D. A. Blane.

(No. 3121 of 1851.)

From *Mr. Secretary Goldsmid* to the Revenue Commissioner, Northern Division.

Sir,
I have been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, dated the 6th instant, submitting one from the acting collector of Ahmedabad,
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V. 4807.

III.
Bombay.

Ahmedabad, with accompaniment, relative to an application made by a merchant of Burwala to be allowed to purchase one of the saw-gins lately received from Khandesh.

2. Government have already authorised the sale of saw-gins to parties wishing to purchase them, and His Lordship in Council has no objection to the amount being recovered as tuccavee.

3. The Right Honourable the Governor in Council concurs with you in the observation made in the 3d para. of your letter under acknowledgment.

Bombay Castle, 19 March 1851.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 28 April 1851.—V. 6547 to 6550.

(No. 968 of 1851.)

V. 6547. From the Revenue Commissioner, Northern Division, to the Secretary to Government.

Revenue Commissioner's Camp, Mahableshwur,
11 April 1851.

(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

(No. 104 of 1851.)

V. 6548. In forwarding the accompanying correspondence, the acting collector has the honour to state that he has given his sanction for the request of Captain Lang therein alluded to being complied with.

Camp, Hursole, 31 March 1851.

(signed) *E. L. Jenkins*,
Acting Collector.

(No. 47 of 1851.)

To *E. L. Jenkins*, Esq., Acting Collector of Ahmedabad.

Sir,

I HAVE the honour to enclose copy of a letter received from Major Lang, Political Agent of Kattywar, together with that of my reply to that gentleman, relative to a proposal for supplying the agents of several of the Kattywar chiefs with gins from this department, and would request the favour of your giving the subject of this communication your favourable consideration.

2. Having been desired by Major Lang to adapt one of the hand-gins for being worked by cattle power for the Takoor of Bhownuggur, I beg to state that I have undertaken the construction of the necessary apparatus, and hope you will have the kindness to allow me to dispose of it when finished to the gentleman for whom it has been ordered, to whom one of the hand-gins will also have to be made over at the same time.

3. The remaining proposal of Major Lang to attach two of the cottage gins to his agency, to admit of their being shown and worked in the presence of the cotton dealers within his jurisdiction, is also submitted to you with a request that I may be allowed to comply with that gentleman's request, as it appears to me to be a judicious arrangement, and one likely to lead to the disposal of a few of these machines to the poorer class of traders, and used by them in supercession to the country churka.

Superintendent's Office, Dhundooka,
27 March 1851.

I have, &c.
(signed) *T. Price*,
Superintendent of Cotton Experiment.

(No. 96 of 1851.)

From the Political Agent in Kattywar to Mr. *Price*, Superintendent Cotton Experiment, Dhundooka.

Sir,

THE agents of several of the chiefs of Kattywar having expressed a wish to get a few cotton gins, like those you kindly showed them at Dhundooka, when I lately passed through that place, I should feel obliged by your endeavouring to obtain the necessary sanction for supplying them with as many as they may require for payment; and as I think you would find these gins more highly prized in this part of the country if you could adopt them in the most simple way for bullock power, I should esteem it a further favour if you could get one made up in this way as soon as possible, and forward it to me at this place, where the Thakoor would be happy to get it, and I should have an opportunity of showing it to the agents of a number

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1169

a number of the other chiefs; should there be any difficulty in getting this done at Dhundooka, and should you be likely to visit this part of the country, I have no doubt that the necessary apparatus could easily be made here or at Gogeh, and you would in that case be able to see it set up yourself, and instruct the people how to work it properly.

2. One or two of the small cottage gins of which you were kind enough to let me bring away one with me, might, I think, be well disposed of, if made over to this age, in being shown to the people in different parts of the country, and the work done by them, compared with that performed with their own village gins; but should there be any objection to dispose of a few of them in this way, I trust you will be able to allow me to keep the one I have got for payment, and let me know the cost of it as soon as you can ascertain it. The authorities here I find have one or two of these small gins, and they inform me that they are easier to use, and do more work than their own country gins.

Kattywar Agency, Camp Bhownggur,
20 March 1851.

I have, &c.
(signed) *W. Lang*,
Political Agent.

(No. 46 of 1851.)

To Major *W. Lang*, Political Agent, Kattywar.

Sir,

I HAVE the honour to acknowledge the receipt of your letter of the 20th instant, and have much pleasure in observing that the agents of the several chiefs of Kattywar who accompanied you through the station, have expressed their wish to get a few saw-gins like those they were shown at work at this place; and in stating that, I have this day submitted to the acting Collector copy of your letter, with a request that he will make such arrangements as he may think desirable for enabling this department to meet calls for gins from Kattywar.

2. Agreeing with you that the hand gin would be more highly prized were it so arranged as to be available for being worked by cattle as well as by labourers, I need scarcely state that this idea suggested itself to me before I had the pleasure of seeing you, as from the great demand there is at present for labourers, I have been unable to procure them to work the few machines I have on hand, unless under great disadvantages; and as this circumstance is likely to lead to a depreciation of them, I was about to solicit being allowed to adapt one gin at least for bullock power, to compare the result of working it in that way with that by manual labour: and it is with much pleasure I have to state, that your verbal instruction to me to have one gin set up for working it by a bullock for the takoor of Bhownggur, has afforded me an opportunity of solving a question, of which I am equally as desirous as the people are themselves. The construction of the necessary apparatus was therefore eagerly undertaken by me, and so soon as it is ready, and found to answer the purpose, I will proceed with it to Boanuggur, and set it up for the Thakoor.

3. With regard to the cottage saw gins, the acting collector, in his letter No. 90, of the 19th instant, has instructed me to dispose of them for whatever I myself consider to be a fair price; I believe the net cost of the construction of each gin is 30 rupees, to which it is necessary to add 5 rupees for freightage, making *Rs. 35* as the price of one; I have this day also proposed to the acting collector the placing two of these cottage gins at your disposal, including the one you have at present with you, and will act agreeably to the instructions I may receive from that gentleman.

Superintendent's Office, Dhundooka,
27 March 1851.

I have, &c.
(signed) *T. Price*,
Superintendent of Cotton Experiment.

(No. 977 of 1851.)

To *E. L. Jenkins*, Esq., Acting Collector of Ahmedabad.

Sir,

WITH reference to your memorandum No. 104, of 31st ultimo, I have the honour to acquaint you, that Government having in its letter No. 3121, of 19th, forwarded to you on the 26th ultimo, already allowed the disposal of saw-gins on application, your proceedings are approved.

Revenue Commissioner's Camp, Mahableshwur,
11 April 1851.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

III.
Bombay.
V. 6549.

MINUTE by the Honourable Mr. *Willoughby*, subscribed to by the Honourable Mr. *Blane*.

THIS is very satisfactory, and may be approved.

15 April 1851.

(signed) *J. P. Willoughby,*
D. A. Blane.

(No. 4261 of 1851.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division.

Sir,

V. 6550.

I HAVE been directed to acknowledge the receipt of the correspondence submitted under your endorsement, No. 968, dated the 11th instant, and to acquaint you that the Right Honourable the Governor in Council is much gratified by the desire evinced by the agents of some of the chiefs in Kattywar to purchase saw-gins, and the interest which the Political Agent there takes in the matter. Government approve of the acting collector of Ahmedabad having authorised Mr. Price to supply Major Lang with the gins applied for by the latter officer.

I have, &c.
(signed) *H. C. Goldsmid,*
Secretary to Government.

Bombay Castle, 17 April 1851.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25 August 1851.—V. 14,313 to 14,316.

(No. 2179 of 1851.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 14,313.

THE Collector having already, in anticipation of the Government sanction, authorised the construction of 25 gins, the Revenue Commissioner begs to recommend his proceedings for approval, and the sanction of the Right Honourable the Governor in Council, to an outlay of four thousand four hundred and nine rupees, four annas and ten pies (*Rs. 4,409. 4. 10.*) is at the same time solicited.

2. The cotton press might also, under the circumstances represented, be repaired at a cost of rupees one hundred and fifty and twelve annas (*Rs. 150. 12.*). This subject was brought before Government in the correspondence noted in the margin.*

Revenue Commissioner's Office,
Poona, 6 August 1851.

(signed) *A. N. Shaw,*
Revenue Commissioner, Northern Division.

MINUTE by the Honourable Board.

V. 14,315.

THIS may be sanctioned, provided the construction of gins in Candeish is considered necessary and advisable under the sanction given in para. 3 of Government letter, 20th June 1851, No. 6600, to Mr. Shaw's suggestion, that gins for that province should be made up at Bombay. The present application appears to be inconsistent with that suggestion and sanction.

12 August 1851.

(signed) *Falkland,*
D. A. Blane.
A. Bell.

(No. 8449 of 1851.)

From Mr. Secretary *Goldsmid* to the Revenue Commissioner, Northern Division.

Sir,

V. 14,316.

I HAVE been directed to acknowledge the receipt of your memorandum, No. 2179, dated 6th instant, with its enclosures, and to inform you that the Right Honourable the Governor in

* Rev. Commissioner's letter to Government, No. 2051 of 10 August 1850.
Government letter, No. 6766 of 13 September 1850.
Rev. Commissioner's memorandum, No. 2810 of 31 October 1850.
Government letter, No. 8419 of 15 November 1850.
Rev. Commissioner's memorandum, No. 3250 of 21 December 1853.
Government letter, No. 56 of 4 January 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA; 1171,

in Council approves of the proceedings of the Collector of Candeish in having authorised Mr. Brenham to proceed with the construction of 25 gins, and also sanctions on that account an outlay of Rs. 4,409. 4. 10., provided the construction of gins in Candeish is considered by you necessary and advisable under the sanction given in para. 3 of Government letter, No. 6600, dated 20th June last, to your suggestion that gins for that Province should be made up at Bombay. The present application appears to his Lordship in Council to be inconsistent with that suggestion and sanction.

2. The Governor in Council has also been pleased to sanction the cotton press at Dhurumgaum being repaired at a cost of Rs. 150. 12.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 23 August 1851.

III,
Bombay,

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 23 July 1851.—V. 12,108 to 12,112.

From Mr. *John Hall* to Mr. Secretary *Goldsmid*.

Sir,
THINKING it very likely that Government would be willing to re-employ me in the department of cotton experiments when I can be spared from the duties I am now employed upon in the dock-yard Marine department, I beg most respectfully to request that you will mention my name to his Lordship in Council as willing to be so employed, should my services be required, on such terms as may be deemed adequate to them, with references to my former successful conduct at Broach.

V. 12,108 and
12,109.

I beg to inclose the covenant under which I now serve, and to refer the Government to their own records as the best testimony I can give of my fitness for any such appointment, amongst which it will be observed I on one occasion received a handsome pecuniary reward for improvements designed by me in cotton machinery.

Bombay, 1 July 1851.

I have, &c.
(signed) *John Hall*.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. *Blane* and *Bell*.

THE Revenue Commissioner, Northern Division, may be requested to favour us with his opinion as to whether it would be advisable to secure Mr. Hall's services, and if so, where and in what manner they should be made use of for the advancement of cotton culture or preparation in this division. A perusal of the former correspondence, relative to Mr. Hall's services, has led to the papers, in volume 51 of 1846, relative to Dr. Burn's improvement on the churka, attracting my notice. I should wish to know whether the utility of a machine of this description was subjected to further test, and, if so, the result. It was stated to combine the advantages, in point of facility of working it, of the saw-gin, without its imputed disadvantages as regards injury to staple.

V. 12,110.

Mr. Hall's counterpart covenant should be returned to him. If his services will be useful in the cotton department, the authorities under whom he is now serving must be asked, through the proper channel, whether he can be spared without inconvenience. Copy of the covenant and memorandum of former services in India to be sent Mr. Shaw, with Government reference.

5 July 1851.

(signed) *Falkland*,
D. A. Blane,
A. Bell.

(No. 7361 of 1851.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,
I HAVE been directed to transmit to you herewith, copy of a letter dated the 1st instant, from Mr. John Hall, engineer in the Marine department, and formerly engineer to the experimental farm at Broach, and to request that you will favour the Right Honourable the Governor in Council with your opinion as to whether it would be advisable to secure Mr. Hall's services, and, if so, where, and in what manner they should be made use of for the advancement of cotton culture or preparation in your division.

V. 12,111.

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Bombay.

2. The covenant which was executed when Mr. Hall was engaged for the experiments in Broach, and a memorandum of his services in that collectorate, are hereto appended; you will be pleased to return the former with your reply to this reference.

Bombay Castle, 17 July 1851.

I have, &c.,
(signed) *A. Malet*,
Chief Secretary to Government.

MEMORANDUM of Mr. *Hall's* Services in the Cotton Experimental Farm at Broach.

APPOINTED by the Honourable Court on the 30th August 1842, as engineer, for the purpose of working and superintending the repairs and alterations in the saw-gins, &c., erected in the cotton establishment under the Bombay Presidency; arrived in India in October 1842, joined his appointment at Broach in the beginning of December 1842, resigned his appointment on the 15th March 1846.

(signed) *A. Malet*,
Chief Secretary to Government.

(No. 7362 of 1851.)

From Mr. Chief Secretary *Malet* to the Collector of Broach.

Sir,

V. 12,112.

WITH reference to Mr. Jenkins's letter, No. 170, dated the 22nd May 1846, I have been directed by the Right Honourable the Governor in Council to request that you will state whether the utility of the cotton machine made by Mr. Burn was subjected to further test than it had undergone, and, if so, with what result; it was stated to combine the advantages in point of facility of working it, of the saw-gin, without its imputed disadvantages as regards injury to staple.

Bombay Castle, 17 July 1851.

I have &c.,
(signed) *A. Malet*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 6 August 1851.—V. 13,258-13,261.

(No. 2021 of 1851.)

V. 13,258.

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 7361, of the 17th inst., directing me to state my opinion as to whether it would be advisable to secure Mr. Hall's services, and, if so, where and in what manner they should be made use of for the advancement of cotton culture or preparation in this division; and, in reply, I do myself the honour to observe, for the information of the Right Honourable the Governor in Council, that Mr. Hall's character and former services are wholly unknown to me.

2. In the cotton culture or its preparation for market, I do not see an opening for Mr. Hall, but if he is a superior engineer, fully capable of superintending the construction, &c. of a saw-gin in all its branches, he might be employed either wholly in Khandesh or wholly in Goozerat, or generally in both, in the same way as Mr. Frost is engaged in the Southern Marhatta country in superintending the establishments now employed in Ahmedabad, Surat, and Khandesh.

3. From the complaints which have reached Government of the inferiority of the manufacture of gins in Khandesh and Belgaum, and, bearing in mind that Government has requested the Honourable Court to provide a civil engineer in every way qualified for this duty, I do not think, unless Mr. Hall is really a superior engineer and mechanic, and a more qualified and scientific person than the parties now employed in the above districts, that his services are required in this division.

Revenue Commissioner's Office,
Poona, 19 July 1851.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, Northern Division.

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MINUTE by the Right Honourable the Governor, subscribed to by Honourable Messrs. *Blane* and *Bell*.

III.
Bombay.
V. 13,259.

I AM of opinion, the Agent for Gun carriages and Mint engineer should be requested to report as to Mr. Hall's qualifications as a mechanic and machinist.

25 July 1851.

(signed) *Falkland.*
D. A. Blane.
A. Bell.

(No. 7946 of 1851.)

From Mr. Chief Secretary *Malet* to the Agent for Gun Carriages.

V. 13,260.

Sir,
IN transmitting to you the accompanying copy of a letter from the Revenue Commissioner, Northern Division, No. 2021, dated the 19th ultimo, I have been directed by the Right Honourable the Governor in Council to request that you and the Mint engineer will have the goodness to examine Mr. Hall, and report as to his qualifications as a mechanic and machinist. Agent for gun carriages.

2. Mr. Hall has been requested to call upon you for the purpose above-mentioned.

Bombay Castle, 4 August 1851.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

(No. 7948 of 1851.)

From Mr. Chief Secretary *Malet* to Mr. *John Hall*.

V. 13,261.

Sir,
IN reply to your letter dated the 1st ultimo, I have been directed by the Right Honourable the Governor in Council to request that you will wait upon the Agent for Gun carriages and the Mint engineer, who have been requested to examine you, and report to Government on your qualifications as a mechanic and machinist,

2. The covenant which accompanied your letter under reply is herewith returned.

Bombay Castle, 4 August 1851.

I have, &c.
(signed) *A. Malet,*
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 24 September 1851.—V. 15,814 to 15,816.

From the Agent for Gun Carriages, Bombay, and Mint Engineer, to Mr. Chief Secretary *Malet*.

V. 15,814.

Sir,
WE have the honour to inform you that in conformity with your letters Nos. 7946 and 7947 of 1851, Territorial Department, Revenue, dated the 4th of August 1851, and addressed respectively to Major Grant, the Agent for Gun-carriages, and to Captain Burke, the Mint engineer, wherein we are requested to examine Mr. Hall, and to report as to his qualifications as a mechanic and machinist; that we met at the Mint at twelve o'clock this day, and proceeded to examine Mr. Hall, *visà voce*, as to his previous career, and as to his qualifications.

2. From this examination it appears that Mr. Hall was brought up as a steam engineer and millwright at the celebrated establishment of Messrs. Napier & Co. at Glasgow; that in the year 1836 he was employed in the equally celebrated firm of Forrester & Co. of Liverpool; and in the year 1839 was sent out by this latter house to Bombay to put in the engines in the iron Indus flotilla steamers, the "Comet" and the "Meteor"; that he accomplished this business in the Mazagon dockyard, in the course of the year 1840, and afterwards proceeded up the river Indus as head engineer in charge of the "Comet," which situation he held for eight months; that in January 1841 he returned to England, and after a residence there of fifteen months, again came to Bombay, to superintend as engineer the cotton experiments at Broach, having been selected for this duty, after an examination in London by the Honourable the Court of Directors of the East India Company, and under a three years' covenant.

3. In this capacity he served for three years and nine months, and it then appears, resigned the appointment, and returned to England. When in England he was appointed foreman of the millwrights and engineers at the Birkenhead docks, which appointment he held for four years, and relinquished only on the temporary cessation of those works

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Bombay.

4. It also appears that in the year 1844, previous to this second return to England, that he had been employed in the gun-carriage department, Bombay, in fitting up and altering cotton-cleaning machinery.

5. He again returned to Bombay in September 1850, under a two years' covenant with the Honourable East India Company, having been selected by Messrs. Maudslay & Co., of London, to put in the engines of four Government steamers, in the Bombay dockyard, viz., the engines of the "Falkland," of the "Indus," of the "Jhelum," and of a fourth steamer, not yet launched or named.

6. Mr. Hall is therefore at present employed in the Bombay dockyard under the last-mentioned covenant, and on a salary of 230 rupees a month.

7. We have requested him to produce his characters and certificates, but he states that they are in the East India House, London, and that he has not any copies.

8th. From inquiries among the machinists of the Mint, and of the gun-carriage manufactory, it further appears that Mr. Hall bears an excellent character as a practical engineer, and as a millwright, among his fellow mechanics in Bombay. His qualifications can moreover be further tested by a reference to the dockyard authorities.

9. On the whole, therefore, we have much pleasure in rendering our favourable testimony to the general capabilities of Mr. Hall as a mechanic and machinist; and, from the nature of his previous services, and evident high character with the first engineering establishments in England, we can safely recommend that his services be engaged in their proper sphere by the Bombay Government.

We have, &c.
(signed) *J. Grant*, Major,
Superintendent of the Gun-carriage Department.

(signed) *J. H. Burke*, Captain,
Mint Engineer.

Bombay, 8 August 1851.

V. 15,815.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. *Blane* and *Bell*.

To be forwarded Mr. Shaw for his further opinion, with copy of proceedings on our records relative to Mr. Hall's services; Mr. Shaw to be informed that it is by no means certain the Honourable Court will send out an engineer for the purpose referred to.

(signed) *Falkland*,
D. A. Blane,
A. Bell.

15 August 1851.

(No. 9140 of 1851.)

V. 15,816.

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, Northern Division.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 2021, dated the 19th July last, and to forward for your further opinion, and report copy of a joint report by the Superintendent of the Gun-carriage department and the Mint engineer, dated the 8th ultimo, on the qualifications of Mr. Hall, and of the proceedings on the records of Government, as per accompanying list, relative to the services of that person.

2. His Lordship in Council has desired me to inform you, that it is by no means certain that the Honourable Court will send out an engineer for the purpose referred to in para. 3 of your letter under acknowledgment.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

Bombay Castle,
12 September 1851.

LIST of Papers relative to the Services of Mr. *Hall*, Engineer.

1. HONOURABLE Court's despatch, No. 21, dated the 24th August 1842.
2. Government letter to the Military Board, No. 2920, dated 13th October 1842.
3. Government letter to the Commissary-General, No. 2974, dated 22d October 1842.
4. Honourable Court's despatch, No. 22 of 31st August 1842.
5. Government

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5. Government letter to the Superintendent of Cotton Experiments, Broach, No. 3066 of 27th October 1842.
6. From Mr. Hall to Mr. Chief Secretary Reid, dated 19th November 1842.
7. Government letter to the Superintendent of Cotton Experiments, Broach, No. 3370 of 21st November 1842.
8. From the Superintendent of Cotton Experiments, Broach, No. 38 of 27th February 1843.
9. From Mr. Hall to the Superintendent of Cotton Experiments, Broach, dated 19th February 1843.
10. Government letter to Superintendent of Cotton Experiments, Broach, No. 738 of 8th March 1843.
11. Transfer from Judicial Department, No. 2435 of 19th October 1843.
12. From Superintendent of Cotton Experiments, Broach, No. 125 of 12th October 1844.
13. From Mr. Hall to the Superintendent of Cotton Experiments, Broach, dated 9th October 1844.
14. From Government to Major Coghlan and two others, No. 3812 of 25th October 1844.
15. Report from Major Coghlan and two others, dated 7th November 1844.
16. Government letter to Military Board, No. 4228, of 23d November 1844.
17. From Military Board, No. 4850, of 3d December 1844.
18. From Civil Architect at the Presidency, No. 442, of 30th November 1844.
19. From Government to Government Cotton Planter, at Dharwar, No. 4471, of 13th December 1844.
20. From Superintendent Cotton Experiments, Southern Mahratta Country, No. 39, of 28th November 1843.
21. From Superintendent Cotton Experiments, Broach, No. 237, of 8th December 1843.
22. From Government to Government Cotton Planter, Dharwar, No. 312, of 24th January 1844.
23. From Superintendent, Cotton Experiments, Southern Mahratta Country, No. 53, of 22d December 1844.
24. To the Military Board, No. 172, of 15th January 1845.
25. From Military Board, No. 1954, of 21st May 1845.
26. From Government to Major Coghlan and two others, No. 3007, of 27th June 1845.
27. To the Superintendent of Cotton Experiments, Broach, No. 3009, of 27th June 1845.
28. To the Government Cotton Planter, Southern Mahratta Country, No. 3010, of 27th June 1845.
29. Reply from Major Coghlan and two others, dated 28th June 1845.
30. To the Government of India, No. 3377, of 19th July 1845.
31. From Superintendent Cotton Experiments, Broach, No. 67, of 14th July 1845.
32. To Superintendent Cotton Experiments, Broach, No. 3840, of 7th August 1845.
33. From the Government of India, No. 538, of 9th August 1845.
34. To the Collector of Broach, No. 4541, of 17th September 1845.
35. From Mr. Mercer to Government, No. 58, of 8th September 1845.
36. To the Revenue Commissioner, Northern Division, No. 4663, of 27th September 1845.
37. From Dr. Burn, No. 23, of 22d March 1845.
38. From Mr. Hall to Dr. Burn, dated 22d March 1845.
39. From Civil Auditor, No. 1523, of 1st April 1845.
40. To Dr. Burn, No. 1648, of 12th April 1845.
41. From Collector, Broach, No. 27, of 23d January 1846.
42. From Dr. Burn to the Collector, Broach, No. 5, of 20th January 1846.
43. From Mr. Hall to Dr. Burn, dated 20th January 1846.
44. To the Collector of Broach, No. 623, of 11th February 1846.
45. From Mr. Hall to Government, dated 18th March 1846.
46. To Mr. Hall, No. 1182, of 18th March 1846.
47. From Mr. Hall, of 20th March 1846.
48. From Civil Auditor, No. 1654, of 25th March 1846.
49. To Mr. Hall, No. 1486, of 30th March 1846.

III.
Bombay.

(signed) *A. Malet*,
Chief Secretary to Government.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 1 October 1851.—V. 16557 to 16559.

(No. 2563 of 1851.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

Sir,

V. 16557.

I HAVE the honour to acknowledge the receipt of Mr. Chief Secretary Malet's letter, No. 9140 of 12th instant, and from a perusal of the testimonials of Mr. Hall's good conduct and general efficiency as a mechanic and machinist, with the experience he has had in this country, I am disposed to recommend him as a qualified superintendent of the saw-gin manufactory to be established at the Presidency.

2. I would venture to suggest that a report on each consignment of saw-gins made at the Presidency should be submitted, after they have been a reasonable time at work in the Mofussil.

Revenue Commissioner's Office, Poona,
15 September 1851.

I have, &c.
(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. *Blane* and *Bell*.

V. 16558.

MAJOR GRANT may be informed of the arrangement made by the establishment of a factory at Belgaum for the supply of the southern districts, and informed that on the recommendation of the Revenue Commissioner, Northern Division, we are prepared to employ Mr. Hall for the purpose of constructing under his orders, at the factory, gins for the northern districts, provided, of course, the dockyard authorities can dispense with Mr. Hall's services.

The number of gins which will probably be required for the Northern Division can be ascertained from the Revenue Commissioner, Northern Division, by Major Grant; Mr. Shaw to be furnished with copy of our letter to Major Grant, and directed to furnish him with information on that point.

23 September 1851.

(signed) *Falkland*,
D. A. Blane,
A. Bell.

RÉSOLUTION No. 9499, dated 30 September 1851.

V. 16559.

GOVERNMENT being desirous of engaging Mr. John Hall, at present employed in the dockyard, for the purpose of constructing gins for the cotton experiments in the northern districts of this Presidency, ordered, that it be ascertained from the Marine Department whether the dockyard authorities can dispense with Mr. Hall's services, and the result, without delay, communicated to this department.

(signed) *A. Malet*,
Chief Secretary to Government.

(No. 10216 of 1851.)

From Mr. Chief Secretary *Malet* to the Agent for Gun Carriages.

V. 7859.

Sir,
WITH reference to the joint letter from yourself and Captain Burke, Mint Engineer, dated the 8th August last, I have been directed to inform you, that, at the recommendation of the Revenue Commissioner, Northern Division, the Right Honourable the Governor in Council is prepared to employ Mr. Hall for the purpose of constructing, under your orders, at the factory, gins for the northern districts. It has been ascertained, through the Marine Department, that the dockyard authorities can dispense with Mr. Hall's services.

2. The number of gins which will probably be required for the northern division can be ascertained by you from the Revenue Commissioner, Northern Division, who will be furnished with copy of this letter, and requested to afford you information on that point.

3. I have been desired to add that, for the supply of saw-gins for the southern districts of this Presidency, arrangement has been made by the establishment of a factory at Dharwar, under the superintendence of Mr. Frost.

Bombay Castle, 25 October 1851.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

Territorial Department, Revenue, No. 192 of 1851.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WE have the honour to transmit herewith copy of the papers as noted in the margin, from which your Honourable Court will learn that Mr. Frost, the engineer attached to the cotton experiments in the Southern Mahratta country, has intimated his intention of resigning his appointment at the expiration of 12 months, unless sufficient inducement be offered to him to remain attached to the experiments.

Memo. from the Revenue Commissioner, S. D., No. 3598, dated 29th October 1851, with accompaniments.

2. From the extracts as per margin, your Honourable Court will observe that since June last, Mr. Frost's duties have been extended over a larger extent of country; and as Messrs. W. W. Bell, Goldfinch, W. E. Frere, and Captain Wingate have expressed opinions so very favourable of Mr. Frost's conduct, skill, exertions, and their result, we would strongly recommend to your Honourable Court to sanction the proposed addition to Mr. Frost's salary, so that his pay may be made up to 500 rupees per mensem from the date of his having the duty of preparing machinery for Belgaum and other places, added to that of preparing it for Dharwar.

Extract para. 4, of letter from Revenue Commissioner, S. D., No. 2164, dated 18th May 1851.

Ditto paras. 4 & 5 of letter from Mr. Goldfinch, No. 550, dated 17th April 1851.

Ditto paras. 2 to 7 of Government letter, No. 6600, dated 20th June 1851.

3. Mr. Frost receives at present a salary of Rs. 291. 10. 8. per mensem, and five rupees per diem batta when actually travelling in the districts.

We have, &c.
(signed) Falkland.
J. Grey.
D. A. Blane.
A. Bell.

Bombay Castle, 17 December 1851.

(No. 5598 of 1851.)

Territorial Department, Revenue.

Transmitted for the Orders of Government.

The Revenue Commissioner concurs in the collector's opinion as to the expediency of renewing the engagement for Mr. Frost's services; but as regards an increase to his emoluments, the Revenue Commissioner considers that the grant of permanent batta throughout the year at five rupees per diem, as proposed in the 4th para. of the letter from this department, dated 15th May last, No. 2164, would be sufficient.

(signed) E. G. Fawcett,
Revenue Commissioner, S. D.

Poona Districts Camp,
Khundalla, 29 October 1851.

(No. 1767 of 1851.)

FROM J. S. Law, Esq., Collector of Dharwar, to E. G. Fawcett, Esq., Revenue Commissioner, S. D.

Sir,

I HAVE the honour to forward, for the purpose of being laid before Government, the accompanying copy of a letter from Mr. H. Frost, engineer of the cotton experiments, dated the 10th instant, and addressed to the Superintendent, intimating his intention to resign his appointment after the lapse of 12 months, unless some addition is made to his pay.

2. In the 4th para. of Mr. Goldfinch's letter to your department, dated 17 April last, No. 550, it was proposed that a permanent allowance of 200 rupees per mensem should be granted to Mr. Frost in lieu of the deputation allowance of five rupees per diem to which he is now entitled when travelling in the districts. To this no answer has yet been received, but I may observe, that since then the sphere of this officer's duties has been much enlarged under the instructions conveyed in the Government letter, dated 20th June last, No. 6600, whilst he can seldom be spared from head quarters, with so much work to superintend, so that he will have little opportunity of drawing travelling allowance.

3. From all I have seen and heard of Mr. Frost and his workmanship, I quite concur in the testimony borne to his merits in the 5th para. of Mr. Goldfinch's letter above quoted, and consider his retention for some time longer as essential to the successful prosecution of

the experiments. His present salary amounts to Rs. 291. 10. 8. per mensem; and I would venture to recommend that it be made up to 500 rupees per mensem immediately, if possible, but at any rate after the expiration of his engagement on the 25th June 1852;

Collector's Office, Dharwar, 15 October, 1851.

I have, &c.
(signed) J. S. Law,
Collector.

(No. 5 of 1851.)

To T. M. Blount, Esq., Superintendent of Cotton Experiments, Dharwar.

Sir,

I HAVE the honour to call the attention of Government to that clause in my covenant with the Board of Directors,* which stipulates a 12 months' intimation of purpose prior to a removal from service, and respectfully beg to give them the notice accordingly, which I am rather led to do than prolong my stay in India under present conditions.

2. If, however, Government should consider a continuation of my services, after seven years' experience in the cotton experiment, a desirable arrangement, and would condescend to sanction a sufficiently remunerative inducement, I beg leave to add that I should not in such a case object to a re-engagement.

Dharwar, 10 October 1851.

I have, &c.
(signed) H. Frost,
Engineer of Cotton Experiments.

MINUTE by the Honourable Board.

MESSES. W. W. Bell, Goldfinch, W. E. Frere, and Captain Wingate, have expressed opinions so very favourable of Mr. Frost's conduct, skill, exertions, and their result, that I would strongly recommend to the Honourable Court to sanction the proposed addition from the date of Mr. Frost having the duty of preparing machinery for Belgaum and other places, added to that of preparing it for Dharwar.

24 November 1851.

(signed) Falkland,
D. A. Blane,
A. Bell.

EXTRACT Para. 4 of a Letter from the Revenue Commissioner, S. D., No. 2164, dated 15 May 1851.

Para. 4. Mr. Frost the engineer's services are highly spoken of, and a consolidated travelling allowance of 200 rupees per mensem is proposed for him; I think some addition to his emoluments may reasonably be made. He already draws batta at the same rate as uncovenanted assistants in the service, viz., five rupees per diem; and were this allowed all the year round on the same terms as to assistant collectors in permanent charge of districts, I think he ought to be well satisfied. This would raise his present emoluments (shown in column 1 of the accompanying statement) to 5,300 rupees per annum.

EXTRACT Paras. 4 and 5 of a Letter from Acting Collector of Dharwar, No. 550, dated 17 April 1851.

Para. 4. * * * * Mr. Blount recommends, and I beg most heartily to support the recommendation, that the deputation allowance of five rupees per diem, now drawn by the engineer, Mr. Frost, when in the districts on duty, be stopped; and that, in lieu of it, a consolidated travelling tent and horse allowance, to the amount of 200 rupees, be drawn permanently. Mr. Frost will of course be required to proceed into the districts when necessary without claim to any extra allowances; thus, including this last item, there will be a permanent increase to the establishment of 340 rupees; but from this will have to be deducted Mr. Frost's deputation allowance. The amount of this varies, it may be, on an average throughout the year, probably of 80 rupees or 90 rupees a-month; taking it at 80 rupees, the permanent increase to the Dharwar establishment will be 260 rupees per mensem.

5. I am

* Dated India House, 25 June 1847, will expire on the 25th June 1852.

15. I am happy in having an opportunity to express the very high opinion I entertain of the value of Mr. Frost's services, besides his qualifications as an engineer, of which I am not competent to offer an opinion; his patience, tact, and good humour with the natives have had, I am convinced, very considerable share in producing the popularity which the new machine has acquired, and which is far greater than the most sanguine of us could have anticipated. I consider it of great importance to secure the retention of Mr. Frost's services in connexion with the experiment, and I look upon it as a most fortunate accident which brought him to it. The factory, after the amalgamation, will form a large establishment, and its superintendence an important and responsible duty; the additional allowances proposed for him, though exceeding by 50 rupees the amount of deputation allowance which will be stopped, will not, I submit, be more than a moderate remuneration for the enhanced labour and responsibility resulting from the increase of the factory under his charge.

EXTRACT Paras. 2 to 7 of a Government Letter, No. 6600, dated 20 June 1851.

Para. 2. HAVING very carefully considered all these papers, former correspondence and the information they have been enabled to collect from all sources, Government have determined that Mr. Frost be located at Belgaum, and manufacture gins for the use of the Dharwar, Belgaum, Sholapoor, and, unless the commission at Sattara can show they had better be left to Mr. Vary, Sattara districts.

3. A consideration of the difficulty in obtaining persons of Mr. Frost's qualifications for employment in Khandeish and Goozerat, and the knowledge that the machines made up by Mr. Channing, whose qualifications and work have been so much lauded, have been stigmatised (whether justly so or not remains to be ascertained) as most faulty; as also a consideration of the fact that Mr. Simpson's machines have been objected to by Messrs. Ritchie, Steuart & Co. as inefficient, coupled with a consideration of the large expense Government have undergone, lead his Lordship in Council to think that it will be better that gins for Khandeish and Goozerat should be made up at the gun-carriage manufactory at Bombay, the usual extra charge on account of superintendence, &c.* being foregone.

4. The gins should be made up after models furnished by Mr. Frost, and with any modifications that may be suggested by the superintendents in each collectorate, and that may on consideration appear advisable.

5. By the adoption of this arrangement, the superintendents in the several collectorates will have to keep up such very moderate establishment as may be necessary to repair the machinery used by Government and the ryots, until the ordinary artisans of the district have obtained sufficient experience to enable them to make the necessary repairs. They (the superintendents) will also suggest to Mr. Frost and the gun-carriage manufactory improvements and alterations.

6. It is with some hesitation that Government have determined that this plan proposed by you be carried out, because they think it desirable, for many reasons, that the machines should be made up in the districts where they are to be used; but, for the reasons assigned in para. 3 of this letter, his Lordship in Council has determined on adopting it, and would adhere to it at any rate until a man qualified as Mr. Frost appears to be can be met with. Government have no reason for supposing that Mr. Edwards, Mr. Price, and Mr. Daley are qualified for constructing machinery; neither their training nor profession can warrant such a supposition, and much harm might be done by their endeavouring to introduce machinery which, although they were unconscious of the fact, might be unfitted for the work it had to perform.

7. Four apprentices on the pay proposed by you should be attached to Mr. Frost, and when he considers they have obtained sufficient practical knowledge for the purchase, they should be sent under the several superintendents to assist in the repairing of the gins, or obtaining a knowledge of the mode of cleaning and other matters connected with the preparation of cotton for the market.

Revenue Department, 10 March (No. 7) 1852.

Our Governor in Council at Bombay.

1. In your letter dated the 17th December last (No. 192), you inform us that Mr. Frost, the engineer attached to the cotton experiments in the Southern Mahratta country, has intimated his intention of resigning his appointment at the expiration of 12 months, unless sufficient inducement be offered him to remain;

Allowances of Mr. Frost, the cotton engineer.

* Government understand this can be effected without actual loss to them.

III.
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remain; and you strongly recommend that an addition to his salary may be sanctioned, so that his pay may be made up to 500 rupees per mensem from the period of his having the duty of preparing machinery for Belgaum and other places, added to that of preparing it for Dharwar.

2. Mr. Frost's present pay is Rs. 291. 10. 8. per mensem, with 5 rupees per diem when travelling in the districts.

3. Considering the strong testimony borne to the usefulness and efficiency of Mr. Frost's services, we accede to your recommendation, that his salary be raised to 500 rupees per mensem, but we do not consider it necessary that the increase should be retrospective, and it should therefore commence from the date of the termination of his present engagement. Under this arrangement his travelling allowance will cease, and he will be liable to go, when required, into the districts, without claim to any extra allowances.

We are, &c.

London, 10 March 1852.

(signed) *J. Shepherd.*
J. W. Hogg.

REVENUE LETTER from the Government of *Bombay* to the Court of Directors, dated 29 January (No. 16) 1853.

Cotton experiments.
Egyptian cotton-
cleaning machine.

WE beg to inform your Honourable Court, that, having received six of the Egyptian cotton-cleaning machines referred to in our letter No. 121, dated the 9th August last, from Mr. Piozin, Mr. Larkin's *locum tenens*, during the latter gentleman's absence in England, we distributed four of them among some of our own officers, and sent one to Mr. Landon at Broach, and one to Messrs. Ritchie, Steuart & Co., and requested them to favour us, after trial, with their opinion on the merits of the machine. From their replies, a copy of which is annexed, your Honourable Court will observe that no advantage is likely to result from our attempting to introduce the machine into this Presidency.

We have, &c.

(signed) *Falkland.*
D. A. Blane.
A. Bell.

(No. 63 of 1853.)

Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

WITH reference to your despatch, No. 7, dated 10th March 1852, we have the honour to forward a copy of our proceedings as per margin,* from which your Honourable Court will learn that, for the reasons stated in our Resolution, No. 3103, dated 28th May 1853, we have sanctioned, subject to your confirmation, the re-engagement of Mr. Frost's services as engineer in the Cotton Experimental Department of the Southern Mahratta country, and have permitted him to draw from the date of Mr. Blount leaving those districts Rs. (150) one hundred and fifty in addition to his present salary of Rs. (500), five hundred per mensem.

We have, &c.

Bombay Castle, 30 May 1853.

(signed) *D. A. Blane.*

* Memo. from the Revenue Commissioner, S. D., No. 617, dated 11th March 1853, with accompaniments. Revenue, No. 1697, dated 19th March 1853. Memo from Revenue Commissioner, S. D., No. 1144, dated 30th April 1853, with accompaniments. Resolution, No. 3103, dated 28th May 1853.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1181.

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(No. 617 of 1853.)

MEMORANDUM by the Revenue Commissioner, Southern Division, dated 11 March 1853.

Forwarded for the information and orders of Government.

2. Should his Lordship in Council see fit, the Collector might be requested to endeavour to supply Mr. Frost's place in the manner proposed.

Revenue Commissioner's Camp,
Nehr, 11 March 1853.

(signed) *W. Courtney,*
Revenue Commissioner, S. D.

(No. 4 of 1853.)

To *J. S. Law*, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to inform you that my engagement with the Honourable the Court of Directors expired on the 24th June 1852, and that my further continuance in the employment, sanctioned by the Government in the letter No. 2952 of 20th April 1852, being for no specified period, I now beg that you will acquaint Government with my wish to resign my appointment on the 1st February 1854, 12 months from this time, it being the period of notice which I am engaged to give in my original appointment of intention to leave the service. I would further beg to request that the Government will grant me my pay and allowances for one month at the Presidency, preparatory to my leaving India.

I have, &c.
(signed) *H. Frost,*
Engineer, Cotton Experiments,
S. M. C.

Dharwar, 24 January 1853.

(No. 98 of 1853.)

True copy forwarded to the Revenue Commissioner, Southern Division, for submission to Government.

Dharwar, Collector's Office,
26 January 1853.

(signed) *J. S. Law,*
Collector.

(No. 346 of 1853.)

THE Collector is requested to state what arrangement he would propose for supplying Mr. Frost's place, and to what extent he considers it necessary to do so.

(signed) *W. Courtney,*
Revenue Commissioner, S. D.

Revenue Commissioner's Camp, Ahmednuggur,
7 February 1853.

(No. 192 of 1853.)

THE Collector begs to state that he is of opinion that a skilful mechanic should be engaged to supply Mr. Frost's place, but that there is no occasion for giving him such a large salary, as a competent person could probably be found willing to serve for from 200 rupees to 300 rupees per mensem. It is very desirable that he should be a man of good temper, likely to get on well with the natives. A well-qualified mechanic, who has already been a short time in the country, and acquired a knowledge of the Hindoostanee language, would seem preferable to one fresh from England.

Dharwar, Collector's Office, Camp Kaguellee,
26 February 1853.

(signed) *J. S. Law,*
Collector.

RESOLUTION on a Memorandum by the Revenue Commissioner, Southern Division, No. 617, dated the 11th March 1853.

1. Mr. Blount has resigned.
2. A good machinist and mechanic in the Southern Mahratta country is required in the present state of the experiments there.

1182. PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III
Bombay

3. Government are willing to renew their engagement with Mr. Frost,
4. The terms on which that gentleman is willing to remain, to be ascertained.

(signed) *Falkland.*
D. A. Blane.
A. Bell.

(No. 1697 of 1853.)

To the Revenue Commissioner, Southern Division.

19 March 1853.

(signed) *H. E. Goldsmid,*
Secretary to Government.

(No. 1144 of 1853.)

MEMORANDUM from the Revenue Commissioner, Southern Division, dated 30 April 1853.

FORWARDED to Government with reference to their resolution, No. 1697, of the 19th ultimo.

2. Although a renewal of the engagement with Mr. Frost is desirable, the Revenue Commissioner questions whether there are sufficient grounds for his being allowed travelling allowance (at 5 rupees per diem) throughout the year. The Collector was requested, under date the 12th instant, to furnish a statement showing the extent, &c., of Mr. Frost's tours in the cotton districts during the last three years. The appended memorandum, No. 465 of 18th instant, is Mr. Law's reply, from the enclosure to which the engineer's movements would scarcely appear to have been so constant or expensive as to lead to the conclusion that his present emoluments are insufficient.

(signed) *W. Courtney,*
Revenue Commissioner, S. D.

Revenue Commissioner's Camp, Nehr,
30 April 1853.

(No. 343 of 1853.)

From *J. S. Law, Esq.,* Collector of Dharwar, to *W. Courtney, Esq.,* Revenue Commissioner, Southern Division.

Sir,

WITH reference to the Government resolution, No. 1697, dated 19th ultimo, forwarded with your endorsement, No. 748, dated 23d idem, I have the honour to forward the accompanying copy of a letter from Mr. Frost, engineer of the cotton experiments, offering to re-engage himself for a period of two years, provided he is permitted to draw permanent travelling allowance in addition to his pay.

2. As I consider it of great importance, with a view to the successful prosecution of the experiments, that Mr. Frost's services should be retained until the apprentices placed under him shall become sufficiently skilled in the work to be able to manage the factory without other superintendence, I would beg strongly to recommend that he should be engaged for two years more, and that his salary should be raised from 500 rupees to 650 rupees per mensem, from the date on which he may begin to put up the cotton screws at Hooblee. I would suggest that he should be required to devote as much time as he can spare from his other duties to the superintendence of these screws during the period for which they are kept at work.

I have, &c.
(signed) *J. S. Law,*
Collector.

Dharwar, Collector's Office,
2 April 1853.

(No. 18 of 1853.)

To *J. S. Law, Esq.,* Collector of Dharwar.

Sir,

I BEG to acknowledge the receipt of your letter, No. 308 of 28th instant, requesting me to inform you upon what terms I would re-engage my services.

2. In reply, I beg to say that I will forego my intention of resigning my appointment, and engage to remain for a period of two years further from this date, provided some consideration is made to me in respect to my travelling allowance, as I am obliged to keep up an establishment for that purpose; and since presses are about to be put up at Hoobly, my presence there will be frequently required; I trust therefore my demand will not be considered too much when I solicit I may be put upon batta allowance of 5 rupees per diem;

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1183

3. At the end of two years, I have no hesitation in saying that I shall be able to have the apprentices quite qualified to manage my duties.

I have, &c.
(signed) *H. Frost*,
Engineer, Cotton Experiments,
S. M. C.

Dharwar, 31 March 1853.

(No. 465 of 1853.)

FORWARDED for the information of the Revenue Commissioner, Southern Division, with reference to his letter, No. 916, dated the 12th instant.

Dharwar, Collector's Office,
18 April 1853.

(signed) *J. S. Law*,
Collector.

(No. 25 of 1853.)

To *J. S. Law*, Esq., Collector of Dharwar.

Sir,

WITH reference to your memorandum, No. 440, of 15th instant, I have the honour to inform you that I am unable to give the information required in the Revenue Commissioner's letter, No. 916 of 1853, as per the form received with the letter above quoted, I have kept no diary of my travelling, and therefore cannot state in detail the villages I visited, their distance from Dharwar, or the dates I started from or remained in each village. The objects of my visits were to see whether the cotton gins at the various villages were in proper working condition, and to make any repairs that might be necessary. I have no memorandum from which I can tell the cost of each tour in every particular. The number of carts employed by me for conveying tent and luggage were three, at a cost of 13 rupees each per month.

I beg to give below a memorandum of the number of days I was on duty, away from my head-quarters for the period mentioned in the form.

From 30th November 1849 to 30th November 1850, days 211
Ditto 30th - ditto - 1850 to 30th - ditto - 1851, days 114
Ditto 30th - ditto - 1851 to 30th - ditto - 1852, days 38.

I have, &c.
(signed) *H. Frost*,
Engineer, Cotton Experiments,
S. M. C.

Dharwar, 18 April 1853.

RESOLUTION on a Memorandum from the Revenue Commissioner, Southern Division, No. 1144, dated the 30th April 1853.

FROM these papers it appears that Mr. Frost is willing to renew his engagement for a period of two years, provided Government allow him to draw permanent travelling allowance at the rate of five rupees a day, in addition to the pay, viz., 500 rupees per mensem, sanctioned by the Honourable Court.

2. Considering Mr. Frost's qualifications as a mechanic and machinist, and his experience in connexion with the cotton experiments in the Southern Mahratta country, Government sanction his salary being raised, subject to the confirmation of the Honourable Court, by 150 rupees a-month, from the date of Mr. Blount leaving the Southern Mahratta country.

3. Government also approve of the suggestion, at close of the Collector's letter of the 2d April 1853.

(signed) *Falkland*,
D. A. Blane.

COPY of REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 9th August, No. 121 of 1851.

WITH reference to our Letter, No. 70, dated the 15th May last, we have the honour to transmit herewith, copies of a letter, with enclosure, addressed by our Secretary to Mr. J. W. Larking, under date the 24th idem, No. 5856, requesting information as to description of machine which is best adapted for cleaning Egyptian cotton, and of that gentleman's reply of the 3d ultimo.

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2. A copy of Mr. Larking's communication has been furnished by us to the Commissioner in Sindh.

We have, &c.
(signed) *D. A. Blane.*
A. Bell.

Bombay Castle, 9 August 1851.

To A. Malet, Esq., Chief Secretary to Government, Bombay.

Sir,
We have the honour to acknowledge receipt of your letter, No. 6653, of the 15th instant, requesting us to reply to No. 10,663 of the 12th November last, regarding an Egyptian cotton-cleaning machine which Government sent us.

In reply, we have the honour to inform you, that the cleaning-machine alluded to resembles the cotton churka used in this country, but is of a much ruder construction, and is suggestive of no improvement in the manufacture of machines for the cleaning of cotton. We paid to the superintendent of stationery Rs. 7. 0. 66. for the above machine; it could be made here for Rs. 1½, we should suppose. The machine, as sent us, was without the iron cylinder alluded to in Mr. Piozin's letter. The cost of cleaning cotton by the churka in this country is considerably less than that stated by Mr. Piozin to be the cost of cleaning by the Egyptian machine.

We have, &c.
(signed) *Ritchie, Stuart & Co.*

Bombay, 16 October 1852.

(No. 1287 of 1852.)

To the Secretary to Government in the Revenue Department, Bombay.

Sir,
WITH reference to your letter, dated 12th November 1851, No. 10,664, I have the honour to forward, for the information of the Right Honourable the Governor in Council, the accompanying copy of a report by Messrs. Blount and Frost, on the subject of the Egyptian churka therein referred to, and beg to add, that from what I have myself seen of the machine, I fully concur in the opinions regarding it expressed by those officers.

2. I would observe, that a similar machine was sent to the Honourable Court of Directors in 1835, as appears from page 289 of the printed volume of reports and documents regarding cotton, wool, indigo, &c., printed in 1836, which also contains a good lithographed illustration of it.

I have, &c.
(signed) *J. S. Law, Collector.*

Dharwar Collector's Office, 31 August 1852.

(No. 138 of 1852.)

To J. S. Law, Esq., Collector, Dharwar.

Sir,
WITH reference to the communication noted in the margin,* received under cover of your endorsement, dated 17th November 1851, we have the honour to report to you that the Egyptian churka therein alluded to has been erected at the gin factory in this place, for the purpose of testing its facilities of cleaning cotton, as compared with machines of similar construction in use in this district.

This churka is not different in the principle of its construction or action from the ordinary native machine. It has a wooden roller, to which is attached a short handle, and to the opposite end of the iron roller is attached a fly-wheel, which is worked by a treadle. The churka is built into a wall, on an incline to the seat of the workman, which is formed by an extension of the same wall, on which he sits astride, and works the treadles with the right foot, and the handle of the wood roller with the right hand. The position of the workman is cramped and awkward, and we are sure from the trials made by ourselves and stoutest coolies in the factory, that to work this churka successfully, would require men specially trained for it. The mechanism of the machine is extremely rude, and altogether it is the most unwieldy churka we have ever seen. It possesses not one advantage over the native churka, and is inferior to it in several particulars. It costs Rs. 7. 2. 8., whilst the price of the native churka is only from 12 annas to 1 rupee. It requires a strong man to work it, whilst the native is worked here exclusively by women. It can clean per diem, as per Messrs. Piozin and Broadhurst's report, 20 to 25lbs. of cotton, which is no more than can be done by a woman in a day's work. Here, the native churka is

* No. 5866, of 1852, from H. E. Goldsmid, Esq., Secretary to Government, to J. W. Larken, Esq., Alexandria, with extract of a letter, No. 301, dated 30th April 1851. From the Acting Collector of Shikarpoor, paras. 2 and 3, transmitted to Government with letter No. 775, of 1851. From H. B. E. Frere, Esq., Commissioner in Scinde. Letter from J. W. Larken, Esq. to H. E. Goldsmid, Esq., Secretary to Government. Letter from W. Piozin and Broadhurst, Esquires, to H. E. Goldsmid, Esq., Secretary to Government, No. 10,664, of 1851. From H. E. Goldsmid, Esq., Secretary to Government, to J. S. Law, Esq., Collector of Dharwar.

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is a portable article, whilst the Egyptian churka has to be built into a wall, and is a fixture, which is an objection; and, for these reasons, we are of opinion the Egyptian churka will not be made use of here in preference to the native machine.

We have, &c.
(signed) *J. M. Blount*, Supt. Cotton Expts., S.M.C.
H. Frost, Engineer:
Dharwar, 25 August 1852.

(No. 463 of 1852.)

From *A. Rogers*, Esq., First Assistant Collector in Charge, to *A. Malet*, Esq., Chief Secretary to Government, Bombay.

Sir,

WITH reference to Mr. Goldsmid's letter, No. 10,665, dated 12th November 1851, I have the honour to submit, for the information of the Right Honourable the Governor in Council, copy of a report received from Mr. Price, Superintendent of Cotton Experiments in this collectorate, on the Egyptian cotton-cleaning machine. The instructions conveyed to this department were, that a joint report should be made by Messrs. Price and Daley, but as the former gentleman's report appears to be so decisive as to the inutility of the introduction of the machine into this country, and it would cause still further delay if Mr. Daley had to come up to Dhundooka, in order to try it, I have thought it better to hand in the enclosed report at once.

I have, &c.
(signed) *A. Rogers*,
First Assistant Collector in Charge.
Ahmedabad, Collector's Office,
13 November 1852.

(No. 107 of 1852.)

To *A. Rogers*, Esq., First Assistant Collector in Charge, Ahmedabad.

Sir,

WITH reference to your endorsement, No. 443, of the 21st instant, I have the honour to forward the accompanying report of the trial of the Egyptian cotton-cleaning machine alluded to in Government letter, No. 10,665, of the 12th November last.

I have, &c.
(signed) *Thomas Price*,
Superint. of Cotton Expts.
Superintendent's Office, Camp Gogo,
28 October 1852.

(No. 108 of 1852.)

REPORT of the Trial of the Egyptian Cotton-cleaning Machine alluded to in Government Letter, No. 10,665, of the 12th November last.

HAVING set up the machine according to plan, a labourer was employed to work it in the manner described in Mr. Piozin's letter to Mr. Secretary Goldsmid, by setting astride at one end of the machine with the right foot on a lever attached to the fly-wheel by means of a rope, and while with one hand he turned the handle of the iron roller, his other hand was employed in feeding the machine. The machine in principle is similar to that of the Goozerat churka, the mode of working it only differing; and as it requires some experience for one to keep both his hands and a foot continually at work, it is much to be attributed to this want of experience that the man employed at the machine failed in toto. I accordingly had it set up in the manner the churkas of the country are done, and employed, in addition, a boy to keep the fly-wheel in motion; by this means, a small quantity of cotton was cleaned, but the process was slow and irregular, very probably owing to the rough manner in which the iron cylinder was made, it being merely a round bar flattened at one end; whereas the iron cylinder of the Goozerat churka is thicker in the middle than at the ends, and filed very smooth. The outturn was in consequence less than the churka would give. I am humbly of opinion its introduction would be no improvement over the present churka of the country.

(signed) *T. Price*,
Superint. Cotton Expts.
Superintendent's Office, Camp Gogo,
28 October 1852.

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To *H. E. Goldsmid, Esq., Secretary to Government, Bombay.*

Sir,
WITH reference to your letter, No. 10,667, of 12th November 1851, and its accompaniments, I have the honour to state, for the information of the Right Honourable the Governor in Council, that the Egyptian machine therein alluded to cleans cotton properly, and without injury to the staple.

For the long staple black seed cottons it can be worked easily by one person; but to clean the short stapled cottons of India, which adhere to the seed with great tenacity, two persons are required to work it, precisely in the same manner as they do the country churka.

As the two machines are exactly alike, both in principle and construction, the merits of the one are equal to those of the other when worked in the same manner, and applied to the same kind of cotton. The Egyptian mode of setting the machine up, or something like it, is necessary to enable one person to work it instead of two.

I am not aware that the black-seed cotton is anywhere cultivated in India; and am therefore respectfully of opinion that no advantage can accrue to the cotton interest of this country from the introduction of the churka in question, or from the adoption of the Egyptian method of working it.

The saw-gin has never yet been applied successfully to the cleaning of long-stapled cotton, on account of the injury it does to the staple, but for separating the seed from all varieties of short staple, it is, as regards cleanliness, efficiency and economy, infinitely superior to every other machine known.

As an instance of the superior economy of the saw-gin, as compared with the Goozerat churka (which is the most efficient native machine in India), I may mention, that if the whole of the cotton shipped from Broach were to be cleaned by the former instead of the latter, a saving would be effected under this head alone of more than 3,00,000 rupees, (3 lacks) per annum. This estimate is based upon the price which I pay per bhar for ginning, and that which is uniformly paid for cleaning by the native churkas, and may therefore be relied on as correct.

In explanation and apology for the apparent delay which has occurred in submitting this report, I respectfully beg to state, that I was unable sooner to make such a trial of the Egyptian machine as would enable me to speak with certainty of the result.

Broach, 12 January 1853.

I have, &c.
(signed) *J. Landon.*

(No. 447 of 1852.)

From the Commissioner in Scinde to the Right Honourable Lord Viscount Falkland,
Governor and President in Council, Bombay.

My Lord,

WITH reference to Mr. Secretary Goldsmid's letter, No. 10,668, of the 12th November 1851, I have the honour to submit for the information of your Lordship in Council, copy of a report by the superintendent of cotton experiments, Mr. Prince, on the subject of the Egyptian cotton-cleaning machine forwarded by Government.

Commissioner's Office, Kurrachee,
18 December 1852.

I have, &c.
(signed) *H. B. E. Frere,*
Commissioner in Scinde.

(No. 6 of 1852.)

From the Superintendent of Cotton Experiments to the Commissioner in Sindh.

Sir,

I HAVE the honour to acknowledge the receipt of the Government memorandum, bearing your endorsement, No. 3045 of 1852, and the accompanying correspondence on the subject of the Egyptian cotton-cleaning machines mentioned in Government letter, No. 10,668 of 1852, as to whether the machines clean the cotton properly, and without injury to the staple, as also whether they are easily worked; and their relative merits to those of the ordinary churkas used in Scinde.

2. In reply, I have the honour to inform you, that while I was in Kurrachee, Mr. Maher showed me one of the machines mentioned in letter No. 10,668 of 1852, but I had not then, nor have I since had an opportunity of trying it; however, I have no hesitation in saying that it will clean cotton properly, and without injury to the staple; it is, in fact, very similar to the Goozerat churka, and to the common Scinde churka or "attarree," the only difference being (as far as I can see), that the Egyptian churka is worked by one man, with a windlass or crank, and a wheel and treadle, as shown in the diagram, and the Scinde churka is worked by two persons, with two cranks, and without the wheel, which enables them both to feed at the same time, and consequently to clean more cotton than could be done by only one hand feeding.

3. With

No. 6, dated the
15th December
1852.

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3. With regard to the comparative working merits of the Scinde and Egyptian churkas, I am inclined to think that a Sindhee churka, turned and fed by two women or boys (by whom the work is generally done) would turn out as much or more clean cotton in a day than an Egyptian one would of the same size, turned and fed by one man in the same time.

4. In conclusion, I would beg to observe, that the Scinde churka, or "attarree," is simple and less expensive than the Egyptian (which would require an elevation of masonry, and be a fixture); that the people are accustomed to its use, it being the only kind used, I am informed in Scinde, and that for the present I think it would answer all the purposes for which it is required.

I have, &c.
(signed) T. G. Prince,
Supt. of Cotton Expts.

Kotree, 15 December 1852.

(No. 560 of 1853.)

From Mr. Secretary Goldsmid to J. W. Larking, Esq., Alexandria.

Sir,

IN forwarding herewith, for your information, a copy of the letters noted in the margin,* containing opinions on the merits of the Egyptian cotton-cleaning machine referred to in Mr. Piozin's letter of the 17th September 1851, I have been directed to communicate to you the thanks of his Lordship in Council for the part you have been so good as to take in the matter.

I have, &c.
(signed) H. E. Goldsmid,
Secy. to Govt.

Bombay Castle, 28 January 1853.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 11 January 1854.—V. 548 to 550.

(No. 3440 of 1853.)

From the Revenue Commissioner, Northern Division, to Mr. Chief Secretary Malet.

Sir,

IN reply to the Government resolution, No. 6598, dated the 12th instant, I have the honour to state, for the information of the Right Honourable the Governor in Council, that the queries proposed in Government resolution, No. 3231, dated the 7th May 1852, were at first confined to Mr. Davies and the Collectors of Ahmedabad and Surat, where Messrs. Price and Daley were.

V. 548.

2. The Acting Collector of Ahmedabad finally intimated, on the 29th July 1852, that he had ordered Mr. Price to proceed to Ahmedabad on the 1st October following, to undergo an examination as to his mechanical knowledge, before the executive engineer, when all the points referred to in the Government resolution would be replied to.

3. On the 1st February 1853, Mr. Lockett, the Acting First Assistant in Charge, reported on the several points, except the qualification of Mr. Price, who had been in the meantime transferred to Khandeish, and a reference was made to the Collector of that zillah on the 14th February last, to which Mr. Mansfield replied on the 5th July 1853. On receipt of this, and on consideration of the whole subject, I deemed it advisable, in order to render the report complete, to propose the other three questions to the latter Collector also, which was done on the 30th July 1853, and not 3d July, as acknowledged by him in his reply, No. 2022, dated the 12th September last.

Forwarded to Government with Revenue Commissioner's letter, No. 3126, dated 24th October 1853.
Ditto.
Ditto.

Revenue Commissioner's Office,
Tannah Districts, Camp, Koolgaon,
16 November 1853.

I have, &c.
(signed) E. G. Fawcett,
Revenue Commissioner, Northern Division.

RESOLUTION on a Letter from the Revenue Commissioner, Northern Division, No. 3440, dated 16th November 1853, replying to Government Resolution, No. 6598, dated 12th idem, regarding the reference made to the Collector of Khandeish relative to certain Queries on the subject of Cotton Experiments.

V. 549.

1. THE questions before Government for decision are—

1st. Whether, as proposed by Mr. Price, a competent maistry, on 25 rupees a month, to look after the efficient working of all machines belonging both to Government and to

* Government letter to Messrs. Ritchie, Stuart & Co. and others, No. 10,663, dated 12th November 1851. From Messrs. Ritchie Stuart & Co., dated 16th October 1852. From the Collector of Dharwar, No. 1287, dated 31st August 1852, with enclosure. From the First Assistant Collector of Ahmedabad in charge, No. 463, dated 13th November 1852, with enclosure. From Mr. J. Landon, dated 12th January 1853. From the Commissioner in Scinde, No. 447, dated 18th December 1852, with enclosure.

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to private individuals in the absence of the superintendent, should be attached to the Cotton Experimental Department at Ahmedabad?

2d. Whether Mr. Price and Mr. Daley possess the mechanical knowledge and skill necessary to enable them to superintend the construction and repair of gins?

3d. Whether it is advisable to buy and gin cotton on account of Government?

4th. Whether it is advisable to maintain gins for the purpose of cleaning at Government gin-houses cotton for the growers and traders; and if so, on what terms?

5th. Whether it is advisable to continue the manufacture of gins at a Government factory; or better, that gins should be purchased from Mr. Landon, and Messrs. Price & Daley be employed in getting the people to make use of such machinery, and in repairing them when out of order?

2. A maistree may be entertained if still deemed advisable by Mr. Fawcett.

3. The Revenue Commissioner says, that though Mr. Price has undergone no examination, he is believed to be well acquainted with the mechanical part of the duties he has to perform. Government would wish this to be ascertained beyond a doubt. They are gratified at the testimony born by the executive engineer at Surat at Mr. Daley's qualifications, Mr. Edwards has resigned the service, and conducted himself in a manner which will preclude his ever again being employed by Government.

4. Government concur in the opinion expressed by the Revenue Commissioner on the third point. But that officer should be reminded, that unless the cotton is properly and carefully ginned, the object with which the experiment is made is sure to be frustrated.

5. As regards the fourth question, Mr. Fawcett's observations on the third point apply partially to this. If, as Mr. Fawcett observes, the gins can be employed by letting them out, it is so far in advance towards success. Government would greatly prefer this arrangement to ginning on their own account, if the rates for ginning cotton mentioned by Mr. Price in answer 2, in his memorandum, No. 123, dated the 29th November 1852, to query 3, put in Government Resolution, No. 3231, dated 7th May preceding, are too high, Government authorise their being reduced to the amount the Collector may deem advisable.

6. On the fifth point Mr. Fawcett observes:—"My own opinion is, that the time has not yet arrived for Government to withdraw from maintaining an establishment either for constructing or repairing gins. Natives who may purchase gins have no other means at present of getting them repaired when out of order, and this objection would be of such weight with them that I think it would of itself decide them against using them. That keeping up these establishments tends to instruct native artificers who may eventually undertake such work on their own account, is also, I think, a strong argument in favour of maintaining the manufactory for some time longer."

7. His Lordship in Council allows the opinion to be acted on, in deference to Mr. Fawcett; but if they acted on their own judgment, would have preferred the gins being purchased when made up by Mr. Landon.

(signed) *Falkland.*
D. A. Blane.
J. Warden.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 15th February 1854.—V. 1761 to 1763.

(No. 143 of 1854.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

Sir,

V. 1761.

I HAVE the honour respectfully to draw the attention of the Right Honourable the Governor in Council to para. 4 of Mr. J. H. Pelly's letter, No. 260, dated 7th July, 1852, in which it will be observed, Mr. Landon's qualifications are doubted on apparently sufficient grounds. From the opinion expressed in para. 7 of Government Resolution, No. 204, dated the 9th instant, I am inclined to suppose that this may have escaped observation, and request to know whether Government wish its opinion still to stand as expressed.

I have, &c.
(signed) *E. G. Fawcett,*
Revenue Commissioner, Northern Division.

Revenue Commissioner's Office, Camp, Dhoolia,
16 January 1854.

V. 1762.

RESOLUTION on a Letter from the Revenue Commissioner, Northern Division, No. 143, dated 16th January 1854, relative to Mr. Landon's qualifications.

THE Revenue Commissioner should ascertain, as speedily as possible, whether there were sufficient grounds for the opinion expressed in para. 4 of Mr. Pelly's letter, (which, as supposed

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supposed by Mr. Fawcett, escaped the observation of his Lordship in Council,) and if not sufficient grounds, and Mr. Landon will undertake to supply gins, Government are of opinion that they had much better be purchased from him than made up at a Government factory.

(signed) *Elphinstone.*
D. A. Blane.
J. Warden.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 29th March 1854.—V. 3396 to 3399.

(No. 527 of 1854.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

SUBMITTED for the information of the Right Honourable the Governor in Council. The Revenue Commissioner begs to explain, that on intimating to the Acting Collector of Ahmedabad the despatch of the gin-saws, alluded to in the communication forwarded with Government memorandum, No. 1357 of 3d March 1853, that officer reported the opinion of the then superintendent, Mr. Edwards, that they would be of no use, as the native merchants were disinclined to adopt saw-gins.

V. 3396.

2. As, however, his predecessor, Mr. Price, had been prepared to find use for the gin-saws, the Acting Collector was requested to ascertain the cause, for it seemed as if the superintendent did not exert himself to win over the people; and, if that was the case, it might have been necessary to take measures to replace him by some person who could exert a more beneficial influence. The correspondence now submitted is the result of the inquiry instituted, which is gratifying, inasmuch as the merchants now seem to be anxious to adopt gins.

18 February 1854.

(signed) *E. G. Fawcett,*
Revenue Commissioner, Northern Division.

(No. 95 of 1854.)

From *J. W. Hadow*, Esq., Acting Collector of Ahmedabad, to *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division.

Sir,

In reference to your letter, No. 1376, dated 18th May last, relative to the subject of saw-gins, I have now the honour to submit copies of letters, as per margin,* containing the result of inquiries instituted by my first assistant, Mr. Ritchie, and by Mr. Daly, into the disinclination of the native merchants and dealers, to adopt the saw-gins as reported by the late superintendent.

V. 3397.

2. It now appears, from what Mr. Daly states, that the native cotton dealers at Dhundooka are by no means apathetic on the subject, or in the least disinclined to use the saw-gins. The prejudice against the use of the gin, and the disposition evinced to oppose its introduction, as represented by the late superintendent, may now be considered without foundation, and to have been chiefly imaginary.

3. The only difficulty appears to be a scarcity of manual labour to work the gin, and not its size, as supposed by my first assistant; the way in which this difficulty can be obviated is pointed out by Mr. Daly, and I have no doubt that the dealers will soon provide a remedy for it themselves when convinced that they can afford to pay the higher rates,

4. The cog-wheels referred to in the concluding paragraph of Mr. Daly's letter being perfectly useless in their present state, I have given him permission to make use of them in constructing the cattle-power machine adverted to in para. 3, which the native dealers seem very anxious to see at work.

5. The gin-saws received in October last, referred to in my letter, No. 586 of 1853, have been retained at Ahmedabad, where perhaps they had as well remain for the present, until the decision of Government be communicated to this department, in regard to a successor to Mr. Edwards.

Ahmedabad, Collector's Camp, Dholka,
7 February 1854.

I have, &c.
(signed) *J. W. Hadow,*
Actg. Collector.

* From the Acting First Assistant Collector, No. 1, dated 3 January 1854. From Mr. Daley, Superintendent of Cotton Experiments, on special duty, No. 2, dated 21 January 1854.

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(No. 1 of 1854.)

From *W. A. Ritchie*, Esq., Acting First Assistant Collector, to *J. W. Hadow*, Esq.,
Acting Collector.

Sir,

IN reply to your endorsement, No. 375, of May 30, 1853, to the address of my predecessor and subsequent call, No. 587, of October 21, 1853, on a letter, No. 1376, of May 18, 1853, from the Revenue Commissioner, N. D., relative to the reported disinclination of the native cotton dealers in this part of the country to make use of the saw-gins applied for by the late superintendent, Mr. Price, I have the honour to report, that I have personally made inquiries on the subject, and have ascertained that Mr. Price was induced to apply for these saw-gins from some persons expressing their readiness to take them, should they find them suitable.

2. Four amongst others were taken by Ahmedabad merchants to be worked here, but the success which attended their establishment was not such as to induce others to follow their example. The superiority of the machines to the churka of native manufacture was acknowledged by all, but the labour of working them was found to be beyond the strength of the men engaged.

3. This, I am informed, is the chief objection to their use, the labouring population of these districts declining such hard work on any terms; for the merchants to whom I spoke assured me that could they command a sufficiency of labour, they would willingly become purchasers of gins.

4. Another objection which was urged, is the space absolutely necessary for the proper working of the gins, space which the limited accommodation in and about their houses could not afford; I suggested that room might be found elsewhere, either on the outskirts of the town, or on vacant ground within them; and further proposed that they should form joint stock associations for the purpose; but the expense (notwithstanding all seemed aware of the certainty of a profit) was objected to on the first, and as to the second point, I found them strongly opposed to any scheme of partnership for the accomplishment of the object in view.

5. These appear to be the causes of the disinclination upon which I have been called upon to report, and while the frivolous nature of the second is at once apparent, it is undeniable that the first is of considerable importance, as if the labour of working the hand-gin is as great as is alleged, it is self-evident that no introduction of it will be made at all.

6. I am not aware whether in the construction of these gins (which I think are all made on models procured from England), due allowance has been made for the difference between European and native capacity for such description of labour, but I observe Mr. Edwards in his progress report of February last, calls it "very hard work, too much so for the inveterate opium eating, drinking and smoking inhabitants of this zillah."

7. If this is the fact (but I am not aware of its having been sufficiently tested, nor of any other opinions on the subject), it is clear that nothing will do but a reduction in the amount of labour; and as it is the practice in these districts for the women of the family to employ themselves in working churkas, it appears to me that all difficulties would vanish could saw-gins be made of a construction adapted to their strength, as well as to that of the men.

8. From all that I have heard, there can be little room for doubt, that were the women able to work small saw-gins, the men would gladly come forward and endeavour at least to work those now on hand, as then the labour of both would be productive; whereas, under existing circumstances, if a man works a saw-gin, the women of his family are unable to contribute to his labour, and thus he naturally refuses work which only brings him two or three annas a day, when by their labour at the churka he is able to double the amount of his own wages.

I have, &c.
(signed) *W. A. Ritchie*,
Actg. First Asst. Collr.

Acting First Assistant Collector's Office,
Camp Dhundooka, 3 January 1854.

(No. 2 of 1854.)

To *J. W. Hadow*, Esq., Acting Collector, Ahmedabad.

Sir,

IN reply to your letter of the 14th instant, No. 35, regarding the application from Mirza Durearjee Kyojee, Parsee, watchmaker to the Thakore of Bhownuggur for two saw-gins, to be paid for one year after delivery; I beg to inform you that I have consulted the carcoon of this establishment, and he tells me that it is customary here to receive the cash before the gin is made over to a purchaser, I have in consequence written to the Parsee at Bhownuggur, to either bring or send the cash for the gins.

2. The native cotton dealers here are far from being apathetic or disinclined to use the saw-gins. A few days ago I convened a meeting of the principal dealers in this town, and asked

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asked them the cause of their not using the saw-gins in preference to their churkas, they unanimously acknowledged the superiority of the saw-gin to the churka, and the only objection that they had to the saw-gin was not to its size, but to the difficulty in obtaining manual labour to work it. This difficulty can, I believe, be easily obviated. If a labourer can earn by light work two annas a day, turning the fly-wheel of a gin being considered heavy work by them, the cotton dealers have only to give each labourer half an anna, or one anna a day extra, and I suspect there will then be no difficulty in obtaining manual labour. At the rate of three annas a day to each labourer, the gin will still clean a candy of cotton much cheaper than the churka, and of course much cleaner; besides, the ginned cotton, I am told, fetches from three to five rupees more a candy at Dhollera than the churkaed cotton; with a little tact, I believe, before long I will be able to dispose of the whole of the gins on hand.

3. The cotton dealers begged of me to construct a cattle-power machine to work the gins with, and they told me that if it worked at all reasonably they would not only take up all the gins here, but that they would also indent upon me for as many more gins as would enable them to clean all the Kholla kuppas in one season, instead of as at present, the churkas cleaning a portion before the monsoon, and the remainder after, the latter becoming thereby subject to deterioration in quality by the effects of the rains, &c., and consequently a loss to the owners. Not to let their ardour cool, I at once commenced constructing a cattle-power machine to work four gins at my own cost, on the same principle as those in use by the firm of Messrs. Ritchie, Steuart & Co., in Candeish, so as to enable the dealers here to judge for themselves as to its utility. I expect to have the machine completed by the 10th proximo, and by that time I hope also to have inspected the whole of the exotic cotton-fields in this talooka.

4. I beg to request that you will have the goodness to permit me to use two cog-wheels that are lying useless here in my cattle-power machine. They will enable me to expedite the construction of the machine, and also to allow me to employ the carpenter and hammerman on the work.

5. I offered to clean kuppas with my machine at the rate of (5) five rupees a Bombay candy of 784 lbs. of clean cotton; the dealers closed with my proposal most willingly, and promised to supply me with as many maunds of kuppas as would keep all the gins here engaged during the season. The mamlutdar was present at the meeting.

I have, &c.

(signed) C. Daley,

Superintendent of Cotton Experiments on Special Duty.

Dhundooka, 21 January 1854.

(No. 532 of 1854.)

FROM E. G. Fawcett, Esq., Revenue Commissioner, N. D., to J. W. Hadow, Esq.,
Acting Collector of Ahmedabad.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 95, dated 7th instant, with accompaniments, relative to the representation by the late superintendent, Mr. Edwards, of the disinclination of the native merchants and dealers to adopt the saw-gin.

2. In reply I beg to observe, that it is gratifying to find that the merchants are well inclined to adopt the gin. Mr. Daley, however, was not deputed to construct machines, but to report on the success or otherwise of the New Orleans cotton crop in your collectorate, and I request that he may not be detained there on any other subject. Indeed I thought I should have received a report of the result of his mission before this.

3. I have no objection to the permission given by you for the use of the cog-wheel in the construction of the cattle-power machine adverted to in para. 4 of your letter; but unless he can fit it up without delay or prejudice to his duties at Surat, the work must be managed by other agency than that of Mr. Daley.

4. I request you will be good enough to furnish Mr. Daley with a copy of this letter.

I have, &c.

(signed) E. G. Fawcett,

Revenue Commissioner, N. D.

Revenue Commissioner's Office, Camp,
Dhoolia, 18 February 1854.

RESOLUTION and Memorandum from the Revenue Commissioner, N. D., No. 527, dated 18 February 1854, submitting a Letter, with accompaniments, from the Acting Collector of Ahmedabad, relative to the adoption of saw-gins by natives.

V. 2398.

This may be recorded.

296—Sess. 2.

7 S

2. Government

III
Bombay.

2. Government cannot regard the prospect encouraging. The people appear to amuse the Assistant Collector and Mr. Daley by professing to be favourable to the use of the gin, at the same time to assign what appears to be their insuperable objections to their making use of it.

(signed) *Elphinstone.*
J. Warden.
J. G. Lumsden.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 8 February 1854.—V. 1516 to 1519.

(No. 94 of 1854.)

V. 1516. From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

SUBMITTED with reference to Government Resolution, No. 7045, dated 6th ultimo.

2. The Revenue Commissioner begs to mention that the subject of the Collector's letter, No. 589, dated 5th March last, has reference to the failure of the machine constructed by Mr. Edwards, as described in the correspondence ending with Revenue Commissioner's memorandum, No. 2493, dated 24th August last, para. 5.

(signed) *E. G. Fawcett,*
Revenue Commissioner, Northern Division.

Revenue Commissioner's Office, Camp,
Dhoolia, 12 January 1854.

(No. 2846 of 1853.)

From *Samuel Mansfield, Esq.*, Collector of Candeish, to the Revenue Commissioner, Northern Division, Dhoolia.

Sir,

V. 1517. WITH reference to your memorandum, No. 3765, of the 13th instant, forwarding copy of the Government Resolution, No. 7045, dated 6th idem, I have the honour to state for the information of Government, that there are in this province two single bullock-power machines, invented by Mr. Edwards, late superintendent of Government cotton experiments, which, as reported in my letter, No. 589, dated 5th March 1853, are a complete failure, and I therefore beg to suggest that they should be broken up, and the present superintendent, Mr. Price, be directed to turn the materials to the best advantage he can.

I have, &c.
(signed) *S. Mansfield,*
Collector.

Khandeish Collector's Camp, Rawere,
31 December 1853.

V. 1518. RESOLUTION on a Memorandum by the Revenue Commissioner, Northern Division, No. 94, dated the 12th January 1854, submitting a letter from the Collector of Khandesh, suggesting that the two single bullock-power machines in his collectorate, invented by Mr. Edwards, late Superintendent of cotton experiments, be broken up, and the materials used by the present superintendent, Mr. Price, to the best advantage.

Mr. Mansfield's suggestions to be acted on.

(signed) *Elphinstone.*
D. A. Blane.
J. Warden.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 30 September 1854.—V. 9335 to 9341.

(No. 939 of 1854.)

V. 9336. From *J. N. Rose, Esq.*, Acting Collector of Dharwar, to *H. W. Reeves, Esq.*, Acting Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour of submitting, for the consideration of Government, an application from Mr. Frost, the engineer attached to the cotton experiments in this collectorate, for permission to resign his appointment at the end of next January, and for leave of absence for that month and the preceding month of December, without loss of pay.

2. I will not report my opinion on the arrangements proposed by Mr. Frost in the second paragraph of his letter, when I have made myself acquainted in some measure with the working of the establishment over which he presides.

I have, &c.
(signed) *J. N. Rose,*
Acting Collector.

Dharwar Collector's Office,
2 June 1854.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1193

III.
Bombay.

(No. 55 of 1854.)

To *J. N. Rose*, Esq., Acting Collector, Dharwar.

Sir,

ACCORDING to my letter, dated 31st March 1853, No. 18, and the Government Resolution, dated 28th May 1853, No. 3103, my engagement to serve Government will expire next March; but I beg to state that in consequence of my failing health I feel the necessity of retiring from service earlier and departing home, being since November last frequently troubled with rheumatism and fever. I beg therefore to request that Government will permit me to resign my appointment at the end of January next; and that I may settle my private affairs, allow me leave of absence for December and January next without prejudice to my pay.

I would here beg leave to suggest certain arrangements that occur to me, which may be made on my departure, and in the first place I would state that there is no necessity for the employment of a new engineer as my successor. The apprentices that are being trained under me will suffice. Mr. C. M. Courpalais and Mr. J. Carvalho, two of the first appointed apprentices, and whose apprenticeships will expire next November, are efficient hands. They have constructed several gins of different sizes, and are practically acquainted with their work. I would propose to divide my duties between them; the first to get charge of the gins in the Hoobly, Dummul, and Nowlgoond talooks, and the other of those in the Bunkapoor and Raneebednoor talooks. The appointment of two to manage my duties arises from the work daily increasing, and it will be too much for one to attend to. The number of gins in the Dharwar collectorate is near upon 300, and the occasional repairing of these gins, and others that will follow, will afford a large field for employment, and I feel no hesitation to say that the above-mentioned young men will manage the business in the factory and in the districts most satisfactorily, and the more especially as the native establishment is composed of men who have been under me for the last seven years nearly, and understand their business perfectly.

I have, &c.
(signed) *H. Frost*,
Engineer Cotton Experiments,
S. M. Country.

Dharwar Cotton Experiments,
2 June 1854.

(No. 170 of 1854-55.)

REPORT by the Civil Auditor, dated 17 June 1854.

V. 9337.

THE civil auditor begs to state that he is not aware of any objection to Mr. Frost, engineer of cotton experiments in Dharwar, being granted the same indulgence that would be allowed to the uncovenanted servants generally under similar circumstances, viz., leave of absence for one month on full pay, on his retirement from Government employ.

2. Should his Lordship in Council be pleased to comply with Mr. Frost's request and allow him leave for December and January next on full pay, the leave beyond one month must be considered as specially sanctioned by the Honourable Board.

Bombay, 17 June 1854.

(signed) *C. J. Erskine*,
Civil Auditor.

RESOLUTION on a Report by the Civil Auditor, No. 170, dated 17 June 1854, on an endorsement by the Revenue Commissioner, Southern Division, No. 1813, dated 8th idem, submitting a letter from the Acting Collector at Dharwar, accompanied with an application from Mr. H. Frost, the engineer attached to the cotton experiments in that collectorate, for permission to resign his appointment at the end of January 1855, and for leave of absence for that month and the preceding month of December without loss of pay.

V. 9338.

GOVERNMENT regret to lose Mr. Frost's services. His resignation is accepted, and leave of absence for one month allowed.

2. It is possible Mr. Frost may be qualified and be willing to take service in Sind under Major Turner.

3. Mr. Frere should therefore be advised of Mr. Frost's intended resignation, and of the pay and allowances he drew at Dharwar.*

4. The Military Board might also be asked if Mr. Frost's services cannot be usefully employed in the Department of Public Works in any part of the Presidency.

25 September 1854.

(signed) *H. E. Goldsmid*,
Officiating Chief Secretary to Government.

* The pay Mr. Frost draws at Dharwar is 650 rupees per month. He receives no allowances.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 3 March 1855.—V. 1854.

(No. 215 of 1855.)

From the Revenue Commissioner, Northern Division, to Mr. Acting Secretary Tytler.

Sir,

V. 1854.

WITH reference to Government Resolution (No. 836), dated 18th February last, relative to Mr. Landon supplying saw-gins, I have the honour to subjoin, for the information of Government, a letter from that gentleman to the address of the Collector of Broach, dated 5th instant.

“With reference to the letter of the Revenue Commissioner of the Northern Division, dated 21st February 1854, with your endorsement thereon, I have the honour to inform you that, in consequence of my establishment being engaged in the erection of cotton-spinning machinery, it is not in my power to make saw-gins on account of Government; but I beg to add, that I have a few spare gins (new) on hand, which, if Government desire them, I will sell at the rate of 8 rupees per saw, complete; they vary in size from 25 to 50 saws each.

“I have also three sets of cattle-power driving machines, which I am willing to dispose of, at 700 rupees for one; and at 1,200 rupees each for the other two; they are all complete, and ready for setting up.”

2. In Khandeish, the office of superintendent has been abolished, and no successor has been appointed to Mr. Edwards, who was superintendent at Ahmedabad; nor do I think that it will be advisable to replace this officer, though I am not prepared to submit a decided opinion on this point till I have received the report of the collector called for in Government Resolution (No. 5008), dated 25th August 1853, on the advisability or otherwise of continuing the cotton experiments carried on in the Surat Collectorate.

3. The information required in the first part of the Government Resolution under reply, relative to the opinion expressed by Mr. Pelly, in respect to Mr. Landon's qualifications to manufacture gins, has not been supplied by the collector of Surat: but, as Mr. Landon has intimated his inability to supply gins, there seems no necessity for further questions.

Revenue Commissioner's Office, Poona,
29 January 1855.

I have, &c.
(signed) E. G. Fawcett,
Revenue Commissioner, N.D.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 3 March 1855.—V. 636 to 640.

(No. 863 of 1854.)

From the Sub-Collector of Nassick to the Secretary to Government.

Sir,

V. 636.

IN transmitting to Government the accompanying letter from Dr. Pelly, with model of a machine invented by Dr. Pelly for working cotton gins by bullock power, I have the honour respectfully to suggest that a reference should be made to the Chamber of Commerce for their opinion, as to the merit of Dr. Pelly's plan in point of general practical utility.

Nassick, Sub-Collector's Office,
21 December 1854.

I have, &c.
(signed) W. J. Turquand,
Sub-Collector.

(No. 205 of 1854.)

To W. J. Turquand, Esq., Acting Sub-Collector of Nassick.

Sir,

V. 637.

I HAVE the honour to send you the accompanying model of a machine for working cotton gins by bullock power, which, thinking from its simplicity of construction, some advantage to the natives might be derived, I have employed a few leisure hours in making.

2. The superiority of bullock power over that of men is, I fancy, allowed by all; but the actual advantages to be obtained, in saving both of time and money, I believe to be known only to a few. It may therefore not be out of place to give the following calculations, based upon information kindly furnished to me by Mr. Laidlaw, the superintendent of Messrs. Ritchie, Steuart & Co.'s cotton establishment in Khandesh.

3. Supposing, then, a thousand maunds are to be cleaned by a pair of bullocks, at the highest rate of hire, viz, 8 annas per diem, and another thousand by hand power at the rate of 2 annas each per diem for the usual number of nine men, each gin of 20 saws being worked

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1195

III,
Bombay.

worked for an ordinary day of 10 hours, the following will be found to be the results arrived at:—

Power.	Number of Hours per Diem.	Quantity Cleaned per Diem in Seers.	Cost per Diem in Annas.	Number of Days required to Clean 1000 Maunds	Cost of Cleaning 1000 Maunds.	Saving in Expense in favour of Bullocks.	Saving in Time in favour of Bullocks.
				Days hrs.	Rs. a. p.	Rs. a. p.	Days hrs.
Men - - -	10	420	18	95 2	107 2 -	65 6 -	31 7
						or more than two-thirds.	or one-third.
Bullocks - -	10	630	8	62 5	31 12 -		

4. If, as there is no reason to doubt, these calculations are correct, there is shown a very considerable advantage in favour of bullock power.

5. It is, however, well known, that though European capitalists have availed themselves of these advantages to a considerable extent, the native dealers have hitherto, generally speaking, been deprived of them, owing to the difficulty and expense of obtaining machinery from England, and the very prevalent idea that neither the materials procurable in the districts are suitable for the requisite machinery; nor the skill of country carpenters sufficient to enable them to construct such machines. The adaptation of bullock power has therefore, I believe, very seldom if ever been attempted by them.

6. It will be seen, from the model now sent, that the machine I propose can be formed almost entirely of wood, the small quantity of iron required being only flat bars of that metal, procurable in any bazaar; any country carpenter who can make a Persian wheel, or even a common cart, may very easily construct it, and the fly wheels now in use may easily be turned to account, as shown by the small wheel of the model.

7. The formation of the cog-wheel is generally looked upon as a difficult task, but if the cogs are marked off at the distance of 3 inches apart, this will allow of each cog being 1 1/2 inches square at the base, which (if they are only 2 inches high) will give sufficient strength, and the carpenter has only to count the number of inches in the diameter of the circle on which he purposes placing them, when the exact number of cogs for which there is room will be ascertained.

8. The calculation of the requisite number of cogs must depend upon the speed of the bullocks, and the relative proportions of the fly-wheel and pulley worked by it.

9. Khandeish cotton cannot be cleaned without injury if the saws make more than about 180 revolutions per minute. The small fly-wheel in the model, if acting on a pulley of the ordinary size, viz., nine inches diameter, will, at the common pace of a bullock (four revolutions per minute), give exactly 176 revolutions of the saws. The large wheel, if acting on a pulley one foot in diameter, will give exactly the same number of revolutions.

10. If used in Goozerat, the machine might safely be constructed so as to give 200 revolutions per minute without injury to the cotton.

11. As shown in the model, two gins may be worked by one cog-wheel, and two pairs of bullocks may work as easily as one pair.

12. The cost of the proposed double machine can scarcely be more than the saving arising from cleaning 1,000 maunds with one gin, about 65 rupees, especially if the fly wheels now in use are turned to account instead of new ones being made.

Nassick, 9 December 1854.

I have, &c.
(signed) S. M. Pelly, Civil Surgeon.

Reference to Mr. A. C. Brice, No. 63, dated 8 January 1855.

Mr. A. C. BRICE is requested to have the goodness to report on the machine herein referred to.

V. 636.

Bombay Castle, 8 January 1855.

By order, &c.
(signed) C. E. F. Tytler,
Acting Secretary to Government.

III.
Bombay.

To *C. E. F. Tytler*, Esq., Acting Secretary to Government.

Sir,

V. 639.

I HAVE perused the papers, and examined the model which you did me the honour to send me to-day, and beg to return them.

I concur in *Dr. Pelly's* opinion, that the application of cattle power to a simple machine for driving gins, will be attended with great advantage to the cotton growers.

I go the length of thinking that, without such appliances in aid of manual labour, Indian cotton will, during the course of low prices consequent on the war, prove so unremunerative, to the ryot as to go out of cultivation to a large extent. The soil, the climate, and even the slovenly tillage of the land, are equal to the production of very fine cotton, and could it be made quickly merchantable and brought to a port, the supply would increase as fast as it did in America after the introduction of *Whitney's* machine. There is barely labour to spare to pick the bolls from the bush; there is not covering to house it; there are not hands to clean the seed from the fibre much before the next crop is ripe on a succeeding year's sowing, and long before shipped, the quality is so depreciated as to throw a doubt on India's ability to produce a decent article in quantity.

Cattle-power machines must be spread far and wide over the country, but I attach far less importance to any possible economy in the expense of cleaning, than to the preservation of the intrinsic good qualities of the growth; the first will prove but a saving of one or two per cent., the latter will be an enhancement on the value of the present article of 10 or 20 per cent.!!

I venture to think that *Dr. Pelly's* machine would not be extensively adopted by the natives, and I offer a few suggestions to remedy what I believe will be found the objections to it. The circle in which the cattle are to work is too small; it should be 30 feet diameter; the timbers supporting the gearing are liable to warp and throw the teeth of the wheels out of play. Let the whole be sunk in masonry, and the cattle work over the machine instead of under it. Masonry would cost less than the wood-work, but even that is unnecessary. Two pits in which the drums should work would serve all purposes, and the rest might be on the ground; but cattle working a rough machine as that proposed, would cause jerks, and the irregularity of the motion would cause the staple to be injured. The machines I wish to get out are as simple and inexpensive as is compatible with success. I shall be content if they effect no saving in expense, but enable me to do the work, which cannot be done in any other way than by machinery, of which gins are but a part.

Bombay, 8 January 1855.

I have, &c.
(signed) *A. C. Brice*.

(No. 326 of 1855).

From the Secretary to Government to the Secretary to the Chamber of Commerce.

Sir,

V. 640.

I AM directed to forward to you the accompanying copy of the papers noted in the margin,* together with the model of a machine invented by *Dr. Pelly*, for working cotton gins with bullock power, and to request that the Chamber of Commerce will favour Government with their opinion on the point alluded to by *Mr. Turquand*.

Bombay Castle, 27 January 1855.

I have, &c.
(signed) *C. E. F. Tytler*,
Acting Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 1 May 1855.—V. 3463 and 3464.

(No. 26 of 1855.)

From the Secretary to the Chamber of Commerce to *Mr. Officiating Chief Secretary Young*.

Sir,

V. 3463.

I HAVE the honour, by direction of the Committee of the Chamber of Commerce, to acknowledge receipt of *Mr. Tytler's* letter, dated the 27th January last, No. 326 of 1855, in the Territorial Department, with papers accompanying; and the model of a machine for working cotton gins with bullock power invented by *Dr. Pelly*, for which the Chamber is very much obliged to His Lordship in Council.

2. This Chamber is not in a condition to give any authoritative opinion on the point suggested by *Mr. Turquand*, which, indeed, is a question for mechanists or parties engaged specially in the business of cleaning cotton, rather than merchants.

Bombay Chamber of Commerce,
23 March 1855.

I have, &c.
(signed) *John Cannon*, Secretary.

* Letter from the Sub-Collector of Nassick, No. 863, dated 21st December 1854, with accompaniments. Letter from *Mr. A. C. Brice*, dated 8th January 1855.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1197

III
Bombay

(No. 1630 of 1855.)

From the Secretary to Government in charge of the Revenue Department, to
J. Landon, Esq.

Sir,

I AM directed to forward to you the accompanying copy of papers noted in the margin,* together with the model of a machine therein referred to, invented by Dr. Pelly for working cotton gins with bullock power, and to request that you will favour His Lordship in Council with your opinion thereon.

V. 3464.

Bombay Castle, 21 April 1855.

I have, &c.,
(signed) *W. Hart,*
Secretary to Government.

(No. 71 of 1855.)

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 30 May 1855.—V. 4973 to 4978.

(No. 1249 of 1855.)

From the Revenue Commissioner, Southern Division, to the Secretary to Government in Charge of the Revenue Department.

THE Revenue Commissioner recommends, with reference to the resolution, No. 1167, dated 19th March last, that the services of Doctor Forbes be accepted, as proposed in the 4th para. of Mr. Ogilvy's letter.

V. 4973.

Poona, Revenue Commissioner's Office,
7 May 1855.

(signed) *H. W. Reeves,*
Revenue Commissioner, Southern Division.

(No. 621 of 1855.)

From *T. Ogilvy, Esq.*, Collector of Dharwar, to *H. W. Reeves, Esq.*, Revenue Commissioner, Southern Division.

Sir,

WITH reference to the Resolution of Government, dated the 19th ultimo, No. 1167, transmitted with your endorsement, dated the 21st idem, No. 841, in which Government desire to know whether Dr. Forbes would be able permanently to carry on the general duties of superintending the cotton experiments department in all its branches, in an efficient manner, without interfering with his duties as Civil Surgeon and Assistant Magistrate of Dharwar, and whether he would be willing to accept of the situation of Superintendent of cotton experiments on a salary of rupees 200 per mensem, and undertake to remain at Dharwar for at least two years, I have the honour to forward for the information of Government a reply from the officer referred to, dated the 18th instant, accepting the offer made to him by Government.

V. 4974.

2. Feeling convinced that Dr. Forbes was both able and willing to superintend the cotton gin factory at Dharwar in the most satisfactory manner, I had the honour to address a letter to you, dated the 1st ultimo, No. 376, recommending that he should be appointed superintendent, on a salary of rupees 200 per mensem, from the date of his having received charge from Mr. Frost. That letter was returned to me with a remark that a reply from Mr. Brice, to the offer made to him by Government, should be awaited.

3. I have not yet received any definite answer from Mr. Brice, but I have no reason to suppose that he is willing to assume charge of the factory on the only terms that Government are prepared to accept.

4. Considering that Dr. Forbes has devoted much time and attention to the cotton gin factory, I trust that he will be allowed to draw the salary which Government have fixed at rupees 200 per mensem from the date that he took charge of the establishment.

Dharwar Collector's Office, Camp, Gurrug,
23 April 1855.

I have, &c.,
(signed) *T. Ogilvy,*
Collector.

* Letter from the Sub-Collector of Nassick, No. 863, dated the 21st December 1854, with accompaniment. Letter from Mr. A. C. Brice, dated the 8th January 1855.

III.
Bombay.

WITH reference to the 5th paragraph of Government resolution above quoted, Dr. Forbes begs to state that he is willing, on the terms specified, to take charge of the duties therein mentioned, and also engages to remain at Dharwar for at least two years.

Dharwar,
18 April 1855.

(signed) *G. F. Forbes,*
Assistant Magistrate in charge
Cotton Experiments.

V. 4975.

EXTRACT from a Resolution on a Memorandum from the Revenue Commissioner, Southern Division, No. 1249, dated 7th May 1855, with accompaniments recommending that the services of Dr. Forbes be accepted to superintend the cotton experiments at Dharwar, on a salary of rupees 200 per mensem, from the date he took charge of that department.

Surgeon Forbes' services to be accepted on the terms proposed.

30 May 1855.

(signed) *W. Hart,*
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 11 July 1855.—V. 6094 to 6097.

(No. 2186 of 1855.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government, dated 11th June 1855.

V. 6094.

SUBMITTED with reference to Government Resolution, No. 6822, dated 24th November 1853, and the excess of rupees one hundred and five, annas seven, and pies nine, (Rs. 105. 7. 9.) recommended for sanction.

2. The aggregate amount expended for the completion of the bullock-power machine at Chopra, including the excess for which sanction is now solicited, is, rupees one thousand two hundred and eighty, annas ten, and pies six, (Rs. 1280. 10. 6.) the sums that have been sanctioned from time to time for the completion of the machine, are specified in the two last Government resolutions quoted in the margin.*

Revenue Commissioner's Office, Poona,
11 June 1855.

(signed) *E. G. Fawcett,*
Revenue Commissioner, N. D.

(No. 634 of 1855.)

From *Samuel Mansfield, Esq.,* Collector of Candeish, to *E. G. Fawcett, Esq.,* Revenue Commissioner, Northern Division.

Sir,

V. 6095.

I HAVE the honour to forward a letter, No. 53, dated 12th instant, from Mr. Brenham, head carpenter, in charge of Government Cotton Factory in Candeish, with a bill of charges incurred for making certain alterations and additions to the cattle-power machine, at Chopra, and under the circumstances therein stated I request you will have the goodness to obtain the sanction of Government for the disbursement of the sum of rupees one hundred and five, annas seven, and pies nine, expended by Mr. Brenham in excess of the amount sanctioned by Government Resolution, dated 24th November 1853, No. 6822, copy of which was received with your endorsement, No. 3594, of the 30th idem.

Khandiesh, Collector's Office, Dhoolia,
21 May 1855.

I have, &c.
(signed) *S. Mansfield,*
Collector.

(No. 53 of 1855).

From Mr. *George Brenham,* Head Carpenter in Charge Government Factory, to *Samuel Mansfield, Esq.,* Collector of Khandeish.

Sir,

I MOST respectfully beg to forward the accompanying bill, in duplicate, of expenses incurred for the alterations and additions made to the cattle-power machine at Chopra, amounting to Rs. 444. 14. 1.

I most

* No. 4664, dated 11th August 1853. No. 6822, dated 24th November 1853.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1199

III.
Bombay.

I most respectfully beg to state that the excess on the estimate of Rs. 105. 7. 9. has, in my humble opinion, occurred from the enhanced price at which the iron was received from the principal Commissary of Ordnance from Bombay; and no allowance having been made by the late Mr. Price for the additional labour required in making up a spur-wheel and pinion, as also the pulling down the old machine and fitting up of the new one.

Government Factory, Dhurrumgaum,
12 May 1855.

I beg, &c.
(signed) *G. Brenham*,
Head Carpenter, Govt. Factory.

(signed) *S. Mansfield*,
Collector.

RESOLUTION on a Memorandum from the Revenue Commissioner, Northern Division, No. 2186, dated 11th June 1855, with Accompaniments, submitting a Bill for Rs. 105. 7. 9., being in excess of the amount (Rs. 308. 4.) sanctioned in Government Resolution, No. 6822, dated the 24th November 1853, for Alterations and Additions to the Cattle-power Machine at Chopra, in the Candeish Collectorate.

V. 6096.

The bill sanctioned.

2. The efficiency or otherwise of the machine, after the expenditure which has been incurred in putting it into effective order, to be reported.

7 July 1855.

(signed) *W. Hart*,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 11th July 1855.—V. 6094 to 97.

(No. 2819 of 1855).

From the Revenue Commissioner, N. D., to the Secretary to Government.

SUBMITTED to Government, with reference to para. 2 of their Resolution, No. 2850, dated the 7th ultimo.

V. 8081.

Revenue Commissioner's Office,
Poona, 17 August 1855.

(signed) *E. G. Fawcett*,
Revenue Commissioner N. D.

(No. 74 of 1855).

From Mr. *George Brenham*, Head Carpenter in Charge Government Factory, to *Samuel Mansfield*, Esq., Collector of Khandeish.

Sir,

In reply to your endorsement, No. 869, of the 13th instant, and with reference to the second para. of the copy of a resolution passed by Government, No. 2850, of the 2d idem, I most respectfully beg to report to you, that on a trial given to the Chopra machine, on the 28th January last, it was found that the strain on the machine, in working four gins unconnected with each other, was too great, to reduce which I was obliged to couple the gins and do away with two leather bands and a drum. Since which a trial was again made in the month of February, and I beg to state that with the slight alterations made, I have been enabled to work the machine better, the result obtained by the trial being two maunds (160 lbs.) of seed cotton cleaned in 45 minutes; this, with bullocks that were never trained to such work, and the bearings and other things belonging to the machine being quite new, is in my humble opinion a favourable result; four gins of 20 saws each driven with this machine could, after everything works smoothly, be made to clean at an average of 3,800 lbs. of seed cotton per diem of ten hours, at an expense of Rs. 4. 4. To clean this quantity by hand-gins would cost Rs. 6. 1. 4., leaving a balance in favour of the cattle-power machine of Rs. 1. 13. 4. per diem.

V. 8082.

Government Factory, Dhurrumgaum,
23 July 1855.

I beg, &c.
(signed) *G. Brenham*,
Head Carpenter in Charge, Govt. Factory.

III.
Bombay.

(No. 922 of 1855).

SUBMITTED through the Revenue Commissioner, Northern Division, for the information of Government, with reference to his endorsement, No. 2497, dated the 9th instant, on copy of the Government Resolution under date the 7th idem, bearing the Revenue Secretary's endorsement, No. 2350.

Khandeish, Collector's Office, Dhoolia,
26 July 1855.

(signed) S. Mansfield,
Collector.

RESOLUTION on a Memorandum from the Revenue Commissioner, Northern Division, No. 2819, dated 17th August 1855, with Accompaniments from the Collector of Khandeish, regarding the working of the Cattle-power Machine at Chopra.

V. 8083.

THE reported result does not appear to his Lordship in Council very satisfactory; even if the machine were to work for the greater part of the year, it would take several years to make good the expenditure incurred, exclusive of any future contingencies arising from wear and tear, which cannot but be considerable.

12 September 1855.

(signed) H. Young,
Offg. Chief Secy. to Govt.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 3d November 1855.—V. 9242 to 46.

(No. 3004 of 1855).

From the Revenue Commissioner S. D. to the Secretary to Government.

V. 9242.

THE Revenue Commissioner, Southern Division, loses no time in forwarding for the early consideration of Government the accompanying correspondence connected with the process of ginning the native and American cotton for market.

2. That the saw-gins used in the Southern Mahratta country injured the staple of the cotton to a certain extent has been long known, but this defect was considered unavoidable, and the discovery of an improved description of machine, which should separate the cotton from its seed without shortening the staple, has, ever since the Revenue Commissioner became acquainted with the cotton experiments, been a "desideratum."

3. The Revenue Commissioner concurs in the opinions expressed by Mr. Ogilvy on the state of the cotton cultivation in his 6th and 12th paras. inclusive.

4. At the same time he is disposed to think that the culture of both varieties of cotton, and especially of the exotic, ought to have extended more than it has, and that this failure is probably attributable to those defects in the construction of the saw-gin which occasion injury to the staple.

5. The opinion of any mercantile houses in Bombay, who trade extensively in the cotton of the Southern Mahratta country, as to the state of the native and New Orleans ginned cotton delivered into their hands, would now be very valuable.

6. It would also very much assist us in forming an estimate of the suitability or otherwise of our machinery, if the opinion of cotton merchants at home were likewise obtained.

7. But it would be still more practically useful if a sample of the best ginned New Orleans cotton, imported from America into the English market, could be obtained from home, and speedily sent to Dharwar to Dr. Forbes. At present we appear to be working very much in the dark. It is probable that not one person connected with the cotton experiments in the Southern Mahratta country ever saw good and well-ginned American cotton, and without some practical acquaintance with the first-rate article, the performance of our machinery cannot be fully satisfactory.

8. The Revenue Commissioner respectfully submits these suggestions to Government. He will, at the same time, request Mr. Ogilvy to call upon Dr. Forbes to continue his inquiry into the defects of the saw-gin now in use in the Dharwar and Belgaum collectorates, and to submit the written matured report of the committee of gentlemen who have inspected his proposed improvements so soon as he may have it in his power to do so.

Poona, Revenue Commissioner's Office,
15 October 1855.

(signed) H. W. Reeves,
Revenue Commissioner, S. D.

(No. 1716 of 1855.)

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq. Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to transmit to you an original report, with accompanying photographs, received from *G. F. Forbes*, Esq., in charge of the cotton-gin factory at Dhawar, dated the 27th ultimo, No. 98, in which he states that the gins now in use in this collectorate are so defective in construction, that they injure the staple to such an extent in the process of cleaning, that he apprehends, that unless timely remedial measures are adopted, the Dharwar cotton will be driven from the European market, and requests authority gradually to withdraw the cotton gins distributed among the ryots, and return them to their owners improved at the expense of Government. He adds, that he has provided an improved machine, a little more expensive than the one in use, but sufficiently cheap to be within the reach of the ryots and dealers, which has been inspected and approved of by a committee of gentlemen, whom he names, and who are very capable of pronouncing an opinion on its merits.

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Bombay.

V. 9243.

2. He states that, in consequence of the failure that has attended the attempt to introduce the cleaning of native cotton by the saw-gin, its cultivation decreased in the past season to the extent of 41,755 acres, and has been limited, he conjectures, to the supply of labour available for working the native churka, or foot-roller; that the ryots and native dealers have long known, and that at length the European manufacturer has discovered that the fibre of the native cotton ginned in this collectorate has been "utterly ruined" by the process, and that the ginning of American cotton also "is in a most unsatisfactory condition."

3. I have sent a copy of *Dr. Forbes'* letter to *Mr. Brice*, who is not now at Dharwar, with a view to obtain, for the information of Government, the opinion of a man practically acquainted with the subject on the various points noticed by *Dr. Forbes*, and I should have preferred waiting for his reply before forwarding this report, had not *Dr. Forbes* expressed a wish that it should be transmitted without any delay. The observations that I shall make will therefore be offered with much less confidence than they would have been had I had time to institute the careful inquiries that the importance of the subject demands. *Dr. Forbes* was, however, requested to furnish the written opinion of the gentlemen named by him in regard to the merits of his improved cotton gin, and to transmit samples of the New Orleans and native cotton cleaned by the gin in use, and by the one improved by himself.

4. In his reply, dated the 3d instant, No. 99, he observes,—

"I am not in possession of any written opinion from the gentlemen composing the committee alluded to. My object in procuring their attendance at the time of making that trial, was to submit for their judgment the comparative mechanical merits of both gins, and to ascertain therefrom how far I was justified in considering that I had overcome the defects which I have pointed out, as well as to benefit by any suggestions offered, which I may state I have since done with some advantage.

"I do not consider one trial sufficient for a fair estimate of the merits of any gin, and it was, and is, my intention to afford the same committee repeated opportunities of judging for themselves before asking for a written opinion. I have only been prevented from doing so by the absence of two of the members, who are expected to return shortly. But in the meantime, to remove from myself the responsibility of the damage which may accrue to the crop of the ensuing season, I have deemed it imperative without further delay to state the result of my experience with regard to the condition of the gins now at work in the districts. By the time that this shall have been ascertained through the means I have pointed out, and the decision of Government received on the subject, I shall, I trust, be able to furnish full and satisfactory information with regard to the machine with which I would propose replacing the others.

"As regards samples of the native variety, there is none procurable, the cleaning of it by gins having, as I have already stated, been entirely abandoned. I am not at present in possession of what could be called fair specimens of the American ginned cotton, and some delay would of necessity be incurred in procuring them, as to be of any value they should come, not from one, but from several ginning establishments in different localities. This I can do hereafter if required, and along with them forward a specimen taken from a quantity of cotton cleaned by my gin in presence of the committee. In the meantime information of a far safer and more trustworthy description may be procured, viz., what the commercial reputation of the cotton is in the market. If this should prove to be satisfactory, and it would appear that the merchants and manufacturers are content with it in its present condition, there will be no occasion for further improvement."

5. If the opinions expressed by *Dr. Forbes* are correct, the results of the efforts made by Government for the introduction of a superior variety of cotton, and an improved machine for cleaning and preparing it for the European market, are extremely disappointing.

6. It does not appear to me that the decrease in the cultivation of native cotton is, as remarked by *Dr. Forbes*, "entirely to be attributed to the introduction of machinery ill-suited for the purpose required," but that it is rather owing to the increase in the cultivation of New Orleans cotton consequent on the higher price obtained for it in the market.

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7. The subjoined abstract shows the total breadth of cotton cultivated in the five years given by Dr. Forbes, together with the prices ruling in the market for the exotic and native varieties during the same period:—

YEARS.	Extent of Land Cultivated with Cotton.		Prices of		
	Acres.	Chains.	New Orleans Cotton.	Native Cotton.	Differences.
1850-51 - - -	2,54,983	25	Rs. a. p. 88 - -	Rs. a. p. 75 - -	Rs. 13
1851-52 - - -	2,64,323	34	72 - -	63 - -	9
1852-53 - - -	2,79,124	15	75 - -	60 - -	15
1853-54 - - -	2,93,409	22	70 - -	64 - -	6
1854-55 - - -	2,73,559	2	90 - -	80 - -	10

8. The extent of land cultivated with cotton during the above period averaged 2,73,080 acres $3\frac{1}{2}$ chains, and the breadth of land sown within it in the year 1854-55, exceeded that average by 478 acres $38\frac{1}{2}$ chains.

9. It is worthy of observation that the prices of the two species of cotton during the last four months of the current year have been as shown below:—

MONTHS.	PRICES.		
	New Orleans Cotton.	Native Cotton.	Difference.
	Rs.	Rs. a. p.	Rs. a. p.
June - - - - -	75	60 - -	15 - -
July - - - - -	80	65 - -	15 - -
August - - - - -	85	70 - -	15 - -
September - - - - -	90	77 8 -	12 8 -

10. The price that New Orleans cotton produced in the Dharwar collectorate now fetches would not appear to indicate that it has been driven from the market, and although there can, I think, be no doubt that the cotton gins sold to the ryots are, as observed by Dr. Forbes, defective in construction, it may be hoped that less injurious effects have followed than that gentleman supposes.

11. I have questioned some dealers in cotton for local manufacture, and have been informed by them that the saw-gin, though tried some ten years ago, was never adopted by the natives for cleaning indigenous cotton; that the decrease in the cultivation of that variety has been caused solely by the higher price, and the greater demand for export of the New Orleans variety.

12. They state that, for local use, the indigenous is preferred to the New Orleans cotton, because its fibre, though shorter, is stronger, and that therefore its price is as much regulated by the demand for it in this country as in Europe, whereas the price of the foreign variety depends on the demand for it in Europe alone. This would appear to account for the fact observable in the Table given above, that the difference between the prices of New Orleans and native cotton is not uniform.

13. In the 7th para. of my letter to your address, dated the 18th August last, No. 1357, I stated that Dr. Forbes was instituting careful inquiries with a view to ascertain the reasons why the saw-gin sold to the ryots had proved detrimental to the cotton fibre, and was making a variety of experiments in the hope of devising remedies for the defects found to exist in the machinery. He has now explained in what those defects consist, and he promises to furnish, if required, an improved saw-gin to replace the defective machine. He informs me that the American saw-gins first used at Dharwar were free from the defects pointed out, and that alterations, supposed to be improvements, made in this country in those models, added to inferior materials and careless construction, caused the gins sold to the ryots to be cheap, but injurious to the staple.

14. The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1203

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14. The chief remedies that Dr. Forbes proposes to apply to the saw-gin machinery in use throughout this collectorate are the separation of the driving-wheel from the body of the gin, as in the American model, and the substitution of zinc for wood and iron at those parts of the machine that are liable to wear from friction.

15. By separating the driving-wheel from the body of the gin, and removing it to a greater distance from it than can be done when the two are united by a frame, as those made at Dharwar have hitherto been, the machine works with a truer and steadier motion, and by preventing any displacement of its parts, preserves the fibre from injury by the saws.

16. Should the committee of gentlemen who have been referred to furnish a written opinion confirming the conclusions at which Dr. Forbes has arrived, that officer might perhaps be authorised gradually to call in and correct, as far as they can be, the defects existing in the gins sold to the ryots, and charge the expense to the State, since the question bears on the development of the resources of the country and the customs receipts of Government.

Dharwar Collector's Office,
10 October 1855.

I have, &c.
(signed) T. Ogilvy, Collector.

(No. 98 of 1855.)

To T. Ogilvy, Esq., Collector, Dharwar.

Sir,

With reference to the 6th para. of the last half-yearly cotton planters' report, forwarded on the 23d July last, I have the honour to submit the following remarks regarding the state of cotton cleaning and the description of gins now in use in these districts.

First, with respect to Native Cotton :

2. I have already mentioned the entire failure which has attended the attempt to introduce the cleaning of this variety by gins; its cultivation during the last season consequently receded by 41,745 acres, having been probably limited to the amount for which churka labour was available. The figures, as per margin, show the diminution and increase of the native and the New Orleans cotton during the last five years.

3. The above failure is entirely to be attributed to the introduction of machinery ill-suited to the purpose required. The only object which would appear to have been kept in view was the amount of cotton a gin could be made to clean in excess of the churka, and quantity was accordingly attained, but the most casual examination of the staple would have shown, that for all manufacturing purposes it was utterly ruined in the process, and the fibre cut off the seed rather than pulled from it.

Years.	New Orleans.		Native.	
	Acres.	Goontas.	Acres.	Goontas.
1850-51 -	31,668	36	2,23,314	29
1851-52 -	42,647	25	2,21,676	9
1852-53 -	28,010	30	2,51,113	25
1853-54 -	41,403	6	2,52,006	16
1854-55 -	63,298	21	2,10,260	21

4. A matter of surprise, and one which is not without interest as regards the present prospects of "American cotton" also, is how an article so much damaged should have continued, for such a length of time, to find sale in any market. I can only account for it by supposing that (except to the ryots and native dealers) its condition was never known until it arrived at the hands of the manufacturer, and that, from many causes, some time elapsed before the discovery could be made of the district from which it had come. This once ascertained, it became effectually driven from the market. That both the ryots and the native dealers were aware of the damage it sustained, is an established fact, as in their own bazaars it would not sell at even half the price given for the same article cleaned by the chuika. Still, with characteristic indifference to the future, they continued ginning so long as a sale could be effected.

5. It is not my present intention to enter any further than I have done into the causes which have led to so unfortunate a result; I am aware of the great importance of restoring the use of the gin to the cleaning of native cotton, if practicable, and my best attention has been directed to the subject. As soon as I am able to bring it forward in a satisfactory manner, I shall do so. In the meantime I consider it necessary, without further delay, to mention, for the information of Government, that the ginning also of "American cotton" throughout these districts is in a most unsatisfactory condition, and that unless some remedy can be devised for the evil that at present exists, I fear the produce will not only deteriorate in the market, but that, like the native variety above mentioned, it also will ultimately fail in finding a purchaser at any price.

6. The cause of this state of matters has been the introduction, on an extensive scale, of a description of gin, so objectionable in mechanical construction, that after a very short period of use, injury to the fibres of the cotton cleaned by it must ensue, and this injury must continue increasing in degree, until the machine at length wears itself out.

7. As any explanation of the defects alluded to might not be properly understood without the aid of a drawing, I annex the following photographic diagrams of the portions requiring notice; also a drawing of the entire implement.

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Bombay.

No. I. Represents the saws when placed on the iron spindle on which they revolve.

No. II. The "grating" in which they work, and through which the "staple" is drawn, leaving the seed to drop off behind.

No. III. The saws, as they are placed in the grating.

No. IV. The driving-wheel, attached by its strap to the above spindle.

No. V. The picture, from which it will be seen that the driving gear is connected to the gin by a wooden frame. Owing to the shortness of the space which this arrangement admits of, the strap acquires but a slight purchase (indicated by a dotted line in No. IV.) on the "drum," by which it propels the spindle, and unless drawn very tight it would slip over it, without causing it to revolve. The effect of this tightness is a lateral pressure, calculated to draw the spindle from its axis, which displacement, it will be apparent, must also draw the saws from their parallel, and bring their teeth in contact with the "grates."

8. Any person who has once seen a cotton gin in use must readily understand that the true working of the saws in the grating is absolutely indispensable to the safe cleaning of the cotton. Whenever these two parts come even into close proximity, the staple cannot be drawn through without damage. When they come into actual contact, every fibre must be cut, and the machine becomes an engine of destruction to the material ginned, as well as to itself, by the grinding away of the saws. It is in this latter condition that it is usually brought in for repair, and I have not been able to devise either an alteration or reconstruction calculated to prevent this result.

9. It is my opinion, therefore, that, if the integrity of the Dharwar American cotton is to be preserved in the market, it is absolutely imperative that every one of these small "framed" gins should be withdrawn. Unfortunately the districts have been inundated with them, there being no fewer than 219 now in use, a number sufficient to clean four-fifths of the entire produce, and such a measure cannot be carried out without a very considerable pecuniary sacrifice. For this reason I do not propose that it should be done simply on my representation, though the means I adopt for detecting the exact amount of injury inflicted on the staple by the saws, are such as, with a moderate amount of experience, must lead to an unerring conclusion; but I would beg respectfully to suggest that Government should without delay institute a searching inquiry, and ascertain from the merchants in Bombay, and above all means, if practicable, from the manufacturers at home, what the opinion is of the Dharwar "American cotton." If this should be found to confirm what I represent, it would, I think, be unwise to wait until the article gets into such bad repute as not to be saleable.

10. Its introduction to this country has cost a vast amount of trouble as well as expense to Government. Unlike the native variety, it can neither be cleaned by the churka nor by any other process except the gin, and if this fails, its cultivation (which has steadily increased hitherto) must cease.

11. I have for some time back been aware of the facts I have above mentioned. They attracted my attention shortly after I received charge of the establishment, but I have not considered it necessary to bring the matter forward at an earlier period, both because time would not then permit of any remedy being applied, in as far as the crop of the past season was concerned, and in event of the measure I have recommended being determined upon, I felt the necessity of being prepared to state the description of gin with which I would propose supplanting the others, a subject demanding careful inquiry, and to which I have devoted my earnest attention.

12. That large-sized gins would prove best and safest does not admit of a doubt, but their cost excludes them, the cheapest, viz. the 18-saw gin being sold at 200 rupees, a sum which a majority of the ryots and dealers are neither able nor willing to bestow. A cheaper article was therefore indispensable, and I am now able to state that I have provided one which, I trust, will in every respect meet the requirements of the case, and which from advantages it possesses of economy in labour, durability, and consequently safety in its work, will, I have little doubt, supersede the other, even if the matter is left entirely to the choice of the purchaser. Though a little more expensive, it has hitherto, in every instance, been selected by the buyer, who has had an opportunity of comparing both at work; and it also met with a most satisfactory opinion from a committee composed of the following gentlemen:—Major Hebbert, Captain Anderson, Mr. Brice, and his civil engineer, Mr. Lowry, who were kind enough to meet for the purpose of testing its merits. Until a reply is received it is unnecessary that I should lengthen this report by any further description. If required I shall be happy to furnish one, and also to state my opinion of the manner in which the withdrawal of the other gins should be proceeded with, so as to effect the object in view speedily and effectually, at the least possible expense to Government and loss to the present owners.

Dharwar Cotton Gin Factory,
27 September 1855.

I have, &c.
(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1205

III.
Bombay

RESOLUTION on a Memorandum from the Revenue Commissioner, Southern Division, No. 3004, dated 15th October 1855, forwarding a Correspondence from the Collector of Dharwar connected with the Process of Ginning the Native and American Cotton in the Dharwar and Belgaum Collectorates.

Mr. REEVES to be informed that Government await the receipt of the further report which he has called for from Dr. Forbes, before passing a decision on the several suggestions offered by him.

V. 9244.

2. Average samples of the cotton cleaned by the gins should be procured by the Collector and forwarded to Bombay, consigned to the Commissioner of Customs, Salt, and Opium, for examination by the Chamber of Commerce.

(No. 4513 of 1855.)

To the Revenue Commissioner, Southern Division (the Officiating Commissioner of Customs, Salt, and Opium, being informed).

V. 9245.

30 October 1855.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

(No. 4514 of 1855.)

From Mr. Officiating Chief Secretary *Young* to the Acting Secretary to the Chamber of Commerce, dated 30 October 1855.

Sir,

I AM directed to forward, for the information of the Chamber of Commerce, a copy of the papers noted in the margin,* relative to the process of ginning the native and American cotton in the Dharwar and Belgaum collectorates.

V. 9246.

2. I am at the same time directed to request that, on the arrival of the cotton referred to in para. 2 of the Government Resolution, No. 4513, of this date, the Chamber of Commerce will have the goodness to examine it, and report the result to Government.

I have, &c.

(signed) *H. Young,*
Bombay Castle, 30 October 1855. Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 31 December 1855.—V. 11,175 to 78.

(No. 3681 of 1855.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

SUBMITTED for the information of his Lordship in Council, with reference to Government Resolution, No. 836, dated 13th February 1854.

V. 11,175.

2. It will be seen that the opinion recorded by Mr. J. H. Pelly, in his letter, as Collector of Surat,† No. 260, dated 7th July 1852, was founded upon a communication from Mr. Daley, the then superintendent of cotton experiments at Surat, and it will be recollected that Mr. Daley was pronounced by the executive engineer who examined him to be eminently qualified. The Revenue Commissioner is inclined to concur in Mr. Daley's views regarding the advantage of the superintendent being permitted to make up gins as likely to extend the knowledge of the construction of gins, whereas the advantage of obtaining them through Mr. Landon would probably be confined to their being supplied at somewhat less cost, but even that remains to be seen.

3. The Revenue Commissioner begs to be favoured with instructions how Government wish him to act with reference to the concluding part of their Resolution, No. 836, dated 13th February 1854.

Revenue Commissioner's Office,
Camp Oolwa, 29 November 1855.

(signed) *E. G. Fawcett,*
Revenue Commissioner, Northern Division.

* Memorandum from the Revenue Commissioner, Southern Division, No. 3004, dated the 15th October 1855, with accompaniments. Government Resolution, No. 4513, dated 30th October 1855, communicated to the Revenue Commissioner, Southern Division, and Officiating Commissioner of Customs, Salt, and Opium.

† Submitted to Government with Revenue Commissioner's letter, No. 3126, dated 24th October 1853.

III.
Bombay.

(No. 795 of 1855.)

From *Henry Liddell, Esq.*, Collector of Surat, to *E. G. Fawcett, Esq.*, Revenue Commissioner, Northern Division, Poonah.

Sir,

V. 11,176.

WITH reference to your endorsement, No. 564, dated the 21st February 1854, I have the honour to inform you that Mr. Pelly's opinion therein alluded to was founded on the superintendent of cotton experiments, Mr. Daley's letter,* an extract from whose letter on the subject is herewith submitted.

2. I myself much doubt if Mr. Daley's knowledge of engineering entitled him to pass such remarks on Mr. Landon's acquirements in that line.

Surat Collector's Office,
5 November 1855.

I have, &c.
(signed) *H. Liddell*, Collector.

EXTRACT part of Para. 4, of a Letter from the Superintendent of Cotton Experiments, Mr. Daley, to the address of the Collector of Surat, No. 16, dated the 30th June 1852.

It would be far preferable to make up the gins in a Government factory than to purchase them from Mr. Landon, as the workmanship and materials would be of the best description; besides, Mr. Landon is not a professional man (like Messrs. Price, Edwards, and myself) to be able to detect and rectify any defects or disproportions in a gin, and I doubt much whether that gentleman is acquainted with the calculations upon which a gin is constructed, because the engineer that put up Mr. Landon's steam-engine, and attached the gins to it, had no knowledge of them until I taught him, and he told me that if Mr. Landon knew them, it would have been to his own interest to have taught him them. The only drawback that I see to the gins being made up at any particular Government factory is, that the knowledge of making up gins would be confined to the artificers of that factory alone; whereas I believe it is the wish of Government that this knowledge should be as widely extended as possible in the cotton districts; and if I am correct in this belief, I would most respectfully beg to suggest that the superintendents be permitted to make up their own gins whenever required, by which the knowledge of constructing gins would be extended to the artificers in their districts, and the gins would be of the best description.

(True extract.)
(signed) *H. Liddell*, Collector.

RESOLUTION on a Memorandum from the Revenue Commissioner, Northern Division, No. 3681, dated 29th November 1855, regarding the Construction of Cotton Gins by Mr. Landon.

V. 11,177.

BEFORE passing a decision on the subject, Government desire to be favoured with the opinion of the Revenue Commissioner, Southern Division, on the suggestion made by Mr. Fawcett in para. 2 of his Memorandum of 29th November 1855, No. 3681.

28 December 1855.

(signed) *W. Hart*,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 19th February 1856.—V. 1095 to 1100.

(No. 327 of 1856.)

From the Revenue Commissioner, Southern Division, to the Officiating Chief Secretary to Government.

V. 1095.

Sir,

I HAVE the honour to acknowledge the receipt of the Government resolution, No. 5440, of 28th ultimo, and to report my opinion that if the saw-gins manufactured hitherto in Guzerat are of sufficient strength, well proportioned, and of such make that cotton can be cleaned by them without needless injury to the staple; and if Mr. Landon be willing, which seems more than doubtful, to undertake the supply of such saw-gins, it would be better for Government to purchase them from him, than to have them made up by the Superintendent.

2. In the Southern Mahratta country Government have had three American and one English superintendent, every one of whom was fully convinced that he understood the calculations by which the construction of a saw-gin should be effected. Yet it is now as clear as daylight that for years Government has been making and selling gins to the cultivators.

* No. 16, dated the 30th June 1855.

cultivators and merchants connected with the production of New Orleans Cotton in Dharwar, which will probably create a serious objection against that kind of cotton in the home market. Having visited the factory at Dharwar, now under the care of Dr. Forbes, twice, and carefully examined the saw-gins formerly made by Mr. Frost, particularly those brought in for repair, and compared them with those made up by Dr. Forbes, I am quite convinced of what I here state.

3. The cultivators and local dealers of Dharwar and Belgaum look solely to the quantity of cleaned cotton that they can turn out in a day; they are perfectly reckless as to the manner in which the cotton is cleaned, and they work their saw-gins as long as they can be kept going. It is therefore of the greatest importance that the machine supplied them should be made sufficiently strong, and on the best possible principle; too much care cannot be bestowed on these points, for the character of Bombay cotton depends on them

4. I have had in contemplation to despatch to Bombay for the inspection of the Right Honourable the Governor, two saw-gins made by Dr. Forbes in the Dharwar factory, and one or two of the old ones for the purpose of satisfying Government on these very vital points. Since a scientific committee cannot be found at Dharwar, as expected by Government in their resolution, No. 4513, dated 30th October 1855, it would be very satisfactory if the machines produced by Dr. Forbes could be pronounced upon, and it could not fail of assisting the judgment of a committee, and of benefiting the Bombay cotton trade, if one of the best Goozerat gins were subjected to examination at the same time.

of 10 saws.
of 20 saws.

5. Such an inspection and comparison would enable Government to pronounce at once upon the statements made by Dr. Forbes* in his letter to the Collector of Dharwar, No. 98, of the 27th September last, and the question under reference from Mr. Fawcett might be very much simplified; since, if Mr. Landon refuses to undertake the manufacture of the required machines, Government would probably have it in their power to set the Superintendent in Goozerat to work to make them up himself, as proposed, with much more satisfaction than they can at present, considering Mr. Liddell's opinion of his abilities.

6. The cost of despatching the saw-gins from Dharwar to Bombay would be trifling, and Dr. Forbes, with whom I have conferred on the subject, engages to forward them in charge of a young man well acquainted with cotton machinery, and capable of clearly explaining all the defects and improvements which are to come under review.

Revenue Commissioner's Camp, Dharwar,
2 February 1856.

I have, &c.
(signed) H. W. Reeves,
Revenue Commissioner, S. D.

RESOLUTION on a Letter from the Revenue Commissioner, Southern Division, No. 327, dated 2d February 1856, reporting on the relative advantages of the two plans of having cotton gins for distribution constructed at the Government Factory in Goozerat, and of purchasing them from Mr. Landon.

V. 1096.

1. His Lordship in Council is of opinion that there are advantages to be looked for from the manufacture of saw-gins being in the hands of the Superintendent of cotton experiments, which would not attend the purchase of the machines from a private factory for distribution, and that when the best mode of construction has been once decided, there can be no such mechanical difficulty in making up the machines as should prevent Government from entrusting the work to their own superintendent.

2. Mr. Reeves reports very unsatisfactorily of the working of the saw-gins in use in the Southern Mahratta country, and agrees with the superintendent of the gin factory in considering that they are calculated to ruin the character of the Southern Mahratta cotton in the home market. It is exceedingly discouraging, after the great expenditure of money which has been incurred in securing a supply of what Government had been led to believe were efficient saw-gins for the use of the country, to find that their endeavours to promote improvement in the cleaning of cotton are reported to be worse than useless, which, if there be any truth in the opinion that the character of the cotton in the market has been or is likely to be injured, it certainly is.

3. Government called in their resolution of the 30th October last, for samples of the ginned cotton from the Southern Mahratta country, which would appear not yet to have been received. These samples should be again called for, and that this important matter may be fully inquired into, orders may be at once issued for the despatch from Dharwar of two of the gins hitherto in use, and two altered under Dr. Forbes's superintendence.

4. Two of the gins in use in Goozerat should, at the same time, be forwarded from Broach.

5. On

* *Vide* correspondence ending with Government resolution, dated 30th October, No. 4513 of 1855, above quoted.

III.
Bombay.

5. On the arrival of these machines, which should be expedited as much as possible, a committee should be appointed (to be hereafter named) for the purpose of ascertaining their respective qualities, and pointing out any defects which may be remediable. It is to be hoped that their labours will lead to a final determination as to the mode of construction best suited to the wants of this country.

18 February 1856.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

From the Officiating Chief Secretary to Government, to Dr. Forbes, Superintendent Gin Factory, Dharwar.

V. 1100.

GOVERNMENT wish you to send to Bombay, to the care of the Commissioner of Customs, two of the gins hitherto in use in the Southern Mahratta country, and two altered under your superintendence.

Bombay,
18 February 1856.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 27 February 1856.—V. 1185 to 89.

(No. 402 of 1856.)

V. 1185.

From the Revenue Commissioner, Southern Division, to the Officiating Chief Secretary to Government.

Sir,

* No. 3004, of 15th
October idem.

WITH reference to the orders of Government, No. 4513 of 30th October 1855, in reply to my memorandum on the subject of the cotton saw-gins of Dharwar, which were reported by Dr. Forbes to be very defective in construction, I have the honour to request that you will lay the following remarks before the Right Honourable the Governor in Council.

2. I have now visited the saw-gin factory at this station twice, and held several consultations with Dr. Forbes; at Hooblee also, whither I rode a week ago for the purpose of viewing the cotton screws there, and forming an opinion of the importance of that rising town, I met Mr. Ogilvy, and learnt his views on the subject of the machinery now in use for cleaning cotton in the Dharwar districts, and I feel convinced that in condemning the saw-gins which were issued by Mr. Frost, Dr. Forbes is perfectly correct.

3. In his letter, No. 98, of 27th September 1855, to the Collector of Dharwar, Dr. Forbes said, para 3:—"The above failure is entirely to be attributed to the introduction of machinery ill-suited to the purpose required. The only object which would appear to have been kept in view was, the amount of cotton a gin could be made to clean in excess of the chuika, and quantity is accordingly attained; but the most casual examination of the staple would have shown, that for all manufacturing purposes it was utterly ruined in the process, and the fibre cut off the seed rather than pulled from it."

"5. I consider it necessary, without further delay, to mention, for the information of Government, that the ginning also of 'American cotton' throughout these districts is in a most unsatisfactory condition, and that unless some remedy can be devised for the evil, the produce will deteriorate and ultimately fail in finding a purchaser at any price."

4. The defect in the machinery by which the injury to the staple is produced, was described by Dr. Forbes very fully in paras. 6 and 7 of the same letter, to consist in the framework and driving-gear, which produces an excessive tightness of the strap (which forms a portion of the driving-gear) which again, by its powerful lateral working, displaces the saws from their straight, even, position, and forces them into contact with the grating. A glance at the old machinery, of which numerous specimens have been brought into Dharwar for repair, is sufficient to show this defect. It is quite obvious that to produce an even and regular revolution of the saws, the spindle on which they are fixed must be held perfectly straight, but the lateral pressure of the old driving-wheel and strap soon produces an irregular motion, the teeth of the saws work unevenly, and they are often driven against the grating and broken to pieces.

5. This defect was aggravated in the greatest number of the gins issued by Mr. Frost by the weakness of the "bearings" (the important iron-work by which the spindle at each end was confined and held), and by the driving power being applied entirely outside the "bearings." In some of the later machines issued, the "bearings" were a great deal strengthened, and the motion was applied under improved precautions, but even in these, this highly important part is greatly too weak, and the defect arising to the framework remains.

6. Dr. Forbes has now produced a ten-saw machine in which these defects are very completely rectified, as I believe; I have seen it work twice, and its superiority over the latest improvement.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1209

III.
Bombay.

improvement of Mr. Frost is very evident. In his letter to the Collector, dated September 27th last, No. 98, Dr. Forbes briefly alludes to this gin, and I am decidedly of opinion that the account he there gives of it is true. In it the driving power appears to be applied in the proper manner, without the frame which, in the old specimens, so shakes the whole machine; the iron-work (bearings) is so strong that the saws are held level, and no deviation from their clear and regular revolution in the grating is allowed. Government can easily satisfy themselves on this point, however, by submitting this and the old gins for the inspection of a committee at the Presidency, as proposed in my Report, dated the 2d instant, No. 327.

7. The machine made up and sold for issue to the ryots by Mr. Frost was an eight-saw gin, and its price was first 45 rupees, then 50 rupees, afterwards 60 rupees, and latterly 75 rupees.

8. The net cost of Dr. Forbes's new ten-saw gin is Rs. 82. 8., making allowance for the the reduced price of wood at present obtainable, to which if 25 rupees per cent. profit to Government be added, the selling price becomes 103 rupees.

9. Considering that the old eight-saw gins now in use are seriously injuring the staple, and that owing to the reckless manner in which the cultivators work them, the injury is daily increasing, I propose to Government to withdraw them all from use as quickly as possible. I would alter such as admit of efficient alteration, and the others I would exchange. The whole number at work in the districts is 219, all on the same principle, of which 62, Dr. Forbes states, are capable of alteration owing to the improvement mentioned in the latter part of para. 5 of this letter. These Government should, I venture to suggest, alter at the actual cost of material and labour, without extra charge for profit. The owners will, I am informed, agree to this.

10. The remaining 157 gins are of the old kind, and thoroughly bad; these should be withdrawn and exchanged for new machinery. The following memorandum shows how this may be done at the smallest possible expense to Government:

		Rs.	a.	p.
Price of a new ten-saw gin, including profit at 25 per cent.	- -	103	2	-
Deduct 30 rupees for the old gin, and the sum received	Rs. a. p.			
will be - - - - -	73 2 -			
Add value of material recovered from the old gin - -	7 8 -			
		80	10	-
Difference - - - - -		22	8	-
If from this be deducted the profit as above of 25 per cent.: viz.,	-	20	10	-
The actual loss to Government will be on each gin - - - -		1	14	-
Or, on the whole number of saw gins withdrawn, 157 - - -	Rs.	294	6	-

I think the important object in view is well worth this outlay, and I accordingly submit the point for the early consideration of Government.

11. There are 24 new eight-saw gins in store, and Messrs. Brice & Co. have written to request that six gins of the same kind supplied to them from the factory last year may be taken back as too faulty for use. This request, if complied with, as it ought to be, would leave thirty in store. I propose that all these be altered according to the new pattern; the expense on each will amount to Rs. 29. 8., but each machine will, after improvement, sell readily at 85 rupees, and be a good serviceable article. The financial result on this proposal will be seen from the following statement:—

	Rs.	a.	p.	Rs.	a.	p.
Original cost, including 25 per cent. profit - - -	75	-	-			
Cost of alteration, exclusive of profit - - -	29	8	-			
				104	8	-
Selling price after alteration - - - - -				85	-	-
				19	8	-
Deduct above profit, 25 per cent. or 75 rupees - - -				18	12	-
Remainder actual loss to Government on a single gin - - -				-	12	-
On the 30 gins - - - - -	Rs.			22	8	-

12. The above propositions will dispose of all the small saw gins now at work in the districts, at an actual expense of Rs. 316. 14., and it will be borne in mind that small ones are chiefly

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Bombay.

chiefly used by the cotton-growing cultivators, who will, in the case of the exchanged gins, be put in possession of machines, not only of a good description, but capable also of turning out more cleaned cotton in a given time than those withdrawn. The performance of Mr. Frost's eight-saw gin being 1 maund, 13½ lbs. of cleaned cotton per hour, or 15 maunds, 15 lbs. per diem, while that of Dr. Forbes' ten-saw gin is 1 maund, 26 lbs. per hour, or 19 maunds, 3 lbs. per diem.

13. There are besides 37 large gins of 18 saws each in store, made up for sale by Mr. Frost. No accounts of these are forthcoming, and it is impossible to say what the cost of construction was. The sum at which Mr. Frost valued them is 200 rupees each, which Dr. Forbes considers absurdly high. These, too, being on the outside bearing principle, ought, I consider, not to be sold without alteration, the cost of which will be 52 rupees each.* The article when improved will sell for 140 rupees.

14. Dr. Forbes has now made up a very excellent 20-saw gin, or rather a double 10-saw gin, worked by a strap in the middle, priced at 165 rupees, inclusive of profit at 25 per cent, which is a very great improvement on the 18-saw machine of Mr. Frost, and which he is anxious to submit to the inspection of a committee at the Presidency, as stated by me in the letter already quoted.

15. In their resolution, No. 4513, of the 30th October last, Government directed that average samples of the cotton cleaned by the gins in use in this collectorate should be procured by the Collector, and forwarded to Bombay for examination by the Chamber of Commerce. If this order could have been carried out, Dr. Forbes' remarks on the condition of the cleaned cotton of Dhawar would have been in one respect fairly tested; but by the time the resolution of Government reached the Collector, no samples were procurable; the ginning season being then over, all the cotton was on its way to the Presidency. I have, however, it will be observed, spoken of the defects in the saw-gins now in use, as palpable, and I therefore assume that the staple of the American cotton cleaned by them must, of necessity, be needlessly injured.

16. If there should be any Dharwar ginned New Orleans cotton procurable at the Presidency, the Chamber of Commerce may yet be requested by Government to subject a fair sample of it to inspection, and communicate the result. Or, if the proposal contained in my letter of the 2d instant be approved, a quantity of kuppas may be obtained by the Chamber of Commerce, and passed through the old gin which Dr. Forbes has been instructed to hold in readiness for despatch to the Presidency. By either or both of these modes, Government may obtain full satisfaction as to the quality of the work done by the saw-gins made up and sold by Mr. Frost.

17. But the season for cotton ginning re-commences in the course of six weeks, and it appears to me of the utmost importance that prompt measures should be adopted for putting a stop to the present vicious style of working. It may perhaps be impossible to prevent some degree of injury to the staple in separating cotton wool from the seed, but as this operation is now performed here, the character of Dharwar cotton is likely to be seriously damaged. I have therefore ventured to instruct Dr. Forbes to act immediately on the proposals above submitted, for withdrawing the defective machinery from the districts of this collectorate, and replacing it by that of the improved make, so far as the smaller gins are concerned; and I trust that this step will meet with approval. On receiving this letter, and the whole of the important correspondence connected with it, Government will issue final orders respecting the larger machinery.

Revenue Commissioner's Camp, Dharwar,
7 February 1856.

I have, &c.
(signed) H. W. Reeves,
Revenue Commissioner, S. D.

RESOLUTION on a Letter from the Revenue Commissioner, Southern Division, No. 402, dated the 7th February 1856, reporting further on the subject of the defective construction of the saw gins furnished from the factory at Dharwar.

If it be necessary to confirm the favourable opinion entertained by Mr. Reeves of Dr. Forbes' improvement by the opinion of a Committee, as suggested by Mr. Reeves himself, the withdrawal of the old gins should have been postponed until such opinion was obtained. But as the Revenue Commissioner has sanctioned the immediate withdrawal of the old gins, it will be sufficient to direct Dr. Forbes to delay, if possible, the substitution of his new gins until they have been reported on, and measures to expedite such report should be at once taken.

* Vide letter part of 5th para. above.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1211

No. 552 of 1856.

To the Revenue Commissioner, Southern Division (the Officiating Commissioner of Customs, Salt and Opium, being informed).

21 February 1856.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

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Bombay.
V. 1187 & 88.

(No. 554 of 1856.)

From the Officiating Chief Secretary to the Government of Bombay to the Acting Secretary to the Chamber of Commerce.

V. 1189.

Sir,
WITH reference to my letter of the 30th October 1855, No. 4514, I am directed by the Right Honourable the Governor in Council to forward a copy of the papers noted in the margin* for the information of the Chamber of Commerce.

Bombay Castle, 21 February 1856.

I have, &c.
(signed) *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government, in the Territorial Department, Revenue, dated 11th June 1856.—V. 4028 to 31.

(No. 1461 of 1856.)

MEMORANDUM from the Revenue Commissioner, Southern Division, dated 10 May 1856.

V. 4028.

FORWARDED for the sanction of Government, under the circumstances stated in Mr. Ogilvy's memorandum; the Revenue Commissioner has this day intimated his approval of that officer's proceedings.

Revenue Commissioner's Camp "Nehr,"
10 May 1856.

(signed) *H. W. Reeves*,
Revenue Commissioner, Southern Division.

(No. 562 of 1856.)

TRUE copies forwarded for the consideration of the Revenue Commissioner, Southern Division, who is informed that as the season for cotton cleaning is far advanced, the Collector has requested Dr. Forbes, in charge of the cotton-gin factory, to comply with Mr. Brice's request, and hopes the Revenue Commissioner will approve of his having done so.

V. 4029.

Dharwar Collector's Office, Camp Turrus,
26 April 1856.

(signed) *T. Ogilvy*,
Collector.

(No. 46 of 1856.)

To *T. Ogilvy*, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to enclose the accompanying copy of a letter from Mr. Brice, representing the failure of his cattle-power machinery, and soliciting the loan of some old gins now in store in the cotton-gin factory. I shall feel obliged for your instructions as to whether this request may be complied with. I may explain that the old gins alluded to are five, of 18 saws each, which were at one time employed in the districts in cleaning Government cotton; they are considerably worn, and of little value. As Mr. Brice is willing to incur the cost of repairing them, has been disappointed in the working of the cattle-power machine given to him, and cannot at present be supplied with new gins, I would beg to recommend that these old ones may be lent to him for a few months.

Dharwar, Cotton-Gin Factory,
24 April 1856.

I have, &c.
(signed) *G. F. Forbes*,
Superintendent Cotton-Gin Factory.

* Letter from the Revenue Commissioner, Southern Division, No. 402, dated 7th February 1856. Government Resolution, No. 652, dated 21st February 1856. Communicated to Mr. Reeves.

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Bombay.

Dr. G. F. Forbes., in charge of Gin Factory.

Sir,

I HAVE the honour to represent, that notwithstanding our engineer introduced alterations in the cattle-power machinery given me by Government that doubled its speed, we have again to alter to obtain the necessary number of revolutions of the spindle of the gin, and with every increase of speed, of course lose power. Instead of the machinery 160 saws, as we relied on, it with difficulty works 80, and at as much expense as manual labour. We have to deliver more cotton than we are able to work owing to these disappointments, and are therefore under the necessity of reverting to hand-gins; the press of orders on your books precluding your supplying any new ones, and a trial of the 18-saw gins in the factory constructed by Mr. Frost proving that they both injure the staple, and will wear themselves out in a month, I beg the favour of your obtaining me the loan of some old gins in the factory of a different construction, the expense of repairing which I shall be happy to bear.

I would indeed be willing to purchase these, but would rather not, as I have so many large gins that must be worked by cattle, and prefer buying such only as have the recent improvements adapted to them. Besides falling short of the quantity of cotton for our orders, we are unable to prepare enough to keep our regular daily carts and patamars supplied, and I beg the favour of your prompt assistance, as the season will soon close.

Dharwar, 22 April 1856.

I have, &
(signed) A. C. Brice.

V. 4030.

RESOLUTION on a Memorandum from the Revenue Commissioner, Southern Division, No. 1461, dated 10th May 1856, submitting a communication from the Collector of Dharwar (with accompaniments), reporting his having granted on loan for a few months five old saw-gins to Mr. Brice.

Mr. Ogilvy's proceedings to be approved.

6 June 1856.

(signed) H. Young,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 11 June 1856.—V. 3615 to 18.

(No. 1194 of 1856.)

V. 3615.

MEMORANDUM from the Revenue Commissioner, Northern Division.

SUBMITTED to Government for information.

2. The above is the reply to an inquiry made by this department, consequent upon a passage noted in the margin,* occurring in the monthly report for February last of the overseer in charge of the factory. Information was requested whether the gins hired by the native merchant at Kassooda were kept at work in cleaning cotton, and whether any other native had adopted the saw-gin.

3. The facts elicited are very satisfactory, inasmuch as they show that the gins are making favourable way with the native merchants in Khandeish.

(signed) E. G. Fawcett,
Revenue Commissioner, Northern Division.

Tanna Districts, Revenue Commissioner's Office,
Camp Matheran, 2 May 1856.

(No. 732 of 1856.)

V. 3616.

From Samuel Mansfield, Esq., Collector of Khandeish, to E. G. Fawcett, Esq.,
Revenue Commissioner, Northern Division.

Sir,

In reply to your letter (No. 871) dated the 25th ultimo, I beg to forward copy of a letter from Mr. Bienham, which contains all the particulars connected with cotton belonging to native merchants, and cleaned by saw-gins in Khandeish during the present season.

2. There are no means of ascertaining the quantity cleaned in Messrs. Ritchie & Stuart's establishment.

I have, &c.
(signed) S. Mansfield,
Collector.

Khandeish, Collector's Camp, Abhona,
21 April 1856.

* The gins hired by the native merchant at Cassoda have been kept in working order.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1213

(No. 34 of 1856.)

From Mr. *George Brenham*, Overseer in charge Government Factory, to
Samuel Mansfield, Esq., Collector of Khandeish.

Sir,

WITH reference to your indorsement (No. 585 of the 31st ultimo) on copy of a letter from the Revenue Commissioner, Northern Division, to your address, calling for information respecting the working of the gins bought and hired by the native merchants in Khandeish from the Government factory at Dhurungaum, I most respectfully beg to state, that these gins are being worked at the following places:—

Two at Cassoda; four at Dhurungaum; two at Parola; two at Julgaum.

The two gins at Cassoda were worked from the month of December to the end of February last; about 66 candies of seed cotton were cleaned and sold at a profit of nine rupees per candy over the cotton cleaned by the churka, which would indicate that the quality was good.

The four gins at Dhurungaum were worked from the middle of December to the middle of February, cleaning about 90 candies of seed cotton of 1,600 lbs. the candy. This merchant also informs me that the difference in favour of the ginned cotton to that cleaned by the churka, is nine rupees per candy of 784 lbs., and that the quality, to his own knowledge, is good, and has been approved of by the native merchants of Bombay.

This merchant works two of his gins by cattle power, which machine was made at this factory, and purchased by him.

The two gins purchased by the Parola merchant were kept actively at work for part of the season, and cleaned about 40 candies with the same favourable results as the preceding.

The two gins at Julgaum were also at work, and cleaned about 60 candies. But this merchant having sent his cotton to Bombay for sale, instead of selling it in Khandeish, as the others did, his profits not being realised cannot be stated; but he also, in previous years, gave me the same favourable account of his transactions in cotton as the other merchants.

There were eight other gins at different places which were not worked during the past season in consequence of the scarcity and badness of the cotton, owing to the bad monsoon, to which cause is also owing the small quantities cleaned by the gins which were worked. During a good year about 900 candies of seed cotton were cleaned, when all these gins were at work.

I humbly beg to state, of my own experience, that so long as the saws are kept from rubbing against the bars of the grates, and the people be made to work the gins at a proper speed, viz., 180 revolutions in a minute, so as to clean by each gin from 10 to 11 maunds daily, the fibre of the cotton will not be injured.

I have, &c.
(signed) *G. Brenham*,
Overseer in charge, Government Factory.

Government Factory,
Dhurungaum, 16 April 1856.

RESOLUTION on a Memorandum from the Revenue Commissioner, Northern Division, No. 1194, dated 2 May 1856, submitting a letter from the Collector of Khandeish, with its accompanying report by Mr. Brenham, relative to the working of the gins bought and hired by native merchants in that Collectorate from the Government factory at Dhurungaum.

V. 3617.

THE information furnished by Mr. Brenham is satisfactory.

2. The periodical reports of the overseer in charge of the gin factory in Khandeish, should, in future, be so framed as to show the details now communicated.

26 May 1856.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 12 March 1856.—V. 1368 and 69.

(No. 20 of 1856.)

From the Superintendent Cotton-Gin Factory, Dharwar, to Mr. Officiating Chief Secretary *Young*.

Sir,

I HAVE the honour to inform you, that agreeably to instructions received by electric telegraph, dated the 18th instant, four cotton gins have been despatched to the address of the Commissioner of Customs, and I trust they will arrive at Bombay by the 1st proximo.

V. 1368.

Dharwar, Cotton-Gin Factory.
25 February 1856.

I have, &c.
(signed) *G. S. Forbes*,
Superintendent Cotton-Gin Factory.

III.
Bombay.
V. 1369.

(No. 681 of 1856.)

COPY forwarded to the Officiating Commissioner of Customs, &c., with reference to the electric telegraph message quoted by Dr. Forbes, and to the Government resolution, No. 519, dated the 18th ultimo.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

Bombay Castle, 1 March 1856.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 12 March 1856.—V. 1542 and 43.

(No. 661 of 1856.)

From the Revenue Commissioner, Northern Division, to Mr. Officiating Chief Secretary *Young*.

Sir,

V. 1542.

WITH reference to Government resolution, No. 519, dated 18th ultimo, I have the honour to report that the Collector states that there are only three saw-gins borne on the dead stock list of the Broach Collectorate, viz., one Dharwar gin of seven saws, and two Calcutta churkas without saws. These were made over to Mr. Landon, who considers that the Dharwar gin could not be of much use for trial, or otherwise, and the Collector does not think it advisable to direct its transmission to Bombay.

2. Several saw-gins belonging to the late Cotton Experimental Department are now lying at Surat, and I have therefore requested the Collector to forward without delay two of the best gins to the care of the Deputy Commissioner of Customs at Bombay.

3. I beg that the necessary instructions may be sent to Mr. Spooner to receive charge of them on arrival at the Presidency.

I have, &c.
(signed) *E. G. Fawcett,*
Revenue Commissioner,
Northern Division.

Revenue Commissioner's Office, Surat Districts,
Camp "Domus," 5 March 1856.

(No. 786 of 1856.)

V. 1543.

COPY forwarded to the Officiating Commissioner of Customs, salt and opium, for information with reference to the 4th para. of Government resolution, No. 519, of 18th ultimo.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

Bombay Castle, 11 March 1856.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 26 March 1856.—V. 1697 to 1702.

(No. 349 of 1856.)

V. 1697.
Four cotton gins.

MEMORANDUM from the Officiating Commissioner of Customs, Salt and Opium.

THE undersigned presents compliments, and begs, with reference to the Officiating Chief Secretary's endorsement, dated 18th February last, on a copy of the Government letter to Dr. Forbes of the same date, to state that the four cotton gins therein alluded to have just arrived from Dharwar, in charge of Mr. Charles Courpalais' gin apprentice.

2. Instructions are solicited relative to the disposal of the said gins.

(signed) *R. Spooner,*
Officiating Commissioner of Customs,
Salt and Opium.

Bombay, Office of Commissioner of Customs,
Salt and Opium, 8 March 1856.

(No. 371 of 1856.)

V. 1698.

From *Richard Spooner*, Officiating Commissioner of Customs, Salt and Opium, to *Henry Young*, Esq., Officiating Chief Secretary to Government.

Sir,

Two cotton gins
from Surat.

WITH reference to your endorsement, No. 786, dated the 11th March 1856, on the Revenue Commissioner's (Northern Division) letter, No. 661, dated 5th idem, I beg to report the arrival of the two saw-gins alluded to.

2. The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1215

2. The original package list is herewith forwarded, and I solicit the further instructions of Government on the subject.

Bombay, Office of Commissioner of Customs,
Salt, and Opium, 12 March 1856.

I have, &c.
(signed) *R. Spooner*,
Officiating Commissioner of Customs,
Salt, and Opium.

III.
Bombay.

MEMORANDUM of Packages sent to the Deputy Commissioner of Customs, Salt, and Opium,
at Bombay, per Steamer "Elphinstone," under date the 9th March 1856.

Contents of Gin No. IV.

- No. 1. Gin.
- " 2. Receiving box, empty and small
- " 3. Small box containing saws.
- " 4. Small stand.
- " 5. Wheel.
- " 6. Wheel stand.

Contents of Gin No. XI.

- No. 7. Gin.
- " 8. Receiving-box, empty and small
- " 9. Small box containing saws.
- " 10. Small stand.
- " 11. Wheel.
- " 12. Wheel stand.

No. 13. Box containing handles, &c., of the above two gins.

Surat, 9 March 1856.

(signed) *Jugjeewandass*,
Officiating Mamlutdar of Chowrasse in Charge
Experimental Cotton Department.

(No. 843 of 1856.)

From Mr. Officiating Chief Secretary *Young* to *R. Spooner*, Esq., Captain *J. H. Burke*,
Captain *W. C. Anderson*, and Captain *H. J. Barr*.

Gentlemen,

GOVERNMENT are pleased to nominate you, and a mercantile gentleman, whom the Chamber of Commerce have been requested to select, a committee for the purpose of ascertaining the respective qualities of two saw-gins in use in the Southern Mahratta country, and of two altered under the supeintendence of Dr. Forbes, the Superintendent of the gin factory there; as also of two gins belonging to the late Cotton Experimental Department at Surat.

V. 1699.

2. These gins have just arrived, and are now in the Bombay Custom House.
3. You will be pleased to favour His Lordship in Council with your report on the subject generally, but more especially whether any, and what alterations are required in Dr. Forbes' improved pattern.
4. The Officiating Commissioner of Customs, Salt, and Opium has been requested to prepare one of the Custom House godowns for conducting the required experiments, and authorised to purchase a small quantity of seed cotton for the experiments, if procurable, of different qualities and soil.
5. Copy of this letter has been furnished to each Member of the Committee.

Bombay Castle, 13 March 1856.

I have, &c.
(signed) *H. Young*,
Officiating Chief Secretary to Government.

(No. 844 to 847 of 1856.)

COPY to the Officiating Commissioner of Customs, Salt, and Opium, and to Captains
J. H. Burke, *W. C. Anderson*, and *H. J. Barr*.—V. 1700 and 1701.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

Bombay Castle, 13 March 1856.

(No. 848 of 1856.)

From Mr. Officiating Chief Secretary *Young* to the Acting Secretary to the
Chamber of Commerce.

Sir,

WITH reference to my letter, No. 554, dated the 21st ultimo, I am directed by the Right,
Honourable the Governor in Council to forward the accompanying copy of my letter
296—Sess. 2. . 7 X No. 843

V. 1702.

1216 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

No. 843, of this date, to the gentlemen named in the margin,* and to request that the Chamber of Commerce will have the goodness to nominate a gentleman as a member of the Committee therein referred to.

Bombay Castle,
13 March 1856.

I have, &c.
(signed) *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 26 March 1856.—V. 1831 to 33.

(No. 18 of 1856.)

From the Acting Secretary to the Chamber of Commerce to Mr. Officiating Chief
Secretary *Young*.

Sir,

V. 1831.

I HAVE the honour to acknowledge the receipt of your letter to my address, No. 848 of 1856, dated 13th inst., conveying the request of the Right Honourable the Governor in Council that the Chamber of Commerce will name a gentleman as a member of the committee appointed for the purpose of examining and reporting upon two saw-gins used in the Southern Mahratta country, and of two altered under the superintendence of Dr. Forbes, the superintendent of the gin factory there. In reply, I have, by direction of the committee of the Chamber, to inform you that Mr. A. Binny, of the firm of Messrs. Ritchie, Steuart & Co., will, with the sanction of his Lordship in Council, act as a member of the Committee above referred to.

Bombay, Chamber of Commerce,
15 March 1856.

I have, &c.
(signed) *John Mawson*,
Acting Secretary.

(No. 916 of 1856.)

From Mr. Officiating Chief Secretary *Young* to the Acting Secretary to the
Chamber of Commerce.

Sir,

V. 1832.

I AM directed to inform you that his Lordship in Council approves of the nomination by the Chamber of Commerce of Mr. A. Binny, of the firm of Messrs. Ritchie, Steuart & Co., as a member of the committee referred to in your letter, No. 18, dated the 15th instant.

Bombay Castle,
19 March 1856.

I have, &c.
(signed) *H. Young*,
Officiating Chief Secretary to Government.

(No. 917 of 1856.)

From Mr. Officiating Chief Secretary *Young* to *R. Spooner*, Esq., Captain *J. H. Burke*,
Captain *W. C. Anderson*, and Captain *H. J. Barr*.

Gentlemen,

V. 1833.

I AM directed to inform you that his Lordship in Council has approved of the nomination by the Chamber of Commerce of Mr. A. Binny, of the firm of Messrs. Ritchie, Steuart & Co., as a member of the Committee referred to in my letter of the 13th instant, No. 843, to your address.

Bombay Castle, 19 March 1856.

I have, &c.
(signed) *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 26 March 1856.—V. 1831 to 33.

(No. 635 of 1856.)

From the Revenue Commissioner, Southern Division, to Mr. Officiating Chief
Secretary *Young*.

Sir,

V. 1831.

ADVERTING to para. 3 of the Government Resolution, No. 519, of 18th instant, on the subject of the samples of cotton to be submitted for inspection, I have the honour to request

* *R. Spooner*, Esq.; Captain *J. H. Burke*; Captain *W. C. Anderson*; Captain *H. J. Barr*.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1217

III.
Bombay.

request that you will attract the attention of the Right Honourable the Governor in Council to the 15th paragraph of my report, No. 402 of 7th idem, explaining why the instructions of Government in resolution No. 4513 of the 30th October last, could not be carried out, and to observe, that the only practicable course now left Government to satisfy themselves of the correctness of the opinions offered on the structure of the saw-gins now in use, appears to be that suggested in the 16th para. of that communication.

Kolapoor Districts,
Revenue Commissioner's Camp,
Hedooree, 26 February 1856.

I have, &c.
(signed) *H. W. Reeves,*
Revenue Commissioner,
Southern Division.

RESOLUTION on a Letter from the Revenue Commissioner, Southern Division, No. 635, dated 26th February 1856, relative to the Samples required by Government of Cotton cleaned by the Gins in use in the Southern Mahratta Country.

V. 1882.

"As Government have appointed a committee to try the working of these gins, the samples should be dispensed with."

(No. 947 of 1856.)

To the Revenue Commissioner, Southern Division.

V. 1883.

24 March 1856.

(signed) *H. Young,*
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 10 May 1856—V. 2921 to 28.

(No. 513 of 1856.)

From the Officiating Commissioner of Customs, Salt, and Opium, to Mr. Officiating Chief Secretary *Young.*

Sir,

I HAVE the honour to acknowledge the receipt of your endorsement, No. 844, dated the 13th ultimo, on a letter from Government to the address of the Committee on the subject noted in the margin.*

V. 2921.

2. In conformity with the instructions therein conveyed, the committee, as per margin,† assembled at the Custom House on the 18th ultimo, and, having inspected the several gins,‡ the meeting adjourned until the 3d instant, in order to enable me to procure some seeded cotton from Goozerat (none being procurable at Bombay) to admit of a fair trial being made of the working of the several cotton gins.

3. I beg to submit a copy of the committee's proceedings, from which you will observe as follows:

1. That the committee are of opinion that Dr. Forbes' gins are vastly superior to those of the old construction, both in durability and the quantity and quality of the work capable of being performed by them.

2. That they strongly recommend that the new gins should be generally introduced in substitution of the old.

3. That they are not prepared to recommend any alteration or improvements.

4. I solicit instructions relative to the disposal of the six cotton gins now in my possession, also of the two carts used in conveying Dr. Forbes' gins from Dharwar.§

5. The

* Experimental trial of Dr. Forbes' cotton gins.

† Richard Spooner, Captain Barr, Captain Burke, Captain Anderson.

‡ One large new gin, of Dr. Forbes' construction, of 20 saws; one small new gin, of Dr. Forbes' construction, of 10 saws; two small gins of old construction, from Dharwar, of 7 saws; two large gins from Goozerat, of 20 saws.

§ 2 Dr. Forbes' new gins.

2 Old gins, constructed at Dharwar

2 Ditto, ditto, but received from Guzerat.

6

==

2 Carts.

Bombay.

5. The cotton which I procured from Goozerat for the use of the Committee*. I shall now re-sell for the highest sum procurable.

6. The persons, as per margin, † who accompanied the saw-gins from Dharwar, are desirous of returning there, and I solicit, therefore, instructions on this point.

I have, &c.
(signed) *R. Spooner,*
Officiating Commissioner of
Customs, Salt, and Opium.

Office of Commissioner of Customs,
Salt, and Opium, 9 April 1856.

PROCEEDINGS of the Committee.

Bombay, 18 March 1856.

V. 2922.

A MEETING having been appointed, pursuant to Government letter, No. 843, dated the 13th March 1856, the following gentlemen, viz., Richard Spooner, Captain H. J. Barr, Captain J. H. Buike, Captain W. C. Anderson, and A. T. Binny, Esq., met this day at the Custom House.

2. Read and recorded Government letter, No. 843, dated the 13th March 1856.

3. The committee next proceed to inspect the saw-gins as follows:

1. One large gin, new, on Dr. Forbes' construction, arrived from Dharwar, 20 saws.
2. One small gin, new, on Dr. Forbes' construction, also arrived from Dharwar, 10 saws.
3. Two small gins, old construction, from Dharwar - - - - 7 saws.
4. Two large gins arrived from Guzerat - - - - 20 saws.

4. The apprentice, who accompanied the gins from Dharwar, states that he recognises both these Guzerat gins as having been constructed in the Dharwar factory while under the superintendence of Mr. Frost

5. The following appears to the committee the mechanical objection to the gins of old construction, Nos. 3 and 4.

1. The connexion with the driving wheel by a frame is injurious; by the shaking so communicated, the frame of the gin itself soon becomes loose and disjointed.

2. The short space allowed for the strap renders a degree of lightness necessary, which soon wears away the bearings, and the saws are accordingly brought into contact with the grates, to the injury of the staple of the cotton cleaned.

3. The washers, or circular discs separating the saws one from another, are in the gin No 3, made of wood, which by warping, cannot fail to divert the saws from their true bearings, and thereby bring them into contact with the grates.

4. In the gin received from Guzerat the washers are made of zinc; most of those of a similar size recently made at Dharwar are fitted with wooden washers.

6. In the new, or Dr. Forbes' gins, the above defects of construction are to a great extent remedied; in both, zinc washers are substituted for wooden; in both, the frame connecting the driving wheel with the gin is done away with; the sole connexion between the two is the strap communicating motion from the wheel to the gin; the driving wheel is placed at a greater distance, and the strap much lengthened, which causes it to embrace a larger portion of the circumference of the drum, and consequently increases the working power, by giving greater friction without any undue tension, the existence of which is No. 1 objection to the old gin.

7. While the power is applied to the gin in a manner more economical and less likely to produce disarrangement of the machine, the parts of the machine itself, which must gradually be worn away by the application of the power, are strengthened and improved, so as to reduce and distribute the wear. The spindles of the old gins had single beatings at each end; in the new twenty (20) saw-gins, the power is applied in the centre of the spindle carrying the saws, there being 10 saws on each side, with metal bearings outside each

	Rs.	a.	p.
* Cost of 20 Surat maunds cotton	-	25	5 -
Freight and charges	-	4	12 9
	Rs.	-	30 1 9

† 1 Mr. C. M. Courpalais apprentice.
1 Punchapa—carpenter.
2 Two peons } Attached to the Dharwar gin factory.
1 One cooly }

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1219

III.
Bombay.

each 10, and, again, between them and the strap; the tenison of the strap therefore is equalised over the four bearings, and the wear of one more than of another is rendered almost impossible.

8. The fans carrying the brushes are rotated by means of two friction-rollers. In all the old construction of gins these friction-rollers are kept up to the proper working distance by a wedge. Dr. Forbes has substituted for this wedge a sliding bearing, which is acted upon by a small steel spring and a screw, thus very much improving upon the old plan, and placing it in the power of the workmen to arrange the rollers in the best position for obtaining the requisite amount of friction.

9. In the smaller gin, that containing ten saws, the frame is carried out some little distance at the side, and a third bearing introduced outside the strap; there are therefore three bearings in all in this gin; its size does not admit of the application of the power in the same manner as in the 20-saw gin, to which the committee consider it unavoidably inferior, though as substantial and to all appearance as durable as a machine of the small size can be made. The large gin requires four (4) coolies to work it; the price is stated to be 165 rupees; the small gin is worked by two coolies, and the price is 110 rupees. The former gin is suited to the means and requirements of dealers; the latter is the ryot's gin. There can be no doubt that the former is more likely to clean cotton for a continuance without requiring repair than the latter; but the committee are informed by Captain Anderson, that in general the ryot of the Southern Maratha county prefers cleaning his own cotton; the supply of hand labour is insufficient, and if not supplied with efficient machinery, which will turn out a saleable article, the cultivation of cotton, which has there so greatly increased of late years, must unavoidably decrease.

10. The committee adjourned their proceedings in order to procure some seeded cotton from Guzerat, sufficient to admit of a prolonged trial.

Bombay, 3 April 1856.

11. The cotton having been received, the committee again meet on this day, intimation having been previously given to all the mercantile community, and their attendance invited.

12. The 20-saw gin received from Dharwar, the 10-saw gin from the same place, both of the new or Dr. Forbes' construction, and both the gins received from Guzerat, were tried in the presence of the committee; a maund of seed cotton was allotted to each gin. The following tabular statement gives the time in which each gin performed its task, together with particulars as to the quantity of seed and of wool turned out, and the extent to which the staple was injured.

1. DESCRIPTION OF GIN.	2. Number of Men Working.	3. Weight of Seed Cotton.	4. Time Occupied in Cleaning	5. 6. Out-turn.		7. Remarks.
				Seed.	Wool.	
		<i>Lbs.</i>	<i>Minutes.</i>	<i>Lbs.</i>	<i>Lbs.</i>	
20-saw Guzerat Gin, No. 1 - - - -	4	28	20	20	8	- - Fibre much cut and knotted.
Ditto - ditto - No. 2 - - - -	4	28	20	Result not taken.		
20-saw Dharwar Gin, Dr. Forbes' construction -	4	28	10	19 $\frac{1}{4}$	8 $\frac{3}{4}$	} Fibre as little injured as is possible in ginned cotton.
10-saw - ditto - - ditto - -	2	28	21	18 $\frac{3}{4}$	9	

13. The Guzerat gins, it was evident, were in very bad working order; the saws were in continual contact with the grates, and injury of the staple was consequently unavoidable.

14. The merchants and brokers connected with the cotton trade on different occasions inspected the gins, and saw them work, and expressed their approval of the manner in which the new gins worked, particularly as regards absence of injury to the staple.

15. The gins containing seven saws received from Dharwar (No. 3) were not tried by the committee, because they were evidently in bad working order, and as ryot's gins they occupy the same space in relation to the gins of 20 saws, received from Guzerat, as the gins of 10 saws, of the new construction, bear to the gins of 20 saws of the same construction.

16. The committee are unanimously of opinion that the new or Dr. Forbes' gins are decidedly superior to those of the old construction, both in durability and the quantity and quality of the work capable of being performed by them, and have no hesitation in strongly recommending that the new gins be introduced in substitution of the old, to the greatest possible extent.

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17. Adverting to the 3d para. of the Government letter, No. 843, dated the 13th ultimo, the committee would beg to state that they are not prepared, at the present time, to suggest any alterations or improvements to the new gins. They appear fully to answer the purposes required of them, and as such may at the present time be considered as perfect machines, although probably, in process of time, experience in the working of them may point out some minor improvements or alterations.

(signed) *Richard Spooner.*
H. J. Barr.
James H. Burke.
W. C. Anderson.

(True copy.)

(signed) *Richard Spooner,*
Officiating Commissioner of Customs, Salt, and Opium.

V. 2923. RESOLUTION on a Letter from the Officiating Commissioner of Customs, Salt, and Opium, No. 513, dated 9th April 1856, forwarding Copy of the Proceedings of a Committee appointed by Government for the purpose of ascertaining the respective Qualities of certain Saw-gins, and requesting Instructions on certain points.

THE thanks of Government should be communicated to the committee, who may be informed that his Lordship in Council has learnt with satisfaction the favourable opinion entertained by them of the ginning machine as improved by Dr. Forbes.

2. One of the improved machines sent by Dr. Forbes for trial should be forwarded to the superintendent of the cotton experiments at Ahmedabad, who should be instructed to suggest such measures as he may consider calculated to lead to the adoption of the improved gin in Guzerat.

3. The Collector of Candeish may be requested to report whether he considers that it would be of any advantage to send to Candeish an improved gin; the second machine may, in the meantime, be retained in Bombay.

4. The old gins may be disposed of in Bombay, if advantageous prices can be secured; otherwise, as the carts will have to be returned to Dharwar, it may be advisable to return the gins received from Dr. Forbes, to be altered according to his new pattern. If, however, this course should be too expensive, they may, if unsaleable, for the present be retained here, as well as those received from Guzerat, until the receipt of further orders.

5. Mr. Spooner's proceedings for the disposal of the cotton approved.

(No. 1495 of 1856.)

V. 2924 to 26. To the Officiating Commissioner of Customs, Salt, and Opium. (Copy sent to the Revenue Commissioners, Southern and Northern Divisions.)

26 April 1856. (signed) *H. Young.*
Officiating Chief Secretary to Government.

(No. 1496 of 1856.)

From Mr. Officiating Chief Secretary *Young* to the Acting Secretary to the Chamber of Commerce.

Sir,

V. 2927. WITH reference to my letter (No. 916) dated 19th ultimo, I am directed to forward, for the information of the Chamber of Commerce, copies of a communication* from the Officiating Commissioner of Customs, Salt, and Opium, of its enclosure, and of the resolution this day passed by Government (No. 1495.)

Bombay Castle,
26 April 1856.

I have, &c.
(signed) *H. Young,*
Officiating Chief Secretary to Government.

(No. 1497 of 1856.)

V. 2928. From Mr. Officiating Chief Secretary *Young* to *R. Spooner, Esq., Capt. J. H. Burke, Capt. W. C. Anderson, Capt. J. Barr, and A. T. Bunny, Esq.*

Gentlemen,

THE Officiating Commissioner of Customs, Salt, and Opium has submitted a copy of your proceedings on the subject noted in the margin, and I am directed, in communicating to

Experimental trial
of certain cotton
gins.

* No. 513, dated 9th April 1856.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1221

to you the thanks of Government, to inform you that his Lordship in Council has learnt with satisfaction the favourable opinion entertained by you of the ginning machine as improved by Dr. Forbes.

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Bombay.

Bombay Castle.
26 April 1856.

I have, &c.
(signed) *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 21 May 1856.—V. 3457 and 58.

(No. 1383 of 1856.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

THE Revenue Commissioner, Northern Division, presents compliments to the Officiating Chief Secretary, and, with reference to para. 2d of the Government resolution (No. 1495), dated 26th ultimo, begs to inform him that he has just received a letter from Mr. Hadow, stating that he has not received any intimation of the despatch of the saw-gin alluded to, and suggesting, if it has not yet left Bombay, that it may be sent direct to Dhollera; whence it can more easily and economically be transmitted to Dhundooka, where the factory is established.

V. 3457-

(signed) *E. G. Fawcett*,
Revenue Commissioner, Northern Division.
Tanna Districts, Revenue Commissioner's Office,
Camp Matheeran, 16 May 1856.

(No. 1768 of 1856.)

Copy forwarded to the Officiating Commissioner of Customs, Salt, and Opium, for guidance.

V. 3458-

Bombay Castle, 19 May 1856.

(signed) *H. L. Anderson*,
Secretary to Government.

EXTRACT from the Proceedings of Government, in the Territorial Department, Revenue, dated 11th June 1856.—V. 3605 to 3607.

(No. 1289 of 1856.)

From the Revenue Commissioner, Southern Division, to Mr. Officiating Chief Secretary *Young*.

Sir,

I HAVE the honour to acknowledge the receipt of the Government resolution (No. 1495) of 26 April 1856, on the subject of the proceedings and report of a committee appointed by Government for the purpose of ascertaining the respective capabilities of the saw-gins of Dharwar and Goozerat, submitted for inspection.

V. 3605-

2. It is very gratifying to me to find the opinion which I so confidently ventured on the superiority of Dr. Forbes' new gins confirmed by the committee, and I shall lose no time in communicating the resolution of Government and its accompanying report to Dr. Forbes; but I have to observe that the resolution of Government (No. 552) of February 21st last, remains to be disposed of; and I shall be much obliged if you will inform me whether my proceedings and suggestions, as reported to Government, under date February 7th last (No. 402), are approved of. You will observe that the ginning season has already commenced, as noticed by me in the 17th para. of my report.

I have, &c.
(signed) *H. W. Reeves*,
Revenue Commissioner, Southern Division.
Revenue Commissioner's Camp, Nehr,
1 May 1856.

RESOLUTION on a Letter from the Revenue Commissioner, Southern Division (No. 1289), dated 1st May 1856, soliciting Instructions in reference to his Proposals for withdrawing the Gins now in use at Dharwar, and replacing them by those manufactured by Dr. Forbes.

"THE course suggested by Mr. Reeves, in his report (No. 402) of the 7th February last, may now be sanctioned, and his proceedings approved."

V. 3606-

26 May 1856.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

1222 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
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EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 11 June 1856.—V. 3776 to 78.

(No. 737 of 1856.)

From the Officiating Commissioner of Customs, Salt, and Opium, to the Chief Secretary
to Government.

V. 3776.
Dr. Forbes' new
cotton gins.

Sir,
I HAVE the honour to acknowledge the receipt of copy of Government resolution
(No. 1495), dated the 26th ultimo.

2. The items, as follows, are under my charge, and were received from Dharwar and
Surat:—

Received from Dharwar:		Rs. a. p.
A. 1 Cart	- - - - -	44 9 5
B. 1 Ditto	- - - - -	44 9 5
C. 1 Gin of 20 saws, new	- - - - -	165 - -
D. 1 Gin of 10 saws, new	- - - - -	105 - -
E. 1 Gin of 7 saws, old	- - - - -	17 8 -
F. 1 Gin of 7 saws, old	- - - - -	17 8 -
Received from Surat:		
G. 1 Gin of 20 saws, old	- - - - -	21 4 2
H. 1 Gin of 20 saws, old	- - - - -	- - -
		Rs. 415 7 2

One gin of 20 saws, new, 165 rupees. 3. Item C. will be forwarded to Ahmedabad, as directed, as soon as practicable. It will be forwarded before the monsoon, if opportunity offers, otherwise immediately on the opening of the season.

One gin of 10 saws, new, 105 rupees. 4. The item D. will be retained until further instructions are received.

One gin of seven saws, old - - - Rs. 17 8 -
One gin of seven saws, old - - - 17 8 -
Rs. 35 - -

5. With regard to the items E. and F., Dr. Forbes, in his letter to me (No. 44), dated the 22d instant, states as follows:

Rs. 17 8 -
17 8 -
Rs. 35 - -

"With regard to the two old gins, I beg to explain that the sum charged* is the amount at which they were received from the ryots in exchange for new gins, and as they are both unserviceable and irreparable, it is probably more than their actual value."

6. I would therefore beg to suggest that I be directed to sell the aforesaid items E. and F. for whatever can be got for them.

Rs. a. p.
One cart - - - - - 44 9 5
One cart - - - - - 44 9 5
Rs. 89 2 10

7. With regard to the items A. and B., as their aggregate cost is only Rs. 89. 2. 10, as the cost of sending them to Dharwar would be no small trifle, and as I could sell them at Bombay for at least Rs. 50 for the 2 carts, I would beg to suggest that they also be sold for whatever can be got for them by public auction.

8. In respect to the two remaining items G. and H., viz., two large old gins of 20 saws, which were received from the Collector of Surat, I beg to state that the Assistant Collector in charge of Surat, in his letter to me, dated the 5th instant, No. 401, states as follows:—"I have the honour to inform you that the value of the two cotton saw-gins in question is borne on the dead stock of this collectorate as Rs. 21. 4. 4., and I beg to request that you will credit me with the amount as Rs. 21. 4. 4."

"2. It was reported to Government that certain saw-gins were not required here, and thereupon I was directed by the Revenue Commissioner, in pursuance of instructions from Government, to despatch two of the best without delay to you, for what purpose I was not informed."

9. In the committee's proceedings regarding the said two gins, it is thus stated:—

"13. The Guzerat gins, it was evident, were in very bad working order, the saws were in continual contact with the grates, and injury to the staple was consequently unavoidable."

10. Under these circumstances, I would beg to suggest that they also be sold for whatever can be got for them by public auction.

I have, &c.
(signed) R. Spooner,
Officiating Commissioner of Customs,
Salt, and Opium.

Bombay, Office of Commissioner of Customs,
Salt, and Opium, 10 May 1856.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

III.
Bombay.

RESOLUTION on a letter from the Officiating Commissioner of Customs, Salt and Opium, No. 737, dated 10th May 1856, offering suggestions for the disposal of certain cotton gins, &c. received from Dharwar and Surat.

V. 3777

Mr. Spooner's suggestions to be acted on.

28 May 1856.

signed *H. Young*,
Officiating Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 28th June 1856.—V. 4227 to 29 A.

(No. 1550 of 1856.)

MEMORANDUM from the Revenue Commissioner, Northern Division, dated 6th June 1856.

SUBMITTED to Government with reference to para. 3 of their Resolution, No. 1,495, of the 26th April last.

V. 4237.

2. It is requested that the gin now remaining in Bombay may be sent to Khandeish.

(signed) *E. G. Fawcett*,
Revenue Commissioner,
Northern Division.

Revenue Commissioner's Office, Poona,
6 June 1856.

(No. 1047 of 1856.)

From the Collector of Khandeish to the Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to acknowledge the receipt of your memorandum, No. 1205, dated 3d instant, forwarding correspondence relating to the proceedings of a committee assembled by order of Government to report on some improvements made by Dr. Forbes in the saw gin.

V. 4232.

2d. In reply, I would beg to recommend that a pattern one be forwarded to Khandeish.

3d. From the report of the committee there appears to be no doubt that Dr. Forbes' saw gin cleans the cotton more effectually and more speedily than those now in use, and with less injury to the staple.

4th. The cultivation of cotton in this province is increasing annually, and the population being so scanty, it is extremely desirable that the means of cleaning it should increase in the same ratio; this can only be accomplished by a more general introduction of the saw gin of an efficient and an economical description.

I have, &c.
(signed) *S. Mansfield*,
Collector.

Khandeish Collector's Camp, Suptshring,
30 May 1856.

RESOLUTION on a memorandum from the Revenue Commissioner, Northern Division, No. 1550, dated 6th June 1856, with accompaniment, recommending that a saw gin, constructed by Dr. Forbes on an improved principle, be forwarded to the Collector of Khandeish.

12 June 1856.

(signed) *H. Young*,
Officiating Chief Secy. to Govt.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 11th September 1856.—V. 6111 to 6113.

(No. 2300 of 1856.)

From the Revenue Commissioner, Southern Division, to Mr. Officiating Chief Secretary *Young*.

Sir,

IN acknowledging the receipt of your memorandum, No. 2687,* of 21st instant, with accompaniments, I have the honour, with reference to the observation in para. 3 of the Government letter, No. 2686 of the same date, to point out that in the Southern Mahratta country

V. 6111.

* Copy forwarded to the Honourable Court with Letter No. 59, dated 26th July 1856.

III.
Bombay.

country saw gins have proved from experience to be unadapted to the cleaning of indigenous cotton, and that these machines have therefore been, and still are, used exclusively in the preparation of the American or New Orleans variety.

2. I am, however, respectfully of opinion that the gin factory at Dharwar should be maintained, since without it the Southern Mahratta country cotton trade would languish and perhaps entirely cease. So far from advocating its abolition, I consider that its efficiency should be increased. Under Doctor Forbes' superintendence much improvement may be fairly expected in machinery.

3. Pending receipt of a reply to this communication I shall defer calling on the collectors for a statement of the expenditure incurred on account of the cotton experiments in the Southern Mahratta country, Sholapoor and Sattara, and I respectfully add, that difficulty will be experienced in preparing accounts which will show the expense incurred by the States in the encouragement of exotic cotton cultivation, apart from that incurred in the introduction and improvement of machinery.

I have, &c.

(signed) *H. W. Reeves,*

Poona, Revenue Commissioner's Office,
24 July 1856.

Revenue Commissioner, Southern Division.

RESOLUTION of Government.

V. 6112. GOVERNMENT were not prepared to learn that in the Southern Mahratta country saw gins are used exclusively in the cleaning of exotic cotton, since in Khandeish and elsewhere they are extensively used in cleaning the indigenous produce. His Lordship in Council desires that he may be furnished with such explanation as the local authorities can submit of this anomaly.

2. Government concur with the Revenue Commissioner in opinion that the Dharwar gin factory should be maintained on an efficient footing.

3. In the returns called for it does not appear essential to distinguish between the charges incurred for promoting the introduction of exotic cotton and those incurred on account of the improved culture and preparation of the indigenous variety.

28 August 1856.

(signed) *H. Young,*
Officiating Chief Secy. to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 15 November 1856.—V. 8123 to 826.

(No. 3046 of 1856.)

MEMORANDUM from the Revenue Commissioner, Southern Division, dated
3d October 1856.

V. 8123. SUBMITTED* for the information and orders of Government.

2. The Revenue Commissioner concurs in Dr. Forbes' proposal for obtaining gin saws from England, it being very necessary that they should be of the best possible and most suitable description.

3. Mr. Ogilvy is in error in stating, in para. 5, that the sanction of Government has not been obtained to the expense attendant on the alteration proposed by Dr. Forbes and the Revenue Commissioner of Mr. Frost's saw gins; the Government resolution, No. 1834, dated 26th May last, which was communicated to the Collector on date 28th idem, No. 1706, having sanctioned the course suggested in the Revenue Commissioner's report, No. 402 of 7th February last, and approved of his proceedings. This will be brought to the notice of the Collector.

4. In para. 4 of Dr. Forbes' report accompanying, he notices a further improvement made by him in the saw gins, which, he states, adds an expense of five rupees to the small and of ten rupees to the large gins. This, under the circumstances explained, the Revenue Commissioner trusts will not be objected to by his Lordship in Council.

5. The progress made during the half year under report is on the whole satisfactory.

Poona, Revenue Commissioner's Office,
3 October 1856.

(signed) *H. W. Reeves,*
Revenue Commissioner, Southern Division.

* Lett^re from the Collector of Dharwar, No. 1605, dated 20th September 1856, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1225

III.
Bombay.

(No. 1605 of 1856.)

From *T. Ogilvy, Esq.,* Collector of Dharwar, to *H. W. Reeves, Esq.,* Revenue Commissioner, Southern Division.

Sir, Dharwar Collector's Office, 20 September 1856.

I HAVE the honour to transmit, for the information of Government, a copy of the usual half-yearly report rendered by the Superintendent of the Cotton Gin Factory, No. 79, dated the 29th ultimo, detailing the operations of the establishment during the half year ending the 31st May last.

V. 8124.

2. The following statement gives a comparative view of the proceedings of the cotton-gin factory during the past two half years:

	Half Year ending 30th Nov. 1856.			Half Year ending 31st May 1856.			Increase.			Decrease.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Value of work done - - -	4,760	14	2	4,498	1	2	-	-	-	262	13	-
Cost of materials, labour, &c. -	3,983	5	4	3,885	9	3	-	-	-	97	12	1
Realizations from sale and repair of saw gins - - -	1,681	2	3	3,939	14	3	2,258	12	-	-	-	-
Ditto from other sources - -	-	-	-	416	10	10	416	10	10	-	-	-
<i>Profit or difference between value of work done and cost of materials, &c.</i>							<i>Rs. a. p.</i>					
612 7 11												
<i>Deduct value of repairs executed free of charge</i> - - -							611 10 8					
Net Profit - - -							<u>Rs.</u>			<u>- 13 3</u>		

3. The work executed is considerable, though less than in the previous half year, but the time and attention of the establishment was much occupied in prosecuting experiments that have already been attended with the greatest benefit. The realizations considerably exceed those of the previous half year.

4. It appears to me that Dr. Forbes should, with reference to his 5th para., be allowed to procure from England as many superior saws as he may require, to be made according to the model he would furnish.

5. No authority has yet been received for the alteration,* at a cost of 52 rupees each, of 37 18-saw gins constructed on a defective principle by Mr. Frost.

6. It does not appear to be necessary that I should make any further remarks, than that the factory continues, under Dr. Forbes' management, in excellent working order.

I have, &c.
(signed) *T. Ogilvy,*
Collector.

(No. 79 of 1856)

To *T. Ogilvy, Esq.,* Collector of Dharwar.

Sir,

THE six months now reported upon were, in a great measure, occupied with the experiments, alterations and trials required in correcting the defective construction of the cotton-cleaning machinery which I had previously brought to notice. Work of this description, though engaging the time of the best hands, does not show on the returns which embrace only new gins made and old ones repaired; accordingly, though there has been no lack of industry on the part of the establishment, the amount exhibited of "work completed" is somewhat less than on the previous half year.

2. After the new description of gin had been decided upon and approved of, it became necessary to alter those previously made, and the cost of materials and labour in introducing the

* See paragraph 13 of the Revenue Commissioner's Letter to the Officiating Chief Secretary's address, dated the 7th February 1856, No. 402.

I.
Bombay.

the improvements into 20 gins, as per annexed statement, amounts to Rs. 611 10. 8. As these gins were disposed of at the usual selling price, nothing being added for this extra cost of construction, the item has entirely absorbed the profits on the half year, viz., the difference between Rs. 3,885. 9. 3., cost of materials and labour, and Rs. 4,498. 1. 2., value of work done amounting to Rs. 612. 7. 11.

3. The report of the Committee assembled for the purpose at Bombay, in March last, fully establishes the fact of the necessity that existed for a better description of gin than that formerly in use. I have now in the factory specimens of every variety of machine made at Dharwar since the experiments were instituted, and have therefore an opportunity of forming an opinion upon the causes which led to their failure. It appears to me that this has arisen chiefly from neglect of one very important element, viz., want of sufficient care in adapting the articles to the hands into which they were subsequently to pass. Many of these gins probably worked well enough on an hour's trial at the factory, but a glance at their slight and unsubstantial construction will suffice to show that they were but ill-suited to the rough treatment which such articles receive at the hands of the natives who work them. This remark does not apply to the American and English gins imported. These, for strength and perfection of finish are admirable, and if there were American or English hands to work them, they could not be surpassed, but their complicated construction required some care in their management, and it was on this account as well as that of their great expense in the first instance, that they were found unsuitable.

4. A large proportion of the Dharwar cotton is purchased from the ryots by sowears and dealers, who employ gangs of coolies to carry their gins about and work them at the various villages at which the kuppas may be stored. The employers do not accompany these gangs, and as the contract for work is not by the day, but by the quantity cleaned, the coolies, who have no interest of ownership in the gin, care little about the manner in which it is treated, and either through ignorance or indifference, they cannot or will not attend to the simplest instructions with regard to the method of placing, working and preserving the machine. It is, therefore, a matter of necessity that the article provided for them shall be simple as well as durable and strong. For these reasons I have found it necessary, since the new description of gin was submitted to the Committee at Bombay, to introduce several alterations. The screw which regulates the sliding box in which the friction wheel revolves, was found to be a discretionary power which could not be intrusted to the coolies; instead of being limited to its proper use, which might have amounted to half a turn once in a month, I found that it was forthwith driven home to the utmost pitch (the gin, for the time being, working at an increased rate), but the consequence was an amount of pressure which, in a short time, completely crushed one portion of the machine against the other. In one instance I found the screw forced through the zinc bearing, and in another it had been driven with a hammer instead of turned as a screw. A steel spring has been introduced which answers the purpose equally well, without being open to the above objection, but this alteration, with the other modifications, required to suit it, adds an expense of five rupees to the small and 10 to the large gin, making the selling price of the former 110 rupees, and of the latter 175 rupees.

5. The inspector-general of prisons has been kind enough to supply me with convict labour for the purpose of testing the durability and efficiency of the new gins; I have had them in constant daily work at the factory during the whole of the present cotton-cleaning season, and I may now, therefore, from experience, venture an opinion. I am firmly convinced that the ryots' 10-saw gin will realise all that has been represented in its favour by the Committee at Bombay, as well as by myself, and (if furnished with a better description of saw than those at present in store in the factory), that it will leave nothing to be desired, both as regards safety to the cotton staple and suitability in every other respect to the requirements of these districts. It possesses an advantage over gins previously made, requiring, in its use, no adjustment of straps, wedges, or screws, and if not wantonly interfered with or injured it will work for years without repair, except occasional replacement of the friction wheel, the cost of which amounts only to one rupee.

6. The value of gins sold during the above period amounts to 4,160 rupees, which is greatly in advance of the former average, and the demand must continue increasing until the old gins now in use are entirely replaced, as the majority of them are worn out beyond repair.

7. The returns exhibit the total value of work completed, viz., in the construction and alteration of new gins and repair of old ones, at Rs. 4,498. 1. 2., and the cost of establishment and materials at Rs. 3,885. 9. 3, which, but for the reasons I have already explained, would have left an average monthly profit to Government of Rs. 102. 1. 3.

Dharwar Cotton-Gin Factory,
29 August 1856.

I have, &c.
(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1227

III.
Bombay.

STATEMENT showing the Cost, exclusive of Profit, of Altering each Old Gin to the New Model.

MATERIALS :	Rs. an. p.	Rs. an. p.
15 lbs. of zinc for washers - - - - -	3 - -	
8 lbs. of ditto for bearings - - - - -	1 9 6	
5 lbs. of iron for saw double boxes - - - - -	- 6 3	
8 ½ lbs. of ditto for brush ditto ditto, improved brush for bolts and nuts - - - - -	- 10 7	
11 lbs. of ditto for friction wheel, new arms and plates - - - - -	- 13 9	
3 lbs. of sheet iron, for plates of brush whirl - - - - -	- 7 3	
Buffalo hide for washers - - - - -	- 12 -	
Sundry expenses - - - - -	- 12 -	
		8 7 4
LABOUR :		
Carpenters' hire - - - - -	7 8 -	
Smiths' ditto - - - - -	3 4 6	
Tilers' ditto - - - - -	4 3 6	
Lathe turners' ditto - - - - -	3 9 -	
Driller and cooly ditto - - - - -	- 15 -	
		19 8 -
		27 15 4
Cost of establishment, viz., writer, peons, &c. at an average on each gin - - - - -		2 10 -
	Rs.	30 9 4

Dharwar Cotton-Gin Factory,
29 August 1856.

(signed) G. F. Forbes,
Superintendent Cotton-Gin Factory.

STATEMENT No. 1.

COTTON PLANTER'S REPORT for the Half-year, commencing 1 December 1855 and ending 31 May 1856, in the Dharwar Collectorate.

TALOOKAS.	Prospect of the Season and State of the Crop as regards each sort of Cotton	Extent in Acres of Cotton Cultivated							
		New Orleans.		Broach.		Total Foreign.		Country Cotton.	
		Extent in Acres.	Estimated produce in Candies of 784 lbs.	Extent in Acres.	Estimated produce in Candies of 784 lbs.	Extent in Acres.	Estimated produce in Candies of 784 lbs.	Extent in Acres.	Estimated produce in Candies of 784 lbs.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Dharwar 2. Nowgoond. 3. Dumbul. 4. Bunkapoor. 5. Haugul. 6. Hooble. 7. Raneebeduore 8. Kode.	The season was not favourable and the yield in both the New Orleans and Native cotton was not more than two-thirds of an average year.	Acres 50,802 36 chains.	3,887 can- dies, 766 lbs. of cleaned cotton.	- - - -	- - - -	Acres 50,802 36 chains.	3,887 can- dies, 766 lbs. of cleaned cotton	Acres 1,91,196 4 chains.	14,632 can- dies 278 lbs. of cleaned cotton.

STATEMENT No. 1.—Cotton Planter's Report for half-year, in the Dharwar Collectorate—continued.

TALOOKAS.	G I N S.						
	r Sale in the Factory.		In Use.		Out of Use.		Completed in the present half-year.
	Belonging to Government.		Belonging to Private Individuals.		Belonging to Private Individuals.		Belonging to Government.
	Number and Size of Gins.	Talooka.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talook.	Number and Size of Gins.
11.	12.	13.	14.	15.	16.	17.	
1. Dharwar	5 of 20 saws each	-	6 of 40 saws each	Unable to state, as the gins are constantly moved about from one Talooka to another, and after into the adjacent Madras districts and Enam villages, as the dealers may require them.	I believe none	-	10 of 20 saws each, 1,870
2. Nowlgoond.	1 of 10 "	-	1 of 25 "				2 of 40 " 740
3. Dumbul.	16 of 8 "	-	1 of 24 "				19 of 10 " 1,995
4. Bunkapoor.	2 of 4 "	-	8 of 20 "				6 of 10 " 600
5. Haugul.	2 roller churkas	-	73 of 18 "				
6. Hooblee.	1 Egyptian "	-	9 of 14 "				
7. Raneebdnore.	1 cotton thrasher	-	3 of 13 "				
8. Kode.		-	34 of 10 "				
	28		62 of 8 "				37
			157 of 7 "				
			354				5,005

TALOOKAS.	G I N S.					Profit or Loss to Government deducting the Cost of European Superintendence.	Total Net Expenses on Account of the Experiments from the Commencement to the Close of the Half-year preceding that under Report.	Total Expenses for the Half-year under Report.
	Being made			Sold for Government during the Half-year under Report.				
	For Government.	For Private Individuals.		Number and Size of Gins.	At what Cost.			
	Number and Size of Gins.	Number Sold.	Size of Gins.					
18.	19.	20.	21.	22.	23.	24.	25.	
1. Dharwar	42 of 18 saws	-	None	2 of 40 saws	Rs a. p.	Profit as per abstract statement of cost and returns on the work - - - - - Deduct the amount of the above appropriated in altering two gins of ten saws each - - - - - Net Profit - - - - - Rs.	Rs. a. p. 578,548 8 9 1,59,258 7 5 4,26,290 1 4	Rs. a. p. 6,452 14 3 4,356 9 1 2,096 5 1
2. Nowlgoond.	5 of 10 "		5 of 20 "	740 - - -				
3. Dumbul.	8 of 8 "		19 of 10 "	825 - - -				
4. Bunkapoor.	1 cotton cleaning machine.		6 of 10 "	1,995 - - -				
5. Haugul.				600 - - -				
6. Hooblee.	26 roller churkas.			32 - - -				
7. Raneebdnore.			Value of repairs	4,160 - - -				
8. Kode.				Rs. 1,001 13 6				
				Rs. 5,161 13 6				

Dharwar Cotton-Gin Factory,
1 June 1856.

(signed) G. F. Forbes,
Superintendent in Charge.

STATEMENT No. 2.

ACCOUNT of RECEIPTS and EXPENDITURE of the COTTON EXPERIMENTS, *Dharwar* Collectorate, from the Commencement up to 31st May 1856.

				Rs.	a.	p.					Rs.	a.	p.			
Amount of receipts from the commencement to the half-year preceding that under report				1,52,258	7	5	Amount of expenses from the commencement up to the half year preceding that under report				5,78,548	8	9			
For the half-year under report from 1st December 1855 to 31st May 1856.								For the half-year under report from 1st December 1855 to 31st May 1856.								
By proceeds of the sale of saw-gins, viz.:		Rs.	a.	p.	Rs.	a.	p.	To allowance to Dr. G. F. Forbes, superintendent of Cotton-gin Factory, from 1st November 1855 to 30th April 1856, at 200 rupees per month		Rs.	a.	p.	Rs.	a.	p.	
	December 1855	150								1,200						
	January 1856	200														
	February 1856	670														
	March 1856	*989														
	April 1856	*811														
	May 1856	*635														
					3,455											
By proceeds of the repair of saw-gins, viz.:																
	December 1855	3	2	5												
	January 1856															
	February 1856															
	March 1856	82	3	6												
	April 1856	42	5	8												
	May 1856	357	2	8						2,367	2	7				
					484	14	3						3,567	2	7	
	By fine recovered from artificers for breaking of tools					3	8									
	By proceeds of the sale of 11 model carts					413	2	10					76	7		
						4,356	9	1								
						1,56,615		6								
						4,28,386	6	5								
	By balance against the experiment															
						Rs.	5,85,001	6	11				Rs.	5,85,001	6	11

7 x 4

* These items include the advance for gins being made. *Vide* the explanation given under the head of "Remarks" in Statement No. 6.

Dharwar Cotton-Gin Factory,
1 June 1856.

(signed) G. F. Forbes,
Superintendent Cotton-Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1229

STATEMENT No. 3.

ABSTRACT STATEMENT showing the COST and RETURN of the COTTON GIN FACTORY, *Dharwar*, from 1st December 1855 to 31st May 1856.

<i>Cr.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Dr.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
By Value of the difference of work done in completing 25 gins of 10 saws each - - - - -	440 - -		ESTABLISHMENT :		
- Value of the difference of work done in completing 3 gins of 20 saws each - - - - -	283 8 -		To Salary of the fixed Establishment, exclusive of that of the Apprentices and the European Superintendence - - - - -	1,361 2 7	
- Value of 2 gins of 40 saws, commenced and completed in the present half year - - - - -	740 - -		- Batta to the Establishment - - - - -	73 - -	
- Value of 7 gins of 20 saws, commenced and completed in the present half year - - - - -	1,175 - -		- Cost of the contingent Establishment - - - - -	839 10 2	2,273 12 9
Value of work done towards completing 5 gins of 10 saws each	237 - -		MATERIALS :		
		2,875 8 -	355 Circular Saws, of 10 inches, at <i>Rs.</i> 1. 2. 4. each - - - - -	406 12 4	
- Value of Repairs executed :			7 - ditto - of 8 inches, at 12 annas each - - - - -	5 4 -	
December 1855 - - - - -	23 15 10		11 ½ lbs. of Bristles, at 2 rupees per lb. - - - - -	23 - - -	
January 1856 - - - - -	197 5 3		3 lbs. of Brass Wire, at <i>Rs.</i> 1. 8. per lb. - - - - -	4 8 -	
February " - - - - -	225 11 9		Teakwood - - - - -	4 2 -	
March " - - - - -	149 1 -		17 logs of Honny Wood - - - - -	152 - - -	
April " - - - - -	187 12 6		Babool Wood - - - - -	2 2 -	
May " - - - - -	217 15 2		42 maunds and 25 lbs. of Round Iron, of sizes, at 2 rupees per md. of 28 lbs. - - - - -	85 12 6	
		1,001 13 6	11 maunds and 21 lbs. of Square Iron, of sizes, at 2 rupees per md. of 28 lbs. - - - - -	23 8 -	
- Cost of making an Iron Mould for casting Zinc Washers - - - - -		9 1 -	32 maunds and 6 ½ lbs. of Flat Iron, of sizes, at 2 rupees per md. of 28 lbs. - - - - -	64 7 5	
- Cost of Materials and Labour in altering 20 Gins of 10 saws each - - - - -		611 10 8	26 maunds and 15 lbs. of Sheet Iron, of sizes, at 3 ½ rupees per md. of 28 lbs. - - - - -	86 3 10	
			781 kolas of Country Iron, at various rates - - - - -	120 14 11	
			41 maunds and 22 lbs. of Zinc, at various rates - - - - -	219 15 10	
			59 gross 1 dozen and 10 Screws, Iron, of sizes, at various rates - - - - -	132 12 -	
			31 ½ Buffalo Hides, at various rates - - - - -	81 - 2	
			28 Buffalo Horns, at various rates - - - - -	2 12 -	
			5 candys 7 ½ puras of Charcoal, at 16 rupees per candy of 40 puras, exclusive of the difference charge, 1 pie - - - - -	82 15 11	
			8 Hinges, Iron Butt, of 2 ½ inch, at <i>Rs.</i> 5. 4. per dozen - - - - -	3 8 -	
			4 dozen and 2 Hinges, Iron Butt, of 2 inches, at <i>Rs.</i> 5. 4. per dozen - - - - -	21 14 -	
			29 ½ lbs. of Iron Nails, at 3 ½ annas per lb. - - - - -	6 7 3	
			16 lbs. of Steel, at 4 ½ annas per lb. - - - - -	4 8 -	
			SUNDRY EXPENSES :		
			For December 1855 - - - - -	7 13 4	
			For January 1856 - - - - -	9 12 8	
			For February " - - - - -	7 11 1	
			For March " - - - - -	31 11 6	
			For April " - - - - -	10 8 11	
			For May " - - - - -	9 10 10	
				77 4 4	
					3,885 9 3
			To Profit to Government for the half year - - - - -		612 7 11
					Rs. 4,498 1 2
					Rs. 4,498 1 2

Dharwar Cotton-Gin Factory,
1 June 1856.

(signed) G. F. Forbes,
Superintendent Cotton-Gin Factory.

1230

PAPERS RELATING TO MEASURES TAKEN SINCE 1847

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1231

STATEMENT No. 4.

DETAILED MEMORANDUM of the Number, Size, and Value of Gins, made during the Half Year ending 31 May 1856, the Number out of them Sold, and the Balance of Cotton Machines in Store.

DESCRIPTION.	MACHINES.										
	Gins of 40 Saws each.		Gins of 20 Saws each.			Gins of 10 Saws, of Rs. 105 each.			Gins of 10 Saws, of Rs. 100 each.		
	No.	Value.	No.	Value.	Value Recovered.	No.	Value.	Value Recovered.	No.	Value.	Value Recovered.
Number which were on hand at the close of the last half year		Rs. a. p.		Rs. a. p.	Rs. a. p.	1	105 --	--		Rs. a. p.	Rs. a. p.
Number made during the present half year	2	740 --	10	1,670 --	--	19	1,995 --	--	6	600 --	--
TOTAL	2	740 --	10	1,670 --	--	20	2,100 --	--	6	600 --	--
Deduct—Number sold in the present half year	2	740 --	5	825 --	760 --	19	1,995 --	1,995 --	6	600 --	600 --
Balance on hand, except those being made			5	845 --	--	1	105 --	--			

DESCRIPTION.	MACHINES.											
	Gins of 8 Saws, of Rs. 75 each.		Gins of 8 Saws, of Rs. 70 each.		Gins of 4 Saws.		Cotton Thresher.		Egyptian Churka.		Roller Gin.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Number which were on hand at the close of the last half year	7	Rs. a. p.	9	Rs. a. p.	2	90 --	1	100 --	1	7 2 8	2	40 --
Number made during the present half year												
TOTAL	7		9		2	90 --	1	100 --	1	7 2 8	2	40 --
Deduct—Number sold in the present half year												
Balance on hand, except those being made	7		9		2	90 --	1	100 --	1	7 2 8	2	40 --

Dharwar Cotton Gin Factory, 1 June 1856.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

STATEMENT No. 5.

STATEMENT of Gins Sold during the Half Year ending 31 May 1856.

MONTHS.	DESCRIPTION OF GINS.										REMARKS.
	Gins of 40 Saws.		Gins of 20 Saws.		Gins of 10 Saws, of Rs. 105 each.		Gins of 10 Saws, of Rs. 100 each.		TOTAL.		
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	
December 1855		Rs. a. p.		Rs. a. p.		Rs. a. p.	1	100 --	1	100 --	
January 1856							4	400 --	4	400 --	
February "			1	165 --			1	100 --	2	265 --	
March "	2	740 --	1	165 --	9	945 --			12	1,850 --	
April "			2	330 --	5	525 --			7	855 --	
May "			1	165 --	5	525 --			6	690 --	
TOTAL	2	740 --	5	825 --	19	1,995 --	6	600 --	32	4,160 --	

Dharwar Cotton Gin Factory, 1 June 1856.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

STATEMENT No. 6.

DETAILED MEMORANDUM of Sums Collected during each of the Six Months embraced in the Cotton Planter's Report for the Half Year commencing 1st December 1855 to 31st May 1856, for GINS Sold during that Period; also for Repairs to GINS and GINS Sold during the previous Half Year.

MONTHS.	Sums collected during the present Half Year for GINS Sold prior to 1 Dec. 1855.	Sums collected for GINS Sold during the Half Year under Report.	Sums collected during the present Half Year for Repairs made prior to 1 Dec. 1855.	Sums collected for GINS Repaired during the Half Year under Report.	TOTAL.	REMARKS.
	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	
December - 1855	50 - -	100 - -	3 2 5	- - -	153 2 5	<i>Rs. a. p.</i> Sum actually collected by sale and repair of saw-gins in the six months under report - - - - 3,809 14 3 Advance for gins received during the half year; - 130 - - Fines received from artificers for breaking up tools during the half year - 3 8 - Proceeds of the sale of 11 model carts during the half year - - - 413 2 10 Rs. 4,356 9 1
January - 1856	- - -	200 - -	- - -	- - -	200 - -	
February - 1856	- - -	670 - -	- - -	- - -	670 - -	
March - "	- - -	939 - -	- - -	82 3 6	1,021 3 6	
April - "	- - -	771 - -	23 5 8	19 - -	813 5 8	
May - "	- - -	595 - -	273 2 8	84 - -	952 2 8	
TOTAL - - <i>Rs.</i>	50 - -	3,275 - -	299 10 9	185 3 6	3,809 14 3	

Dharwar Cotton Gin Factory,
1 June 1856.

(signed) *G. F. Forbes,*
Superintendent Cotton Gin Factory.

RESOLUTION OF GOVERNMENT.

V. 8125. DR. FORBES' report is satisfactory.

Government will be prepared, on being furnished with a full specification and pattern of the saws required, to request the Court of Directors to forward the required supply.

His Lordship in Council confidently trusts that theginning machine, as now improved by Dr. Forbes, will be found to answer the expectations formed of it.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25th March 1857.—V. 1836-37.

(No. 410 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

V. 1836. SUBMITTED* to Government for information.

2. The principal features of the proceedings, during the period under report, are detailed by Mr. Brenham, in the column of "Remarks," and it is gratifying to observe the number of gins which have already been let out for hire: 21 of which have been taken by native dealers.

(signed) *E. G. Fawcett,*
Revenue Commissioner, Northern Division.

Tanna Districts,
Revenue Commissioner's Office, Camp Coorla,
19 February 1857.

* Letter from the Collector of Khandeish, No. 96, dated 19th January 1857, with enclosure.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1233.

III.
Bombay.

(No. 96 of 1857.)

From *Samuel Mansfield*, Esq., Collector of Khandeish, to *E. G. Fawcett*, Esq., Revenue Commissioner, Amulnair.

Sir,

I DO myself the honour to transmit the half-yearly report of the Government Factory at Dhurrungaum, ending 30 November 1856, forwarded by Mr. George Brenham, in charge of the factory.

V. 1837.

2. The work performed during the half year by the establishment employed in this factory has been stated in the column of "Remarks" of the report under review, and does not require any comments from me.

I have, &c.
(signed) *S. Mansfield*,
Collector.

Khandeish, Collector's Office, Dhoolia,
19 January 1857.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25th March 1857.—V. 1768 to 1771.

(No. 396 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division, dated 14th February 1857.

SUBMITTED* for the information of Government, with reference to para. 2 of their Resolution, No. 1495, dated 26th April 1856.

V. 1768.

2. As para. 6 of Mr. Daley's report was not intelligible in the form originally received, the Collector was requested to submit an amended copy; the para. is now corrected in *italics* accordingly.

3. Captain Scott having been present at the trial mentioned, the Revenue Commissioner thought it would be satisfactory that his opinion of the matter should be obtained, which he has kindly furnished, and a true copy is herewith transmitted.

4. It is probable, from the circumstance of Mr. Daley not being present at Surat to select a good gin, and to put it in proper working order at the trial in Bombay, that the experiment was not so fair as it might have been under other circumstances. According to the report now sent, it would seem that there is no occasion to make any alteration in those Mr. Daley has now at work. Mr. Daley suggests a new trial, at which the heads of each factory should be present to work their own gins. This would be desirable if it could be done without inconvenience; but the Superintendents would have to be brought from such considerable distances, that the proposal could hardly be carried out without inconvenience.

(signed) *E. G. Fawcett*,
Revenue Commissioner, Northern Division.

Tanna Districts,
Revenue Commissioner's Office, Camp Callian,
14 February 1857.

(No. 1023 of 1856.)

FORWARDED to the Revenue Commissioner, Northern Division, in reference to the Government Resolution, No. 1495, dated 26th April 1856, received under his endorsement, No. 1204 of the 3d May last.

V. 1769.

Ahmedabad, Collector's Office,
13 December 1856.

(signed) *J. W. Hadow*,
Collector.

(No. 52 of 1856.)

To *J. W. Hadow*, Esq., Collector of Ahmedabad.

Sir,

WITH reference to your endorsements, dated respectively 8th May and 1st December 1856, Nos. 402 and 977, with accompaniments in original, I have the honour to state, that

* Memorandum from the Collector of Ahmedabad, No. 1023, dated 13th December 1856, with enclosure.

that Dr. Forbes' gin was received on the 22d October last; but as I had no hogs' bristles to tip the brushes of the Guzerat gin with, I could not then have given it a fair trial; so soon, however, as the gins from Surat arrived, I took the bristles out of one of them, and applied them to the brush of one of the Guzerat gins. On Saturday last I got both the gins in working order. Yesterday I gave them a trial in the presence of Captain Scott, executive engineer, Ahmedabad, the acting mamlutdar, and other native officials, and the principal cotton merchants of this place. Captain Scott timed the working of the gins, and the cotton merchants weighed the seed and wool, to satisfy themselves as to the proportion of seed and wool each gin cleaned. The result is as follows:

DESCRIPTION of G I N. 1.	Number of Men working. 2.	Time occupied in Cleaning. 3.	Weight of Seed Cotton. 4.	Out-turn.		REMARKS. 7.
				Seed. 5.	Wool. 6.	
20-saw Dharwar gin, Dr. Forbes's con- struction.	5	Minutes. 29	Lbs. 37 $\frac{1}{2}$ *	Lbs. 24 $\frac{1}{2}$	Lbs. 12 $\frac{1}{2}$	- - Fibre very slightly in- jured by both gins; but if the frames of fly-wheels and gins had been embedded in masonry, the fibre would not have been injured in the least.
20-saw Guzerat gin -	5	19	37 $\frac{1}{2}$	24	13	- - The loss of one-third pounds in each maund must be attributed to the expulsion of dust and dirt from the cotton.

* A Guzerat maund is 40 seers, or 37 $\frac{1}{2}$ lbs.

2. Both the gins worked at a disadvantage, having had to clean damaged and vermin-eaten cotton, which had been lying in the store-room for more than two years, which clogged the saws of the gins much more frequently than new kuppas would have done, and consequently they took more time to complete their work. The Guzerat gin cleans one maund of new kuppas, on an average, in 15 minutes; so then, if four minutes be deducted from the time taken by each, the result will be, Dharwar gin 25 minutes, and Guzerat gin 15 minutes.

3. In the committee's report it is stated that the apprentice, who accompanied the gins from Dharwar, recognised both the Guzerat gins as having been constructed in the Dharwar factory, while under the superintendence of Mr. Frost. Seventeen gins that I received from Dharwar, constructed by Mr. Frost, were condemned by me on their arrival at Surat, and I was in consequence directed to pass an examination in mechanics, before Colonel Kilner, of the Engineers. The two gins, therefore, that were tried in Bombay against Dr. Forbes' gins were not Guzerat gins; and even they, by the Committee's report, had not a fair trial, as they were out of working order.

4. The mechanical objections to the gins constructed by Mr. Frost, noticed by the committee, are just, but not one of them is applicable to the Guzerat gin.

5. Dr. Forbes' 20-saw gin is very neatly finished; but there are a few objections to its introduction into Guzerat:

1st. One of the principles of mechanics is, that the less friction there is in a machine, the easier will it work. In Dr. Forbes' gin, the fans carrying the brushes are rotated by means of two friction rollers, which rollers prevent the rapid movement of the spindles of the saws and the fanner, by the greater friction given to the machine; whereas if drums were placed on the spindles of the saws and fanner, and the strap of the driving-wheel connected with the drum of the saws, and a small strap connecting the drum of the fanner with that of the saws, the machine would work much more easily and expeditiously.

2d. In Dr. Forbes' gin the metal bearings are of zinc, a very soft metal indeed, which would soon wear away under the friction of iron spindles; but if they had been made of brass, they would last for years without material injury. The dividing of the 20 saws into two distinct parts of 10 saws each, by the introduction of the strap of the fly-wheel into the middle of the gin, contracts the working power of the saws, and impedes the free feeding of the gin.

6. The frames of the Guzerat gin and fly-wheel, when in work, are embedded in masonry, which prevent any vibration whatever in them. The vibration commented upon by the committee on the trial of Dr. Forbes' gin in Bombay has also been noticed by me.

7. The cotton merchants at this place are perfectly satisfied with the working of the Guzerat gin, and they have offered me eight rupees to gin a candy of cotton. I have already

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1235

III.
Bombay.

already adjusted two gins, and in a week hence will have two more ready, which will, I believe, be sufficient to commence operations.

8. Mr. Carvalho, my assistant, who was brought up in the factory at Dharwar, acknowledges that the Guzerat gins are the best working gins that he has seen.

9. I would respectfully beg to suggest that, to obtain the best working gin, it would perhaps be advisable to allow the heads of each gin factory to assemble in Bombay, and let each work his own gin, which would enable a Committee appointed for the purpose to select the best; and if there be any improvements in the other gins, which would benefit the best gin, they ought to be engrafted to it, and all the other gins to be altered accordingly.

Dhundooka,
9 December 1856.

I have, &c.
(signed) Charles Daley,
Superintendent Cotton Experiments.

P. S.—The accompaniments are herewith returned.
(signed) C. D.

(No. 1343 of 1856-57.)

To J. W. Hadow, Esq., Collector of Ahmedabad.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 16, of the 5th instant, with accompaniments, and, with reference to your request, to observe, that while at Dhundooka a short time since, I was, at Mr. Daley's desire, present on the occasion of the trial of the cotton gins, and that I particularly observed the working of the machines, as I fancied I perceived a general tendency on the part of those interested in the experiment in favour of the Goozerat gin.

2. However, the experiments were fairly conducted. A similar number of persons were employed to work and feed each machine. The cotton, having been weighed, was placed at equal distances therefrom, and both gins were set in motion at the same time.

3. The result of their performances is correctly noted by Mr. Daley; but it appeared to me that in both instances the fibre of the cotton was considerably injured.

4. The old Goozerat gin appears to me to have the following advantages over the other:

1st. The effect produced by the saw is greater, owing to its not being divided, like that of the Dharwar gin; the feeding space is less confined, and the machine is consequently more freely supplied.

2d. The strap, being placed at the side, permits the man feeding the machine to stand before it, and so to be out of the way of others employed in bringing the cotton, &c.

3d. The machine altogether worked with much less labour to those employed in turning the fly-wheel.

Camp Bugodra, Executive Engineer's Office,
13 January 1857.

I have, &c.
(signed) C. Scott,
Captain, Executive Engineer.

RESOLUTION of Government.

A CORRECT plan of the Guzerat gin, and a specimen of the saw worked in it, should be procured from Mr. Daley, and sent to Mr. Forbes, with a copy of this correspondence, for his report.

V. 1770.

2. It is on record that the Dharwar gin does not answer for cleaning indigenous cotton; but Government is not aware whether the capabilities of the Guzerat gin for cleaning New Orleans cotton have been ascertained: it seems desirable to ascertain this point, and it might be worth while to forward some New Orleans cotton to Mr. Daley for this purpose.

Bombay Castle,
9 March 1857.

(signed) H. Young,
Offg. Chief Secy. to Govt.

HALF-YEARLY REPORT of the GOVERNMENT FACTORY at Dhurrungaum, ending 30th November 1856.

No.	NAMES.	Station.	Remarks on the past Season, as to how far anticipations regarding the Crop, and its disposal, were realised.	Quantity of Cuppas on hand on account of Government, of each Sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.				GINS.						
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.	In Use.		Out of Use.		Completed.		
												Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	
1	Dhoolia - - -	1																
2	Amulnair - - -	1																
3	Betawud - - -	1																
	Errundole - - -	1										2		1				
	Paldee - - -	1												3				
	Cassoda - - -	1												36	3			
	Dhurrungaum - -	1																
4	Bhurgaum - - -		The past has been a very favourable season for the cultivation of cotton and all kinds of grain, and the yield throughout the province is said to be very large.															
5	Challsgaum - - -																	
6	Malhgaum - - -																	
7	Bhagian - - -																	
8	Pimpalnair - - -																	
9	Nundoorbar - - -																	
10	Sooltanpoor - - -																	
11	Thalnair - - -																	
12	Chopra - - -	1													6			
	Arrawud - - -	1													3			
13	Yawul - - -	1													10			
14	Sowdah - - -															3		
15	Nusseerabad - - -															4		
	Jalgaum - - -	1													6			
16	Jamnair - - -	1														2		
	Parola - - -	1																
	TOTAL - - -	11										2	1	65	15			

No.	NAMES.	Gins sold for Government.		Amount Expended in Construction of Gins.	Other Items of Expenditure during the Month under report.						Total Amount.	Amount Expended up to the last Half Year.	Total Expenditure up to the Half Year under Report.				
		No.	For what Amount.		Purchase and Ginning of Cotton.	Cont - gencies.	Buildings.	Temporary Establishment.	Amount of Superintendence.	Amount of Establishment.							
														19.	20.	21.	22.
		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.					
1	Dhoolia - - -											1,770	3	4	1,770	3	4
2	Amulnair - - -											1,984	12	8	1,984	12	8
	Betawud - - -											2,299	2	11	2,299	2	11
3	Errundole - - -											849	6	11	849	6	11
	Paldee - - -																
	Cassoda - - -											442	14	2	442	14	2
	Dhurrungaum - -	1	105 1 8		43 9 9	203 9 9				708	955 3 6	1,30,226	10	10	1,31,181	14	4
4	Bhurgaum - - -																
5	Challsgaum - - -																
6	Malhgaum - - -																
7	Bhagian - - -																
8	Pimpalnair - - -																
9	Nundoorbar - - -											4,161	12		4,161	12	
10	Sooltanpoor - - -											212	15	3	212	15	3
11	Thalnair - - -											380	9	8	380	9	8
12	Chopra - - -											15,563	5	8	15,563	5	8
	Arrawud - - -											2,491	11	11	2,491	11	11
13	Yawul - - -											4,843	7		4,843	7	
14	Sowdah - - -											35	8		35	8	
15	Nusseerabad - - -											1,018	2	11	1,018	2	11
	Jalgaum - - -											23,160	13	9	23,160	13	9
16	Jamnair - - -											2,280	15	7	2,280	15	7
	Parola - - -																
	TOTAL - - -	1	105 1 8		43 9 9	203 9 9				708	955 3 6	1,91,222	8	7	1,92,177	12	1

REMARKS.

During the months under report 13 Government gins have been thoroughly repaired, and two gins belonging to Sham Row Ramchunder slightly repaired; at Dhoolia also five gins have been set up, three at the village of Paldee, hired by Sewall Kissundass, and two at Dhurrungaum, one of which is purchased and the other hired by Bhicarree Tatoo Sett, of Dhurrungaum. Applications for the hire of 24 gins have been received during the half year under report, three of which have been hired by the firm of Messrs. Ritchie Stewart, & Co., and 21 by the native cotton dealers; but, owing to the labourers being employed in cutting grass, and the Badjee and Jowaree crops, three were only set to work.

Government Factory, Dhurrungaum,
1 December 1856

(signed) G. Brenham,
Overseer in Charge Government Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1237

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 30 May 1857—V. 4318 to 4321.

(No. 1221 of 1857.)

From the Revenue Commissioner, Southern Division, to Mr. Chief Secretary *Young*.

Sir,

I HAVE the honour to forward the accompanying letter, No. 427, dated 25th ultimo, from the Collector of Dharwar, with enclosures, being the Progress Report of the Superintendent Cotton Gin Factory, for the half year ending 30th November 1856.

V. 4318.

2. The details exhibited in this report of the work of the half year are satisfactory, and creditable to the superintendence of Dr. Forbes. The demand for the gins stated to exist shows that the machine is appreciated, and will be resorted to as freely as the means of the ryots and cotton dealers admit of. The quantity of indigenous cotton set down as having been, or to be, cleaned by the saw-gin, viz. 15,071 candies 170½ lbs., is more than double that of the New Orleans variety, which has been, or will be, so cleaned of the crop of the same period, and this will no doubt be deemed satisfactory by his Lordship in Council.

Col. 6, Statement 7.

3. With respect to the proposal in Dr. Forbes' 7th, and noticed in Mr Ogilvy's 4th para., for granting rewards to the deserving portion of the establishment from the surplus profits, I have to observe, that Government have already, as is to be gathered from Statement No. 8, accompanying, a balance of Rs. 4,28,824. 1. 7. against the experiment, and it does not appear desirable, now that Government is just realising a small profit, that that profit should be absorbed in rewards. Nevertheless, if Dr. Forbes can report any individuals as specially deserving of notice owing to their exertions, Government might permit him to name them, as well as the reward he would confer on them, as proposed by Mr. Ogilvy.

4. The season, as described in column 2 of Statement No. 7, was favourable both to the New Orleans, as well as indigenous cotton crops.

I have, &c.
(signed) *H. W. Reeves*,
Revenue Commissioner, Southern Division.

Revenue Commissioner's Camp, "Nehr,"
21 April 1857.

(No. 427 of 1857.)

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to transmit, for the information of Government, copy of a letter, and accompaniments, received from the Superintendent of the Cotton Gin Factory at Dharwar, No. 9, dated the 14th instant, detailing the operations of the establishment under him during the half-year ending the 30th November last.

V. 4319.

2. The subjoined abstract gives a comparative view of the working of the factory during the past year:

	Half Year ending 31 May 1856.			Half Year ending 30 Nov. 1856.			Increase.			Decrease.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Value of work done - - -	4,498	1	2	5,793	-	10	1,294	16	8	-	-	-
Cost of materials, labour, &c. -	3,885	9	3	4,944	4	5	1,058	11	2	-	-	-
Realizations from sale and repair of saw-gins - - - -	3,939	14	3	6,130	7	1	2,190	8	10	-	-	-
Realizations from other sources -	416	10	10	432	-	-	15	5	2	-	-	-

296—Sess. 2.

7 Z 4

3. The

3. The profit or difference between the cost of materials, labour, &c., and the value of the work done, amounts to Rs. 848. 12. 5., or to about Rs. 141. 7. 4. per mensem, or to more than the amount of profit previously estimated by Dr. Forbes.

4. The superintendent proposes that a portion of the profits of the factory should be distributed as rewards among the most deserving of the establishment. Perhaps the better way would be for Dr. Forbes, in reporting on the operations of the factory and its profits, to furnish, for sanction, a statement, showing the individuals he recommends for reward, their salaries, his reason for his recommendation, the sums proposed to be given, and the profit that would still remain.

5. The increase in the amount and value of the work and of the realizations is very considerable, and will, I doubt not, prove satisfactory to Government.

6. The great demand for the gins now made in the factory affords evidence that the ryots and dealers fully appreciate the improvements effected by Dr. Forbes in their mode of construction.

7. By visiting the Canara Forests himself, and making his own arrangements for the transport of the timber, Dr. Forbes has been able to stock the factory for three years, at a saving which he estimates at 2,520 rupees.

I have, &c.
(signed) T. Ogilvy,
Collector.

Dharwar, Collector's Office, Camp Kallus,
25 March 1857.

(No. 9 of 1857.)

To T. Ogilvy, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to forward the Cotton Planter's Report for the half year ending 30th November 1856, and along with it a detailed statement exhibiting the cost and returns, including receipts and disbursements of the Cotton Gin Factory during the six months preceding that date.

2. The number of gins completed has been as follows: three gins of 20 saws each, value 525 rupees; 44 gins of 10 saws each, their united value amounting to 4,810 rupees; value of three gins of 18 saws each, formerly on hand, 495 rupees; and value of repairs done to old gins Rs. 174. 5. 1.

3. The total value of work executed is Rs. 5,793. 0. 10. The cost of artisans' labour has been Rs. 2,725. 15. 5.; the price of materials Rs. 2,218. 5., both together amounting to Rs. 4,944. 4. 5., which leave a profit to Government of Rs. 848. 12. 5., the six months' operations.

4. Twenty-two new gins have been sold during the above period, viz., four of 20 saws each, two of 18 saws each, and 16 of 10 saws each. The total value of the sales amounts to 2,770 rupees, and is rather more than double that of the corresponding term of the previous season.

5. Up to the present period, 10 of the old "framed gins" have been withdrawn, agreeably to Government Resolution, No. 1834, of 26th May 1856. This forms the first instalment, and in every instance the owner replaced it with a new gin of 10 or 20 saws. The sum remitted for these 10 gins amounts to 180 rupees, which is more than covered by the profit at 25 per cent. added to the selling price of the new ones, so that no actual outlay has resulted from this transaction.

6. The operations of the factory during the period under report have fully realised my anticipations, and I trust they will be deemed satisfactory. The amount of work completed affords a return of profit in excess of 25 per cent. the sum laid on the cost of labour, for the purpose of covering Government outlay in buildings, providing tools, &c. The pay of the contingent and permanent establishments of workmen is usually about 465 rupees, more or less, on which 25 per cent. would give about 116 rupees, which was calculated as the probable monthly return of profit. On the present occasion the sum averages 141 rupees per month, and this has been realised through superior industry on the part of the establishment, with whom I have had every reason to be well satisfied.

7. To encourage good conduct, I would recommend hereafter that any similar excess (or, at any rate, a portion of it), at the end of each month, should be distributed as a reward amongst the most deserving workmen, who can easily be discriminated from the others, as the duties are carried on systematically, and each department of the smith and carpenter work is conducted separately under the guidance of the most experienced hand. The best exertions

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1239

III.
Bombay.

exertions of the establishment are necessary to meet the calls upon it, and more workmen would be employed if they were procurable. Already within the current half-year orders for new gins have been registered to the value of upwards of 550 rupees, a demand hitherto quite unprecedented.

8. I have already explained in detail the theory on which the new gins were constructed, and in the preceding half-yearly report, para. 5, I mentioned that I had taken advantage of the opportunities at my disposal for practically testing their qualifications; I have since then had the 10-saw gin constantly at work under my own eye. I have now cleaned candies of cotton with it, and in no respect have I found cause to alter the opinion formerly expressed with regard to its fitness for these districts.

9. Both from price and the amount of work it performs, it is equally adapted to the ryot and the dealer. I found occasion to introduce several minor alterations; these have not however in any way affected the original plan of construction, but they have had the advantage of rendering the machine entirely self-adjusting, so that nothing short of unnecessary interference can lead to its derangement, and this, where natives are concerned, is a matter of considerable importance.

10. With regard to timber, it is satisfactory to be able to state that a stock of the description most wanted has been secured at an exceedingly moderate rate, and that will meet the wants of the establishment for at least three years to come.

11. In my letter to your address, No. 108, of 11th November last, I explained that owing to the large dimensions of the logs, the wood-carriers and contractors declined their services on reasonable terms. A tender was made through the peshkar at Hullihal, where most of those people reside, and the lowest offer received (which is now in my possession), was 15 rupees per log for carriage alone, exclusive of cutting and clearing, &c., which was calculated at three rupees more. Rather than accede to a demand so exorbitant, I determined on organising a transport establishment, by means of which I have succeeded in storing the wood at a cost of rather less than five rupees per log, or about three annas per cubic foot, the present bazar price being nine annas. A heavy fall of rain late in the season interrupted the work, so that a small remnant still remains to be brought in before the account can be closed: but the saving effected on this transaction for the benefit of the factory will not be less than 2,520 rupees.

12. With regard to my letter, No. 75, of 1856, I am happy to be able to inform you that the two junior Anglo-Indian lads whose services were of no use to the factory, have now been provided for elsewhere, having found employment in the Electric Telegraph Department. Mr. Charles Courpalais, the senior of the four, is the only one now remaining, and, as I formerly mentioned, he is usefully and advantageously employed.

I have, &c.
(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

Dharwar Cotton Gin Factory,
14 February 1857.

STATEMENT, No. 7.

COTTON PLANTERS' REPORT from 1st June to 30th November 1856, in the Dharwar Collectorate.

TALOOKAS.	Remarks on the Past Season as to how far anticipations regarding the crop and its disposal were realised.	Supposed Proportion of the Last Year's Crop which has been Cleaned in the Saw Gins or will be so Cleaned.						
		New Orleans.		Broach.	TOTAL Foreign.		Country Cotton.	
		Candy of 784 lbs. each.		Candy of 784 lbs. each.	Candy of 784 lbs. each.		Candy of 784 lbs. each.	
1.	2.	3.		4.	5.		6.	
—	The season was rather favourable, for both the New Orleans and native cotton; the average yield was about 7-8ths.	Acres 82,351, 34 chains.	6,302 candies, 343 lbs. of cleaned cotton.	None	Acres 82,321, 34 chains.	6,302 candies, 343 lbs. of cleaned cotton.	Acres 1,96,930 23 chains.	15,071 candies, 170 ½ lbs. of cleaned cotton.

STATEMENT No. 7.—Cotton Planters' Report from 1 June to 30 Nov. 1856, in the Dharwar Collectorate—continued

G I N S.							
TALOOKAS.	For Sale.	In Use.		Out of Use.		Completed in the present Half Year.	
	Belonging to Government in the Factory.	Belonging to Private Individuals.		Belonging to Private Individuals.		Belonging to Government	
	Number and Size of Gins.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	
	7.	8.	9.	10.	11.	12.	
						13.	
	3 gins of 20 saws each.	6 gins of 40 saws each.	Unable to state, as the gins are constantly moved about from one talooka to another, and often into the adjacent Madras districts, and Inam villages, according to the requirements of the owners.	None that I am aware of.		3 gins of 20 saws	Rs. 52
	1 " 18 "	1 " 25 "				44 " 10 "	4,81
	28 " 10 "	1 " 24 "				3 " 18 "	49
	16 " 8 "	12 " 20 "					
	2 " 4 "	75 " 18 "					
	2 roller churkas.	9 " 14 "					
	1 Egyptian ditto.	3 " 13 "					
	1 cotton thrasher.	50 " 10 "					
		61 " 8 "					
		148 " 7 "					
	54	366			50	5,85	

G I N S.							Profit or Loss to Government, deducting the Cost of European Superintendence.	TOTAL Net Expenses on Account of Experiment from the Commencement to the Close of the Half Year preceding that under Report.	TOTAL Expenses for the Half Year under Report.	Prof of Cor Set		
TALOOKAS.	Being Made.		Sold for Government during the Half Year under Report.		At what Cost.	19.					20.	21.
	For Government.	For Private Individuals.	Number and Size of Gins.	At what Cost.								
	14.	No. Sold.	Size of Gins.	17.	18.							
	39 of 18 saws.	- None -	4 of 20 saws.	Rs. a. p.	700 - -	Net profit during the 6 months under report is Rs. 848. 12. 5., as shown in the accompanying abstract statement of cost and returns.	Rs. a. p.	7,000 2 3				
	6 of 10 "		16 of 10 "	1,740 - -	6 11 6		6,562 7 1					
	8 of 8 "		2 of 18 "	330 - -			437 11 2					
	1 cotton cleaning machine.		22	2,770 - -								
	26 roller churkas.		Deduct remission for withdrawing two old gins -	35 - -								
			Add value of complete repairs -	174 5 1								
				2,735 - -								
				Rs. 2,909 5 1								
	80											

Dharwar Cotton Gin Factory, }
1 December 1856.

(signed) G. F. Forbes,
Superintendent Cotton Gin Fa

ACCOUNT of RECEIPTS and EXPENDITURE of the COTTON Experiments, Dharwar Collectorate, from the Commencement up to 30th November 1856.

Amount of Receipts from the commencement up to the half-year preceding that under report				Rs.	a.	p.	Amount of expenses from the commencement up to the half-year preceding that under report				Rs.	a.	p.					
				1,56,615	-	6					5,86,001	6	11					
For the half-year under report. from 1st June to 30th November 1856—								For the half-year under report, from 1st June to 30th November 1856 :										
By proceeds of the sale of Saw-gins, viz. :		Rs.	a.	p.	Rs.	a.	p.	To allowance to Dr. G. F. Forbes, as Superintendent of cotton-gin factory, from 1st May to 31st October 1856, at 200 rupees per month		Rs.	a.	p.	Rs.	a.	p.			
June	1856	-	-	-	335	-	-	- Salary of the fixed establishment of the cotton-gin factory, from 1st May to 31st October 1856		1,200	-	-						
July	"	-	-	-	570	-	-	- Ditto of the cotton press department at Hooblee, from ditto to ditto		97	15	11						
August	"	-	-	-	505	-	-			2,220	9	9			3,420	9	9	
September	"	-	-	-	*1,005	-	-											
October	"	-	-	-	91	3	-											
November	"	-	-	-	2,626	13	-											
					5,133		-	-										
By ditto of the repair of Saw-gins, viz. :								To Batta to the establishment, passed audit for the months from February to September 1856										
June	1856	-	-	-	131	2	9											
July	"	-	-	-	29	11	6											
August	"	-	-	-	432	4	7											
September	"	-	-	-	152	9	9											
October	"	-	-	-	97	2	4											
November	"	-	-	-	164	8	2											
					1,007		7	1										
By Value of two iron half-bale cotton screw presses								To contingent charges ditto, ditto for the following months, viz. :—										
					422		-	-	February	1856	-	-	-	190	6	10		
					6,562		7	1	March	"	-	-	-	321	-	2		
					1,63,177		7	7	April	"	-	-	-	259	12	6		
					4,28,324		1	7	May	"	-	-	-	269	6	10		
					5,92,001		9	2	June	"	-	-	-	1,771	10	1		
					Rs.				July	"	-	-	-	359	6	2		
By balance against the experiment								August				"	-	-	-	253	2	11
					Rs.													
					7,000		2	3										
					Rs.													
					5,92,001		9	2										

S A 2

* This item includes advance for a gin disposed of: vide explanation under the head of Remarks, in Statement, No. 10.

Dharwar Cotton Gin Factory,
1 December 1856.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

STATEMENT, No. 9

Cr.

ABSTRACT STATEMENT, showing the COST and RETURN of the COTTON GIN FACTORY, Dharwar, from 1st June to 30th November 1856.

Dr.

	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.
By - value of the difference of work in completing five gins of 10 saws, of 105 rupees each - - - - -	258 - -				
- Value of one gin of 10 saws commenced and completed - - -	105 - -				
- Value of 38 gins of 10 saws commenced and completed, at 110 rupees each - - - - -	4,180. - -				
- Value of three gins of 20 saws commenced and completed, at 175 rupees each - - - - -	525 - -				
- Value of work done towards completing six gins of 10 saws - - -	215 - -				
		5,283 - -			
- Value of work done in three gins of 18 saws altered - - - -	249 - -				
- Value of repairs executed - - - - -	187 9 1				
- Value of additional work on five gins of 10 saws altered - - -	7 12 -				
- Value cost of experiment on gins - - - - -	28 - -				
- Value of repairing a turning lathe received from Sattara - - -	10 - -				
- Value of repairing three bench vices received from Sattara - - -	7 1 -				
- Value of a cash chest - - - - -	8 7 -				
- Value of a pair of scales being made - - - - -	10 6 6				
- Value of making nine chisels (carpenter) - - - - -	1 13 3				
		510 - 10			
	Rs.	5,793 - 10			
			COST OF ESTABLISHMENT:		
			To Salary of the fixed establishment, exclusive of that of the European Superintendent and of the apprentices - - - - -	1,449 4 6	
			- Batta to the fixed establishment, exclusive of ditto ditto - - -	28 15 -	
			- Contingent establishment - - - - -	1,247 11 11	2,726 15 6
			COST OF MATERIALS:		
			To 540 circular saws of 10 inches, at Rs. 1. 2. 4. each - - - -	618 12 -	
			- 3 ditto ditto, unserviceable, weighing 2 lbs 7 oz. at 4 a. per lb.	- 9 9	
			- 14½ lbs. of bristles, at 2 rupees per lb. - - - - -	29 14 -	
			- 4½ lbs. of brass wire, at 1½ to 1¼ rupees per lb. - - - -	7 3 6	
			- Teak wood - - - - -	154 12 6	
			- Babool wood - - - - -	9 10 -	
			- 33 logs of houny wood, at 4 rupees each - - - - -	132 - -	
			- 101 maunds 2¼ lbs. of rod iron of sizes, at various rates - - -	202 1 7	
			- 36 ditto 17½ lbs. of square iron of sizes, at various rates - -	73 - 9	
			- 18 ditto 23½ lbs. of flat iron of sizes, at various rates - - -	38 - 5	
			- 22 ditto 21½ lbs. of sheet iron of sizes, at various rates - -	76 7 5	
			- 858 ditto kollas of country iron, weighing 67 mds. 6 lbs., at various rates - - - - -	156 1 6	
			- 35 ditto 8½ lbs. of zinc, at various rates - - - - -	171 10 2	
			- 170 iron hinges of sizes, at various rates - - - - -	74 6 -	
			- 26 lbs. 5 oz. of steel, at various rates - - - - -	5 7 -	
			- 82 gross 5½ dozens of iron screws of sizes, at various rates - -	101 12 6	
			- 37 buffalo hides, weighing 20 maunds 14½ lbs., at various rates -	75 11 4	
			- 312½ purras of charcoal, at various rates - - - - -	71 4 9	
			- 1½ bullock hide, weighing 3½ lbs. - - - - -	- 7 2	
					1,999 4 4
			COST OF SUNDRY ARTICLES:		
			For June 1856 - - - - -	19 9 10	
			For July - - - - -	17 10 2	
			For August - - - - -	11 3 -	
			For September - - - - -	5 4 8	
			For October - - - - -	6 9 -	
			For November - - - - -	17 12 -	
			To value of smiths' work which was in advance, consumed - - - -	- - - -	78 - 8
			- Profit to Government for the half year - - - - -	- - - -	141 - -
					848 12 5
				Rs.	5,793 - 10

Dharwar Cotton Gin Factory, }

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

1242 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

STATEMENT, No. 10.

DETAILED MEMORANDUM of SUMS collected during each of the Six Months embraced in the Cotton Planter's Report for the Half Year commencing 1st June to 30th November 1856, for Gins Sold during that Period; also for Repairs to Gins and Gins Sold during the previous Half Year.

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8 A 3

MONTHS.	Sums Collected during the present Half Year for Gins Sold prior to 1st June 1856.			Sums Collected for Gins sold during the Half Year under Report.			Sums Collected during the present Half Year for Repairs made prior to 1st June 1856.			Sums Collected for Gins repaired during Half Year under Report.			TOTAL.		REMARKS.								
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.					
June 1856	-	-	-	335	-	-	181	2	9	-	-	-	466	2	9	Sum actually collected by sale and repair of saw gins in the six months under report -		6,130	7	1			
July "	-	-	-	570	-	-	25	9	6	4	2	-	599	11	6	Advance for a gin not disposed of, received during the half year -		10	-	-			
August "	-	-	-	505	-	-	425	10	9	6	9	10	937	4	7	Value of two half-bale iron screw presses sold -		422	-	-			
September "	-	-	-	995	-	-	49	12	11	102	12	10	1,147	9	9								
October "	-	-	-	81	3	-	10	-	-	52	5	4	44	13	-	188	5	4					
November "	-	-	-	2,416	13	-	210	-	-	148	8	9	15	15	5	2,791	5	2	Rs.		6,562	-	-
TOTAL - - -	Rs.*			2,498	-	-	2,625	-	-	833	2	-	174	5	1	6,130	7	1					

* The balance due on account of the sale of gins up to the 31st May 1856, was 2,643 rupees, out of which 145 rupees having been remitted to the ryots, on account of eight old gins withdrawn during the last half year, under the Government Resolution No. 1834, dated 26th May 1856, the remainder (2,498 rupees) has been collected during the half year under report. The item of 145 rupees above referred to was shown in the last half-yearly Report as debt due by the purchasers on account of the value of gins purchased by them.

Dharwar Cotton Gin Factory, }
1 December 1856.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1243

III.
Bombay.

STATEMENT, No. 11.

DETAILED MEMORANDUM of the Number, Size, and Value of GINS MADE during the Half Year ending 30th November 1856; the Number Sold, and the Balance of Cotton Machines in Store.

MACHINES.											
	Gins of 20 Saws.			Gins of 10 Saws.				Gins of 18 Saws.			
	Number.	Value.	Value Recovered.	Remitted for Old Gins.	Number.	Value.	Value Recovered.	Remitted for Old Gins.	Number.	Value.	Value Recovered.
		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
Number which were on hand at the close of the last half-year	5	845 --	-- --	-- --	1	105 --	-- --	-- --	1	-- --	-- --
Ditto made during the present half-year	3	525 --	-- --	-- --	44	4,810 --	-- --	-- --	3	495 --	-- --
TOTAL	8	1,370 --	-- --	-- --	45	4,915 --	-- --	-- --	3	495 --	-- --
Deduct: Number sold in the present half-year	4	700 --	620 --	20 --	16	1,740 --	1,675 --	15 --	2	330 --	330 --
Ditto sent for inspection to Bombay, as per telegraphic message 18th February 1855, from the Officiating Chief Secretary to Government	1	165 --	-- --	-- --	1	105 --	-- --	-- --	--	-- --	-- --
Balance of Machines in hand except those being made	3	505 --	-- --	-- --	28	3,070 --	-- --	-- --	1	165 --	-- --

MACHINES.												
	Gins of 8 Saws of 75 Rupees each.		Gins of 8 Saws of 70 Rupees each.		Gins of 4 Saws.		Cotton Thrasher.		Egyptian Churkas.		Roller Gin.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>
Number which were on hand at the close of the last half-year	7	-- --	9	-- --	2	90 --	1	100 --	1	7 2 8	2	40 --
Ditto made during the present half-year	--	-- --	--	-- --	--	-- --	--	-- --	--	-- --	--	-- --
TOTAL	7	-- --	9	-- --	2	90 --	1	100 --	1	7 2 8	2	40 --
Deduct: Number sold in the present half-year	--	-- --	--	-- --	--	-- --	--	-- --	--	-- --	--	-- --
Ditto sent for inspection to Bombay, as per telegraphic message 18th February 1855, from the Officiating Chief Secretary to Government	--	-- --	--	-- --	--	-- --	--	-- --	--	-- --	--	-- --
Balance of Machines in hand except those being made	7	-- --	9	-- --	2	90 --	1	100 --	1	7 2 8	2	40 --

Dharwar Cotton Gin Factory,
13 December 1856.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

STATEMENT, No. 12.

STATEMENT of GINS SOLD during the Half-Year ending 30th November 1856.

	GINS of 20 SAWS.						GINS of 18 SAWS.		GINS of 10 SAWS.				TOTAL.		REMARKS.
	Of 185 Rupees each.		Of 175 Rupees each.		Of 165 Rupees each.		Of 165 Rupees each.		Of 105 Rupees each.		Of 110 Rupees each.		Number.	Amount.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.			
June - 1856 -		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>		<i>Rs. a. p.</i>	1	105 - -		<i>Rs. a. p.</i>	1	105 - -	Value of 23 gins sold during the half-year. Deduct remission for withdrawing framed old gins, <i>vide</i> Government Resolution, No. 1834 of 26 May 1856: <i>Rs. a. p.</i> 1 gin of 7 saws - 15 - - 1 gin of 8 saws * 20 - - 35 - - Net Value of the Gins Sold - <i>Rs.</i> 2,735 - -
July - " -	1	185 - -	1	175 - -	1	165 - -			3	315 - -			6	840 - -	
August - " -			1	175 - -							2	220 - -	4	560 - -	
September - " -							1	165 - -			6	660 - -	9	1,045 - -	
October - " -															
November - " -											2	220 - -	2	200 - -	
TOTAL - - <i>Rs.</i>	1	185 - -	2	350 - -	1	165 - -	2	330 - -	4	420 - -	12	1,320 - -	22	2,770 - -	

Dharwar Cotton Gin Factory
1 December 1856.(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1245

III.
Bombay.
V. 4320.

RESOLUTION of Government.

GOVERNMENT concur in the opinion expressed by the Revenue Commissioner, Southern Division, that "the details exhibited in this report of the work of the half year ending 30th November 1856, are satisfactory and creditable to the superintendence and management of Dr. Forbes."

2. Government will be in a better position than now, to decide on the grant of rewards, on account of special merit or exertions, when the detailed information suggested by the Collector of Dharwar is before them.

(signed) J. D. Inverarity,
Acting Chief Secretary to Government.

Bombay Castle, 26 May 1857.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue dated 16 May 1857.—V. 3853 to 62.

(No. 2705 of 1856.)

V. 3853. MEMORANDUM from the Revenue Commissioner, Southern Division, dated 1 Sept. 1856.

SUBMITTED * to Government, with reference to paras. 3 to 5 of their Resolution, No. 2826 of 28th July last.

2. On the subject of entertaining a number of young lads, under regular indenture, for the purpose of training them up as skilled artisans, the Revenue Commissioner would merely refer to para. 9 of his report, No. 1943, of 2d idem, as containing his opinion.

3. In consideration of the high character and qualifications of the senior gin apprentice, referred to in Mr. Ogilvy's and Dr. Forbes' 5th paras., the Revenue Commissioner would second the recommendation of those officers for an increase to his salary, on the terms specified by Mr. Ogilvy, employing him in the Dharwar factory, as proposed in Dr. Forbes' communication, No. 71, of 10th July 1855, as an overseer or foreman.

4. Respecting the disposal of the two junior apprentices, the Revenue Commissioner suggests that, if employment cannot be obtained for them in the establishments at the Presidency named by Dr. Forbes, and referred to in the 10th para. of the Revenue Commissioner's letter, No. 1943, above quoted, it would be advisable at once to discharge them, as proposed by Mr. Ogilvy.

(signed) H. W. Reeves,
Revenue Commissioner, Southern Division.

Revenue Commissioner's Office, Poona,
1 September 1856.

(No. 1392 of 1856.)

V. 3854. From T. Ogilvy, Esq., Collector of Dharwar, to H. W. Reeves, Esq., Revenue Commissioner, Southern Division.

Sir,

WITH reference to your endorsement, No. 2343, dated the 30th ultimo, on the subject of employing low-paid apprentices in the cotton gin factory at Dharwar, I have the honour to transmit, for the information of Government, the copy of a further communication from Dr. Forbes, dated the 11th August, No. 75.

2. The two apprentices referred to in the 4th para. of the Resolution of Government, No. 2826, dated the 28th ultimo, were attached to the cotton gin factory at Dharwar for a term of three years, that expired about 16 months since, for the purpose of fitting them for employment under the several Superintendents of cotton experiments in the Presidency.

3. They are still paid 40 (forty) rupees per mensem, and as they are not required in the factory, and have learnt all that they can acquire there, they are a dead weight on the establishment. Unless employment can be provided for them elsewhere, as suggested in previous correspondence, it would appear to be advisable to discharge them.

4. The object of entertaining a number of young lads, as apprentices, is to render the factory useful to the country for training up skilled artisans, who are becoming more and more in demand.

5. I trust that Dr. Forbes' recommendation that Mr. Courpalais, the only remaining apprentice for disposal, should, in consideration of the high character he bears, and his usefulness to the establishment, be entertained for a further term of two years, from the 4th April last, on 60 (sixty) rupees per mensem for the first year, and 80 (eighty) rupees for the second.

6. Independent

* Letter from the Collector of Dharwar, No. 1392, dated 20th August 1856, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1247

III.
Bombay.

6. Independent of the necessity of keeping up the factory in an efficient manner, for the supply and repair of serviceable gins, for cleaning the increasing crops of New Orleans cotton, and the desirableness of rendering it available as a training establishment for superior workmen, it appears to me that it may be made extremely useful to the educational department, as a lecture-room for the instruction of students in mechanics.

Dharwar Collector's Office,
20 August 1856.

I have, &c.
(signed) T. Ogilvy,
Collector.

(No. 75 of 1856.)

To T. Ogilvy, Esq., Collector of Dharwar.

Sir,

In explanation of the accompanying reference from Government, No. 2826 of 1856, I beg to state that the object I had in view in proposing the entertainment of 25 boys for instruction in carpentering and smith work, was to take advantage of the opportunities afforded by the gin factory for raising and improving the standard of native workmen throughout these districts. The boys employed would, as far as possible, be selected from the families of village carpenters and blacksmiths, such as are, in all probability, destined to follow the handicrafts of their fathers, and to succeed them hereafter.

2. Private enterprize, the introduction of gins, carts, house-building, and other improvements attendant upon the construction of roads, &c., have opened up sources of ample employment, and the want of a better style of native workmen is an evil that is becoming seriously felt. It is scarcely possible to imagine anything inferior to the present class; many of them do not know the use of a screw-nail, or a bolt, and, as may be imagined, invariably injure and often ruin a cotton gin when called upon to repair it.

3. The introduction of an improved class of workmen would, I believe, be a step in the right direction for the benefit of the country, and as it can, I trust, be effected without any pecuniary sacrifice to Government, I respectfully hope that the scheme may be favourably entertained.

4. With regard to the two cotton gin apprentices alluded to in the foregoing reference, I beg to state that they are of a class entirely different from the above-mentioned boys, and that they never anticipated having to earn their livelihood by carpentering. The annexed extracts from letters of the Revenue Commissioner, and Government resolution in reply, will best explain the terms on which they were originally engaged. It is now upwards of 16 months since they have completed the periods of their indenture, and they have long since been taught all that can be shown them here, so that at present they are neither benefiting themselves, nor are their services of the least use to this establishment, to which their pay adds a heavy item of expense. In the event, therefore, of the intention being to continue their employment until openings occur for them elsewhere, it would evidently be to their advantage (if not to that of Government also) that they should be afforded an opportunity of improving their acquaintance with machinery and mechanics.

5. Of the four apprentices entertained, one only has been disposed of, the senior and two juniors still remain. The former, owing to being absent on duty, was deprived of promotion, for which he would have otherwise been recommended. At the time the opportunity occurred, he was absent at Bombay, conducting the recent trial of cotton gins, and his next senior succeeded to the vacancy. I would now beg, respectfully, to recommend his promotion for employment here, on the terms mentioned in my letter, No. 71 of 10th July 1855, and that the same should date from the period of his supercession, viz., 4th April 1856. I may add that he bears an excellent character, and has invariably been most zealous and attentive to his duties.

Dharwar Cotton Gin Factory,
11 August 1856.

I have, &c.
(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

EXTRACT of a Letter from the Revenue Commissioner, Northern Division, to Government,
No. 980 of 12th April 1851.

Para. 14. "The system which I would venture to propose to meet the future exigencies of the experiment, is to employ three apprentices, either Europeans, or intelligent and educated Anglo-Indians. I would allow them 50 rupees per month, until they have passed an examination to the satisfaction of the Collector, relative to all matters applying to cotton cultivation, and of an engineer, as to their competency to construct a saw-gin."

EXTRACT of a Government Letter, No. 6600 of 20th June 1851, to the Revenue
Commissioner, Northern Division.

Para. 7. "Four apprentices on the pay proposed by you should be attached to Mr. Frost; and when he considers they have obtained sufficient practical knowledge for the purpose, they
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III.
Bombay.

they should be sent under the several superintendents to assist in the repairing of the gins or obtaining a knowledge of the mode of cleaning and other matters connected with the preparation of cotton for the market."

(True extracts.)

(signed) *G. F. Forbes,*
Superintendent Cotton Gin Factory.

MEMORANDUM to the Secretary to Government in the General Department, dated
2d October 1856.

V. 3855. THE Officiating Chief-Secretary, in forwarding to the Secretary in the General Department the accompanying correspondence,* on the subject of finding employment under Government for two youths who have completed their apprenticeship in the Dharwar Cotton Gin Factory, requests Mr. Hart will inform him whether he can suggest any means for affording such employment.

2. The Officiating Chief Secretary will also be obliged by Mr. Hart's favouring him with his opinion on the proposal now made to apprentice 25 native boys with the view of supplying the districts with more skilful artisans. If such a measure is deemed advisable, it should perhaps rather be looked on as an educational measure, than as one to be charged against the gin factory.

2 October 1856.

(signed) *H. Young,*
Officiating Chief Secy. to Govt.

(No. 719 of 1857.)

V. 3856. MEMORANDUM from the Revenue Commissioner, Southern Division, dated 7th March 1857.

FORWARDED for the information of Government, with reference to the memorandum from this office, No. 3020, of 1st October last.

Poonah Districts, Camp Pargaum,
7 March 1857.

(signed) *H. W. Reeves,*
Revenue Commissioner, Southern Division.

(No. 270 of 1857.)

V. 3857. THE foregoing copy is forwarded to the Revenue Commissioner, Southern Division, with reference to the correspondence specified in the margin.†

Dharwar Collector's Office, Camp Guddug,
21 February 1857.

(signed) *T. Ogilvy,* Collector.

(No. 10 of 1857.)

To *T. Ogilvy,* Esq., Collector of Dharwar.

Sir,

I HAVE the honour to report, that Mr. G. G. Courpalais, one of the two junior Anglo-Indian apprentices, regarding whom a reference was made to Government in my letter, No. 75 of 11th August 1856, has resigned his situation on the 2d instant, having procured employment elsewhere.

Dharwar Cotton Gin Factory,
14 February 1857.

I have, &c.
(signed) *G. F. Forbes,*
Superintendent Cotton Gin Factory.

* Memorandum from the Revenue Commissioner, S. D., No. 2705, dated 1st September 1856, with accompaniments. (Rev. Commis., 889, 1856, with an abstract of former and present papers). Also Vol. 81, 1851.

† 1. Collector's letter, No. 368, dated 24th March last, and accompaniment. 2. Revenue Commissioner's endorsement, No. 2343, dated 30th July following, and accompaniments. 3. Collector's letter, No. 1392 of 20th August 1856.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1249

III.
Bombay.

MEMORANDUM to the Secretary to Government in the General Department.

FORWARDED to the General Department, with reference to a memorandum from this department, dated 2d October 1856.

V. 3858.

18 March 1857.

(signed) *H. Young*,
Officiating Chief Secy. to Govt.

MEMORANDUM from the Secretary to Government in the General Department.

FORWARDED to the Revenue Department, with reference to the memorandum from that department, dated the 2d October 1856, which is herewith returned, together with the papers which accompanied it, and those which were subsequently forwarded by an endorsement, dated the 18th March 1857.

V. 3859

3 April 1857.

(signed) *W. Hart*,
Secretary to Government.

(No. 519 of 1857.)

I HAVE inquired of the heads of departments and other officers most likely to be able to afford information of the kind required, and I find that there is no demand in the Presidency for the services of the youths referred to.

2. With respect to the proposal to apprentice 25 lads for instruction in carpentry and smith's work, which has the merit of not being expensive, I think Dr. Forbes might be invited to frame a scheme in detail for consideration by Government.

Bombay, Office of the Director of Public
Instruction, 28 March 1857.

(signed) *E. J. Howard*,
Director of Public Instruction.

RESOLUTION of Government.

THE explanation required in the 4th paragraph of the Government resolution, No. 2826, dated 28th July 1856, is not apparent in the correspondence now submitted, neither is the necessity apparent for the further entertainment for two years of Mr. Courpalais' apprentice, from 4th April 1856, at an increased salary.

V. 3860.

2. Government await a report upon the proposed future employment of the junior apprentice now at Dharwar.

3. However gratified Government would be to find the gin factory a school for disseminating a sound knowledge of the handicrafts there practised, they do not consider that this object would be gained by introducing a system of paid apprenticeship, especially when, as has been shown by Dr. Forbes, six lads, sons of artisans, have already been sent thither by their parents for instruction without the inducement of pay.

4. Government will be glad to receive from Dr. Forbes a detail of the present state of the factory and establishment, the quantity of work it turns out, the degree of usefulness it exercises among the surrounding population, and the provision it contains within itself for imparting instruction gratis in carpentry and smith's work to those who may seek for it.

Bombay Castle, 11 May 1857.

(signed) *J. D. Inverarity*,
Acting Chief Secy. to Govt.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated the 16th May 1857.—V. 3708 to 11.

(No. 886 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

Submitted* for favourable consideration.

V. 3708.

2. Mr.

* Memorandum from the Collector of Khandeish, No. 117, dated 23d January 1857, with accompaniments.

1250 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

2. Mr. Brenham's services extend over a period of about 22 years, as appears from the following memorandum given by him:—

	Years.
From November 1829 to November 1834 apprentice in the dockyard, Bombay	5
Carpenter and joiner on board the H. C. sloop "Coote" - - -	1
Clerk, Collector's office, Khandeish, from June 1840 to 1843 - - -	3
From 1843 to 1847 in the engineer's department - - -	4
Head carpenter and overseer in the cotton factory since 1847 - - -	9
About - - -	22

3. Independently of the duties directly appertaining to his situation, Mr. Brenham is occasionally engaged in the clearing of fair-weather roads, for which the Revenue Commissioner believes he gets no allowance. In 1855 twenty-four miles of this description of road were lined out and cleared; and the total number of miles repaired under his superintendence during the last three years amounted to 90. He has also superintended a useful work to facilitate the passage of carts over the River Girna, at Myhejee, where the largest fair in this Presidency is held.

4. Mr. Mansfield, in a subsequent communication, states that—

"Mr. Brenham is a very well-conducted person, and is very attentive and zealous in the discharge of his duties connected with the Government factory at Dhurrungaum, and, in the opinion of the Collector, is deserving of an increase to his pay."

5. During Mr. Brenham's charge of the gin factory, the gins have, as already reported, found favourable way among the native merchants. His salary was fixed at 75 rupees in 1850, at a time when he had no independent charge, being under the orders of the superintendent.

6. He has now had sole charge of this work for upwards of two years, besides making himself useful in superintending certain pieces of road as mentioned above, and being thus employed, his expenses are doubtless increased (owing to his requiring to keep up means of travelling to look after both departments of his work in various places), and his responsibilities also.

7. The Collector does not mention the extent to which he thinks an increase should be made. The Revenue Commissioner, therefore, begs respectfully to propose that his pay be made one hundred and fifty rupees (Rs. 150) per month.

(signed) *E. G. Fawcett,*
Revenue Commissioner, Northern Division.

Tanna Districts,
Rev. Commissioner's Office, Camp Matheran,
13 April 1857.

(No. 117 of 1857.)

V. 3709.

SUBMITTED for the favourable consideration of the Revenue Commissioner, Northern Division.

Khandeish, Collector's Office, Dhoolia,
23 January 1857.

(signed) *S. Mansfield,*
Collector.

(No. 5 of 1857.)

From Mr. *George Brenham*, Overseer in Charge Government Factory, to *Samuel Mansfield, Esq.*, Collector of Khandeish.

Sir,

I WOULD most respectfully and humbly beg to bring to your favourable notice that I have now been upwards of two years in sole charge of the Government cotton factory at Dhurrungaum, on the same salary as that I had when I was only an Assistant to the superintendent.

That in October 1854, when the superintendent's situation was abolished, the establishment was much reduced. Still the whole of the Government property at the factory remained in my charge; and although no cotton has been ginned at the factory for Government, and no new machinery made, yet the most steady efforts have been used to introduce the use of the saw-gin amongst the natives, and at this present time there are more saw-gins in full work by the natives, some of them worked by cattle-power machines, than has been the case before since the establishment of this factory; so that it is doubtful if the present small establishment will be much longer sufficient to keep these machines in repair, as frequent inquiries are made for more; the chief fear on the part of the natives in taking them appearing to be the doubt of their being left on their hands without help from the factory to assist them at first in keeping the gins in working order.

I would

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1251

III.
Bombay.

I would respectfully beg to bring to your notice, that when in temporary charge of the factory for three months in the year 1852, during the absence of the superintendent on a survey of the Taptee, I received an addition to my pay of 50 rupees per mensem.

I most respectfully beg to forward copy of a testimonial of character from each of the three superintendents who have had charge of the factory; but I would trust more to your knowledge of me during the past four years, and to which I humbly hope you will kindly permit me to appeal, in confirmation of the willingness and readiness with which I have ever endeavoured to perform any duty whatever which has been allotted to me to the very best of my ability.

Under these circumstances, with an increasing family, and increasing in years myself, with, I trust it may be considered, a faithful service in the factory from its commencement in 1848, I most humbly solicit your kind and considerate recommendation for an increase of salary.

Government Factory, Dhurrumgaum,
16 January 1857.

I beg, &c.
(signed) *G. Brenham*,
Overseer in charge Government Factory.

I AM happy in being able to testify in favour of Mr. Brenham's steadiness and assiduity in the discharge of his duties as an head carpenter in the cotton experimental department; he is also attentive and obedient, and willing to do his best to please his employer, and gave me entire satisfaction during the time I had charge of the experiments in Khandeish.

(signed) *T. Price*, Superintendent Cotton Experiments,
Dhoolia, 3 December 1850. Ahmedabad Zillah.

To Mr. *G. Brenham*, in Temporary Charge of the Saw Gin Manufactory at Dhurrumgaum.

I HAVE much pleasure in bearing testimony to your steady good conduct, and the faithful discharge of your duties in the cotton experimental department during the time they, the experiments, have been under my superintendence, and I hope your length of service and the considerable experience you possess in the manufacture of saw-gins, as well as in the management of the other branches of the duties appertaining to the superintendent's office, will secure for you every consideration on the part of those under whom you may be immediately placed, and your eventual advancement by Government to a more lucrative appointment.

Dhoolia, 3 April 1851.

(signed) *S. Simpson*,
Late Superintendent Cotton Experiments
in Khandeish.

MR. G. BRENHAM, head carpenter of the cotton experimental department in Khandeish, was in charge of the department on my arrival here; he has also been in charge during the three months that I was surveying the River Taptee. The length of time that he has been in the cotton experiments peculiarly qualify him for the making of saw-gins, and I consider him well fit to hold a superior appointment to what he has held in the above department. I have great pleasure in bearing further testimony to his honesty, attentiveness, and general sound intelligence in carrying on his duties.

I give this certificate on my leaving for Dhundooka, in Guzerat, to exchange appointments.

Dhurrumgaum, 10 December 1852.

(signed) *T. J. Edwards*,
Superintendent Cotton Experiments.

RESOLUTION of Government.

THE superintendence of the Government workshop was entrusted to Mr. Brenham, under authority of the resolution No. 4188, dated 9th September 1854, there being then, besides the machinery in the possession of Messrs. Ritchie, Steuart & Co., not more than 20 gins in the possession of other parties which would, if they fell out of repair, be repaired at the Government factory. Belonging to the factory, there were also 59 gins ready for sale. The Collector of Khandeish should be desired to show how these gins have been repaired or disposed of, and generally what duties in the workshop Mr. Brenham has been engaged in; whether, when visiting villages for the repair of gins, he draws the usual travelling allowance in addition to his salary of seventy-five (75) rupees.

2. Mr. Brenham's employment in clearing fair-weather roads, though very useful, is no ground for increasing his salary as in charge of the Government workshop at Dhurrumgaum.

Bombay Castle, 8 May 1857.

(signed) *J. D. Inverarity*,
Acting Chief Secretary to Government.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 7th March, 1857.—V. 1419.

(No. 353 of 1857.)

From the Revenue Commissioner, Northern Division, to Mr. Officiating Chief Secretary *Young*.

Sir,

V. 1419.

IN reply to para 2 of Government resolution, No. 3527, dated 10th September last, I have the honour to inform you that I have received a report from the Collector of Khandeish, stating that seven samples of cotton were forwarded by him to the Commissioner of Customs, Salt, and Opium on the 4th instant.

I have, &c.

(signed) *E. G. Fawcett*,

Tannah Districts, Revenue Commissioner, Northern Division,
Revenue Commissioner's Office, Camp Kurolee,
10 February 1857.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 7th May 1857.—V. 3527 to 30.

(No. 533 of 1857.)

MEMORANDUM from the Commissioner of Customs, Salt, and Opium, dated 13 April 1857.

V. 3527.

SUBMITTED* to Government with reference to the resolution † quoted in the margin.

2. The gins in which the samples of the cotton under reference were cleaned must, it would appear, be very defective.

3. The correspondence regarding the gins in use in Khandeish, and other matters connected therewith, is not on the records of this department, and therefore I am unable to do further than merely hand up the report of the Chamber of Commerce.

(signed) *R. Spooner*,

Bombay, Office of Commissioner of Customs, Salt and Opium,
13 April 1857.

(No. 35 of 1857.)

To *Richard Spooner*, Esq., Commissioner of Customs, Salt, and Opium:

Sir,

V. 3528.

I HAVE to acknowledge receipt of your letter, No. 213 of 1857, dated 10th February, accompanying seven samples of cotton cleaned by the saw-gins hired or purchased from the Government factory at Dhurrungaum, in Khandeish, by native merchants, and requesting the opinion of the Chamber of Commerce as regards the condition of the staple.

These samples have been submitted to the members of the Chamber generally, and a special report has been requested from those whose more intimate acquaintance with the article rendered their judgment most desirable.

By direction of the committee, I have now the honour to state that the samples are all cotton of the same character, and may be grouped together; that the staple of all, but more particularly of No. 3, has suffered much in the ginning; that much superior saw-ginned cotton from the same districts is now in Bombay; and that it may be assumed, from the appearance of these samples, that the gins in which they were cleaned must be in very bad order.

I have &c.

(signed) *J. Mawson*,
Acting Secretary

Bombay, Chamber of Commerce, 9 April 1857.

RESOLUTION of Government.

V. 3529.

A COPY of this unfavourable opinion of the Chamber of Commerce may be transmitted to Revenue Commissioner, Northern Division, in reply to his letter, No. 353, dated 10th February last, for communication to the Collector of Khandeish and the native merchants, by whom the cotton was cleaned.

2. The Collector's attention should be drawn to the state of the gins.

(signed) *J. D. Inverarity*,

Bombay Castle, 5 May 1857.

Acting Chief Secretary to Government.

* Letter from the Acting Secretary to the Chamber of Commerce, No. 35, dated 9th April 1857.
† No. 3527, dated the 10th September 1857.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1253

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25th September 1857.—V. 7264 to 67.

III.
Bombay.

(No. 2279 of 1857.)

FROM the Revenue Commissioner, Southern Division, to Mr. Acting Chief Secretary
Inverarity.

Sir,

I HAVE the honour to submit the usual half-yearly report of the superintendent cotton gin factory, Dharwar, for the period ending 31st May last, together with a letter from the Collector, Mr. Ogilvy, No. 1093 of 3d instant, forwarding it.

V. 7264.

2. Every effort has, it will be seen, been made for increasing the usefulness of this establishment during the period under notice, and the quantity of work done, as well as the cost at which it has been done, attest the merits of Dr. Forbes' superintendence.

3. The large and growing demands for cotton gins show that the value of machinery is becoming generally known; it is therefore necessary that provision for its immediate and regular supply should be made. Dr. Forbes complains of great difficulty in obtaining workmen, owing to which, his establishment is unable to meet the demands on it; and in reference to this, Mr. Ogilvy recurs to the former proposition of that officer for the entertainment of a number of low-paid apprentices. This proposition was more fully reported on in the accompaniment to my memorandum, No. 2010 of 20th ultimo, and I have only to repeat that I fully concur in Mr. Ogilvy's view of the practical utility of the measure.

4. I also advocate the suggestion made in Dr. Forbes' 7th para., for the establishment of a branch workshop at some central spot, perhaps "Hawaree," conveniently situated for cotton dealers and gin owners. I should very confidently recommend for adoption Mr. Ogilvy's remarks in para. 6, with respect to the discretion which he thinks should be given to Dr. Forbes in the management of his establishment; but now that Dr. Forbes will be so much absent from Dharwar, increased responsibility ought not to be imposed on him without his own consent.

5. Adverting to the 4th para. of Mr. Ogilvy's letter, in which he notices the conduct of the gin factory establishment, and alludes to the system of rewards previously advocated by Dr. Forbes, I have already expressed an opinion that rewards to deserving members of the establishment, if necessary, should be specially applied for, and I see no reason for altering that opinion, now that Dr. Forbes is likely to be so seldom on the spot.

See para. 3 of my letter, No. 1221, of 1st April last.

6. The season was, it is said, rather favourable for the growth of cotton; and the average yield was about three-fourths in both the New Orleans and indigenous varieties.

I have, &c.
(signed) *H. W. Reeves,*
Revenue Commissioner,
Southern Division.

Poona, Revenue Commissioner's Office,
13 July 1857.

(No. 1093 of 1857.)

FROM *T. Ogilvy, Esq.,* Collector of Dharwar, to *H. W. Reeves, Esq.,* Revenue Commissioner,
Southern Division.

Sir,

IN transmitting, for the information of Government, the superintendent's half-yearly report of the operations of the cotton gin factory at Dharwar, dated the 20th ultimo, No. 62, I have the honour to subjoin an elucidatory Abstract:

V. 7265.

	Half Year ending		Half Year ending		Increase.	Decrease.
	30th November 1856.		31st May 1857.			
1. Number of gins completed.	50	5,830 - -	59	8,655 - -	9	2,825 - -
2. Number of gins repaired.	40	174 5 1	147	256 7 -	107	82 1 11
3. Number sold - -	22	2,770 - -	89	12,065 - -	67	9,295 - -
4. Value of work done -	-	5,793 - 10	-	6,497 2 5	-	704 1 7
5. Cost of materials, labour, &c.	-	4,944 4 5	-	5,465 3 11	-	520 15 6
6. Realisations from sale and repair of saw-gins.	-	6,140 7 1	-	9,989 7 -	-	3,848 15 11
7. Realisations from other sources.	-	422 - -	-	226 14 9	-	- - 195 1 3
8. Profit - - -	-	848 12 5	-	1,031 14 6	-	183 2 1

296—Sess. 2.

8 B 4

Thus

Thus the profits on the operations of the establishment during the half year of report, amount to rupees one hundred and seventy-one, annas fifteen, and pies nine (*Rs.* 171. 15. 9.) per mensem, against rupees one hundred and forty-one, annas seven, and pies four (*Rs.* 141. 7. 4.) during the previous half year, which gives an increase of rupees thirty, annas eight, and pies five (*Rs.* 30. 8. 5.), or about 20½ per cent.

2. The greatly increased activity and usefulness of the factory is most creditable to Dr. Forbes, and highly satisfactory, as showing a large development in the export cotton trade.

3. The greater number of the defective saw-gins, sold to the ryots by the late superintendent, have been withdrawn or repaired under the sanction of Government, conveyed in their resolution, No. 1834, dated the 26th May 1856, which will tend, it is hoped, to raise the character of the Dharwar cotton in the European market.

4. Dr. Forbes very highly praises the conduct of the members of his establishment, and informs me that they have industriously and cheerfully laboured out of working hours, but he does not recur to his previous proposition, of distributing small rewards among the more deserving; as, however, the power of granting such rewards, on his own responsibility, to individuals whom he thinks, from personal observation, require such stimulants, would strengthen his influence over them much more than the distribution of small presents after the delay that would result from the necessity of awaiting sanction; and as Dr. Forbes may be safely trusted to carry out his own measures for working the establishment in the best manner, and with the greatest possible degree of efficiency and economy, I would beg to suggest that he should be allowed to expend, in the way proposed by him, a certain sum monthly, say (30) thirty per cent. on the monthly profits remaining over and above rupees one hundred and sixteen (*Rs.* 116.), the amount of profit originally estimated by him. Unless fit occasion presented itself, he would not disburse the amount at all; but the expenditure is of a kind calculated to increase rather than diminish the profits of the establishment.

5. From what Dr. Forbes states in regard to the difficulty he experiences in obtaining a sufficient number of good workmen, I think it right respectfully to refer to the correspondence* that has already taken place on the subject of entertaining low-paid apprentices as a means of supplying the wants of the factory, and eventually of the country, in the hope that the measure may still meet with approval.

6. I beg to solicit favourable consideration to Dr. Forbes' proposition to establish a branch workshop in the centre of the districts where the New Orleans cotton is grown in greatest abundance, which he anticipates can be done without increased expenditure, and to suggest that he should be allowed to give such developments to his establishment, not involving increased cost, as he may find the wants of the country to require; for every effort should now be made to meet the requirements of the increasing export trade, which promises so many advantages. Some freedom of action should, I think, be allowed to an officer of Dr. Forbes' great intelligence and intimate acquaintance with the subject, and in consideration of the marked success that has attended his zealous labours, to enable him to extend the operations of the cotton gin factory with the greatest speed and effect.

7. I will only add, that the facts now brought to the notice of Government must strengthen the favourable opinion of Dr. Forbes' superintendence and management, already expressed in their resolution, dated the 26th May last, 1834, and must more than realise the most sanguine anticipations of success that they can have formed. The increasing demand for gins, which outstrips the powers of the factory to supply, would appear to indicate that the career of the usefulness of the establishment is only in its commencement.

I have, &c.
(signed) T. Ogilvy,
Collector.

3 July 1857.

(No. 62 of 1857.)

To T. Ogilvy, Esq., Collector of Dharwar.

Sir,

I HAVE the honour to submit the half-yearly return of the Dharwar cotton gin factory for the term ending the 31st May 1857, from which it will be seen that during the six months preceding that date the number of gins completed has been as follows, viz.: 38 gins of 18 saws each, and 21 gins of 10 saws each. The value of work completed upon these, inclusive of a sum of *Rs.* 1,422. 2. 5 for repairs to old gins, alterations, and other work, amounts in all to *Rs.* 6,497. 2. 5.

2. The cost of artisans' labour is shown at *Rs.* 3,181. 8. 8, the price of materials at *Rs.* 2,283. 11. 3; both these together amount to *Rs.* 5,465. 3. 11, which, deducted from the sum

* Dharwar Collector's letter, No. 368, of 24th March 1856, to Revenue Commissioner, with accompaniments. 2. Revenue Commissioner's memorandum, No. 2343, of 30th July 1856, forwarding copy of Government Resolution, No. 2826, of 28th idem. 3. Collector's letter, No. 1392, of 20th August 1856, to Revenue Commissioner, with accompaniment. 4. Revenue Commissioner's memorandum, No. 1624, of 20th May 1857, forwarding copy of Government Resolution, No. 2320, of 11th idem. 5. Collector's letter, No. 948, of 13th June 1857, to Revenue Commissioner, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1255

III.
Bombay.

sum mentioned in the latter part of the preceding paragraph (*Rs.* 6,497. 2. 5.) leaves a balance of profit of *Rs.* 1,031. 14. 6. on the six months' operations, or a monthly average of *Rs.* 171. 15. 9. per month.

3. The number of gins sold during the above period amounts to 89, viz., 48 of 10 saws, 39 of 18 saws, one of 20 saws, and one of 8 saws. The aggregate value of the whole amounts to 12,065 rupees, almost all of which has been recovered.

4. Seven of the former framed gins have been withdrawn, in accordance with Government instructions, conveyed in resolution No. 1834, of 26th May 1856, the owners in each instance replacing it with a new gin. The average sum remitted for each amounts to *Rs.* 22. 2. 3. These seven, with 10 previously reported, make a total of 17 now withdrawn. All the large gins of 18 saws formerly reported on hand, and amounting to 37 in number, have now (with one exception) been altered, and disposed of. In addition to these, six others, of the same pattern, which were brought in for repair, have also been converted in accordance with the new and approved model, and the same is being done to all others brought to the factory.

5. Of the small framed "eight-saw gins," 23 are still on hand; they are also capable of being altered, and when this has been effected, they will be serviceable, and find ready purchasers at 100 rupees each. One has already been disposed of for that sum.

6. On comparing last half-year's operations with previous returns, it will be seen that the amount of work done is greatly in excess of that of any similar previous period, and the profits have been proportionately larger. In justice to the establishment, I beg to state that this has been the result of superior industry and zeal on the part of the workmen, and that their conduct during the period under report has been most satisfactory. The increasing demand for gins will also be noticed, and may, I trust, be taken as a fair criterion of the rising prosperity of these districts. The number disposed of has amounted in value to treble that of any previous period on record, and in addition to these, there are up to this date orders registered and advances deposited for new gins of the value of 3,300 rupees. This will raise the amount of sales for the cleaning of last season's crop to upwards of fifteen thousand three hundred and sixty (15,360) rupees. Had the establishment been able to meet the demand, still more would have been disposed of. The scarcity of good workmen has been a source of loss and inconvenience. I have done all in my power to strengthen the establishment by entertaining at high wages every available hand, both here and in Belgaum, but still the number has been below what was required, and not sufficient to admit of adequate establishments being sent into the districts to attend to repairs. This has been complained of by owners and dealers, and it will, I think, be absolutely necessary hereafter to make more efficient provision for the wants of the districts in this respect.

7. Some of the most important talooks are from 50 to 90 miles distant, and at the same time at which it is probably most required, an accident may happen to a gin which can only be repaired at the lathe; it is accordingly found necessary to bring it into Dharwar, and, independent of the expense of carriage, the owner often suffers very considerably from the loss of work for the time being. It becomes daily a matter of increased importance that this should be obviated, owing to the large amount of machinery now being introduced, and I would therefore beg to recommend that, next season, a branch workshop with lathe should be established in a central situation, for the exclusive purpose of securing proper attention to the repair of gins. The village of Havaree, in the Bunkapoor talook, appears to me to be the spot best suited for the purpose; it is the centre of the largest amount of cotton operations, and from it small parties of itinerant workmen could be conveniently sent out to the more distant villages. This measure need not incur any expense to Government, because the strength of the establishment can be regulated according to the amount of work required, so as to pay itself; and when the season is over, the extra hands can be either discharged or recalled into Dharwar, to assist in preparing the supply of new gins required for the ensuing year.

8. I am glad to be able to state that I have had an interview with Dr. Cleghorn, conservator of forests for the Madras Presidency, and that a satisfactory arrangement has been effected for the future supply of timber required for the gin factory. The seigniorage on each tree has, however, been trebled, but the wood will still be sufficiently cheap. The accounts connected with the former transaction have now been closed, and the bill will be submitted for audit. The cost per cubic foot is slightly under three annas, whilst such as is procurable in the bazar is sold at from nine to ten annas.

I have, &c.
(signed) *G. F. Forbes,*
Superintendent Cotton Gin Factory.

Dharwar, Cotton Gin Factory,
20 June 1857.

STATEMENT, No. 1.

COTTON PLANTER'S REPORT, for the Half-year commencing 1st December 1856 and ending 31st May 1857, in the *Dharwar* Collectorate.

TALOOKS.	Prospect of the Season and State of the Crop as regards each Sort of Cotton.	Extent in Acres of Cotton Cultivated.							
		New Orleans.		Broach.		Total Foreign.		Country Cotton.	
		Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	The season was rather favourable, and in both the New Orleans and native cotton the average yield was about three-fourths.	Acres. chs. 82,351 34	Can. lbs. 18,907 245 of cleaned cotton.	None.	None.	Acres. chs. 82,351 34	Can. lbs. 18,907 245 of cleaned cotton.	Acres. chs. 1,96,930 23	Can. lbs. 60,284 682 of cleaned cotton.

TALOOKS.	G I N S						
	For Sale in the Factory,	In Use,			Out of Use,		Completed in the present Half-year,
	Belonging to Government.	Belonging to Private Individuals.			Belonging to Private Individuals.		Belonging to Government.
	Number and Size of Gins.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Value.
11.	12.	13.	14.	15.	16.	17.	
	2 Gins of 20 saws. 1 Do. of 10 saws. 15 Do. of 8 saws. 2 Do. of 4 saws. 2 Roller Churkas. 1 Egyptian Churka. 1 Cotton Thresher.	6 Gins of 40 saws. 1 Do. of 25 saws. 1 Do. of 24 saws. 13 Do. of 20 saws. 114 Do. of 18 saws. 9 Do. of 14 saws. 3 Do. of 13 saws. 98 Do. of 10 saws. 60 Do. of 8 saws. 143 Do. of 7 saws.	Unable to state, as the gins are constantly moved about from one talooka to another, and often into the adjacent Madras districts and Enaam villages, according to the requirements of the owners.	None.		38 Gins of 18 saws - 21 Do. of 10 saws -	Rs. 6,345 2,310
24	448				59	Rs. 8,655	

TALOOKS.	G I N S					Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expenses on account of Experiments from the Commencement to the Close of the Half-year preceding that under Report	Total Expenses for the Half-year under Report	
	Being made		Sold for Government during the Half-year under Report.		Number and Size of Gins.				At what Cost.
	For Government.	For Private Individuals.	Number	At what					
	Number and Size of Gins.	Number Sold.							
18.	19.	20.	21.	22.	23.	24.	25.		
	1 Gin of 18 saws. 8 Gins of 8 saws. 1 Cotton cleaning machine. 26 Roller churkas.	None.	1 Gin of 20 saws - 39 Do. of 18 saws - 48 Do. of 10 saws - 1 Do. of 8 saws - 89	Rs. a. p. 175 - - 6,510 - - 5,280 - - 100 - - 12,065 - -		Net Profit during the six months under report is Rs. 1,031 14. 6. as shown in the accompanying abstract statement of Cost and Returns.			
36			Deduct Remission for withdrawing seven framed Gins - - Add Value of Repairs to Saw-gins - -	155 - - 11,910 - - 1,230 1 5		Total Expenses - Rs. 5,92,001 9 2 Total Receipts - 1,63,177 7 7 Balance - - Rs. 4,28,824 1 7	Rs. a. p. 10,216 5 9 6,028 14 8 Balance - - Rs. 4,187 7 6		

Dharwar, Cotton Gin Factory, }
1 June 1857.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

STATEMENT, No. 2.

296—Sess. 2.

8 C 2

Dr.			ACCOUNT OF RECEIPTS and EXPENDITURE of the COTTON EXPERIMENTS, Dharwar, from the Commencement up to 31st-May 1857.					Cr.		
	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.
Amount of Receipts from the commencement up to the half-year preceding that under report	-	-	-	-	1,63,177	7 7	Amount of Expenses from the commencement up to the half-year preceding that under report	-	-	5,92,001 9 2
For the half-year under report :							For the half-year under report :			
From 1st December 1856 to 31st May 1857 :							From 1st December 1856 to 31st May 1857 :			
By Proceeds of the sale of saw-gins, viz.:—							To Allowance to Dr. G. F. Forbes, superintendent of cotton gin factory, from 1st November 1856 to 30th April 1857, at 200 rupees per month -	1,200	-	-
December 1856	400	-	-	-			" Salary of the fixed establishment of the cotton gin factory from 1st November 1856 to 30th April 1857	1,825	1	5
January 1857	2,081	-	-	-			" Salary of the Cotton Press Department, Hoobly, from 1st Nov. 1856 to 12th April 1857	93	12	3
February	2,399	-	-	-				1,918	13	8
March	1,780	-	-	-			" Batta to the establishment passed audit for the months from October 1856 to March 1857	-	-	3,119 19 8
April	1,240	-	-	-			" Contingent charges, ditto ditto, for the following months, viz :	-	-	31 1 -
May	1,823	-	-	-			September 1856	337	2	8
					9,723	-	October "	345	13	4
" Proceeds of the repair of saw-gins, viz.:—							November "	370	7	5
February 1857	48	-	-	-			December "	394	8	4
March	36	11	-	-	256	7 -	January - 1857	674	13	2
April	60	5	-	-	158	2 1	February - "	239	15	10
May	111	7	-	-	10	- -		2,412	12	9
							" Value of tools purchased at Bombay for the use of the factory	55	-	-
" Proceeds of the sale of three model carts							" Charges for carriage, &c., of tools from Bombay	3	4	6
" Ditto of the sale of two old gins, of nine saws each							" Cost of constructing additional sheds to increase the accommodation of the cotton gin factory	299	10	6
" Ditto of the sale of remnant wood pieces, &c.							" Freight for carriage of 94 packages and 2 pauline, containing stores paid by the Deputy Commissary-general at Bombay	16	6	-
" Ditto of the sale of clean cotton and cotton seed							" Hire for carriage of articles from Sattara paid by the Collector of Sattara	91	13	10
					49	15 8		466	2	10
										6,028 14 3
" Balance against the Experiment					10,216	5 9				Rs. 5,98,030 7 5
					1,73,393	13 4				
					4,24,636	10 1				
					Rs.	5,98,030 7 5				Rs. 5,98,030 7 5

* These items include advances for new gins not disposed of.—Vide explanation under the head of Remarks, in Statement, No. 4.

Dharwar, Cotton Gin Factory,
1 June 1857.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

STATEMENT, No. 3.

Cr.

ABSTRACT STATEMENT showing the Cost and return of the COTTON GIN FACTORY, Dharwar, from 1st December 1856 to 31st May 1857.

Dr.

	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.
By value of the difference of work done in completing 6 gins, of 10 saws each	445 - -		To Cost of Establishment:		
„ Ditto of 15 gins, of 10 saws, commenced and completed at 110 rupees each	1,650 - -		Salary of the fixed Establishment, exclusive of that of the European Superintendent and of an Apprentice	1,448 - 2	
„ Ditto of work done in 33 gins, of 18 saws each, altered, formerly on hand	2,555 - -		Batta to the fixed Establishment, exclusive of ditto - ditto	45 12 11	
„ Ditto of the difference of work done in completing 5 gins, of 13 saws each	425 - -		Wages to the contingent Establishment	1,687 11 7	3,181 8 8
„ Ditto of work done in 1 gin, of 8 saws, altered	44 8 -		To Cost of Materials:		
„ Ditto - ditto - in 12 gins, of 8 saws, being altered	120 - -		28 maunds 6 lbs. 1 oz. of square iron, of sizes at different rates	56 6 1	
„ Value of repairs to gins		5,239 8 -	23 „ 23 „ 6 „ of sheet - - ditto - - ditto	78 12 5	
„ Cost of the following Articles made for the use of the Factory, viz.:		1,230 1 5	41 „ 19 „ 12 „ of flat - - ditto - - ditto	82 14 6	
1 Screw-plate, with 5 dice	6 - -		84 „ 22 „ 6 „ of round - - ditto - - ditto	167 3 1	
4 Iron moulds for casting bearings, washers, &c.	20 - -		63 „ 2 „ 4 „ of country iron - - - - ditto	147 2 11	
2 Scissors	- 12 -		25 „ 11 „ 8 „ of buffaloes' hides 35½ - - ditto	97 12 -	
2 Smiths' cold chisels	- 10 -		3 „ 23 „ - „ of bullock „ 6½ - - ditto	15 4 3	
3 Drills	- 3 -		59 „ 2 „ 10 „ of zinc - - - - ditto	335 7 1	
		27 9 -	8 „ 9 „ 6 „ of old brass - - - - ditto	130 9 2	
			68 gross 8 doz. and 1 screw iron of sizes - - ditto	73 - 6	
			20 Iron hinges 2½ inch, at 5½ rupees per rupee	8 12 -	
			25 lbs. 5 oz. of bristles at 2 rupees per lb.	50 10 -	
			2 „ 1 „ of brass wire at different rates	2 8 11	
			275 Circular saws of 10 inches at Rs. 1 2. 4 each	315 1 8	
			19 Logs of teakwood, at 8 rupees each	152 - -	
			69 „ of honnywood, at different rates	298 7 6	
			8 Blocks of Baubool wood - ditto	10 2 -	
			405½ Puras of charcoal, at 12 puras per rupee	33 12 8	
			2 maunds 12 lbs. 5 oz. of steel from unserviceable files	9 - 8	
			21½ lbs. of iron nails	4 15 6	
			1 lb. of copper	- 12 -	
					2,070 10 11
			To Cost of sundry Expenses:		
			For December 1856	24 5 3	
			„ January 1857	11 10 11	
			„ February	16 2 11	
			„ March	10 - 4	
			„ April	24 - 7	
			„ May	31 12 4	
			To Value of Smith's work which was on hand consumed		118 - 4
					95 - -
					5,465 3 11
			To Profit to Government for the half year		1,031 14 6
					Rs. 6,497 2 5
					Rs. 6,497 2 5

Dharwar, Cotton Gin Factory,
1 June 1857.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

1258

PAPERS RELATING TO MEASURES TAKEN SINCE 1847

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA, 1259

STATEMENT, No. 4.

DETAILED MEMORANDUM of Sums Collected during each of the Six Months embraced in the Cotton Planter's Report for the Half Year commencing 1st December 1856, and ending 31st May 1857, for Gins sold during that Period, also, for Repairs to Gins, and Gins sold during the previous Half Year.

MONTHS.	Sums Collected during the present Half Year for Gins Sold prior to 1 Dec. 1856.	Sums Collected for Gins Sold during the Half Year under Report.	Sums Collected during the present Half Year for Repairs made prior to 1 Dec. 1856.	Sums Collected for Gins Repaired during the Half Year under Report.	TOTAL.	REMARKS.
December 1856	- - - -	Rs. 400	- - -	Rs. a. p.	Rs. a. p. 400 - -	Sums actually collected by sale and repair of saw-gins in the six months under report - 9,749 7 -
January 1857	- - - -	2,081	- - -	- - -	2,081 - -	Advances received during the half-year for gins not disposed of - - - - 230 - -
February "	- - - -	2,399	- - -	48 - -	2,447 - -	Proceeds of the sale of 3 model carts - - - - 158 2 1
March "	- - - -	1,780	- - -	36 11 -	1,816 11 -	Ditto - ditto, of 2 old gins of 7 saws, at Bombay - - - 10 - -
April "	- - - -	1,160	- - -	60 5 -	1,220 5 -	Ditto - ditto, of wood pieces, &c. 18 13 -
May "	- - - -	1,673	- - -	111 7 -	1,784 7 -	Ditto - ditto, of clean cotton, and cotton seed - - - 49 15 8
TOTAL - - Rs.	- - - -	9,493	- - -	256 7 -	9,749 7 -	Rs. 10,216 5 9

Dharwar, Cotton Gin Factory, }
1 June 1857.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

STATEMENT, No. 5.

DETAILED MEMORANDUM of the Number, Size, and Value of GINS made during the Half Year ending 31st May 1857, the Number out of them Sold, and the Balance of Cotton Machines in Store.

	MACHINES.										
	Gins of 20 Saws.			Gins of 18 Saws.				Gins of 10 Saws.			
	Number.	Value.	Value Recovered.	Number.	Value.	Value Recovered	Amount remitted for Old Gins.	Number.	Value.	Value Recovered.	Amount remitted for Old Gins.
Number which were on hand at the close of the last half-year	3	-	-	1	-	-	-	28	-	-	-
Ditto, completed during the present half-year	-	-	-	38	-	-	-	21	-	-	-
TOTAL	3	-	-	39	-	-	-	49	-	-	-
Deduct—Number sold in the present half-year	1	175	175	39	6,510	4,520	110	48	5,280	4,698	45
Balance of machines on hand, except those being made	2	-	-	-	-	-	-	1	-	-	-

	MACHINES.										
	Gins of 8 Saws.			Gins of 4 Saws.		Cotton Thrasher.		Egyptian Churka.		Roller Gn.	
	Number.	Value.	Value Recovered.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
Number which were on hand at the close of the last half-year	16	-	-	2	-	1	-	1	-	2	-
Ditto, completed during the present half-year	-	-	-	-	-	-	-	-	-	-	-
TOTAL	16	-	-	2	-	1	-	1	-	2	-
Deduct—Number sold in the present half-year	1	100	100	-	-	-	-	-	-	-	-
Balance of machines on hand, except those being made	15	-	-	2	-	1	-	1	-	2	-

Dharwar, Cotton Gin Factory, }
1 June 1857.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

STATEMENT, No. 6.

STATEMENT of GINS Sold during the Half-year ending 31st May 1857.

MONTHS.	Gins of 20 Saws.		Gins of 18 Saws.				Gins of 10 Saws, of 110 Rupees each.		Gins of 8 Saws.		TOTAL.		REMARKS.
	No.	Amount.	Of 165 Rupees each.		Of 170 Rupees each.		No.	Amount.	No.	Amount.	No.	Amount.	
			No.	Amount.	No.	Amount.							
December 1856	-	-	1	165	-	-	4	440	-	-	5	605	Value of gins sold during the half-year - - 12,065
January 1857	-	-	5	825	-	-	15	1,650	-	-	20	2,475	Deduct, as per Government Resolution, No. 1834, of 26th May 1856 :
February "	1	175	6	990	-	-	14	1,540	-	-	21	2,705	Rs.
March "	-	-	11	1,815	-	-	2	220	-	-	13	2,035	Remission for withdrawing five framed gins, of 7 saws each 105
April - "	-	-	1	165	1	170	8	880	1	100	11	1,315	Ditto for ditto 2 ditto, of 8 ditto, old - 50
May - "	-	-	-	-	14	2,380	5	550	-	-	19	2,930	155
TOTAL - - Rs.	1	175	24	3,960	15	2,550	48	5,280	1	100	89	12,065	Net Value of Gins sold - Rs. 11,910

Dharwar, Cotton Gin Factory,
1 June 1857.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

V. 7266.

RESOLUTION of Government.

GOVERNMENT consider the report on the Dharwar Cotton Gin Factory for the Half-year ending 31st May to be very satisfactory. It is shown that 89 gins of 20 saws and under have been sold during the half year, at a cost of 12,065 rupees, being, as Dr. Forbes reports, treble that of any previous period on record, and almost all of which has been recovered. It is also shown that there were in use, the property of private individuals, 301 gins of 10 saws and under, and 147 gins of 40 saws and under, the whole number of private gins of sorts being 448. There were also 20 gins of 20 saws and under for sale in the factory, and orders for new gins of the value of 3,300 rupees had been registered and deposits paid.

2. The cost of artisans' labour (Rs. 3,181. 8. 8.), and the price of materials (Rs. 2,283. 11. 3.) being deducted, a balance of profit (Rs. 1,031. 14. 6.) is shown; but it should be remembered that wear and tear of tools, interest of capital sunk, and insurance, are all elements of cost which must be taken into consideration before profits can be calculated.

3. For the efficiency of the gins now in use, and for their successful introduction throughout the districts, Government are greatly indebted to Dr. Forbes' personal exertions, and they, therefore, have no hesitation in authorising him to establish one or more branch factories for the construction and repair of gins at Havaree and elsewhere in the cotton districts, as may appear to him best suited for the purpose.

4. But bearing in mind that the maintenance of a factory is no part of the duty of a Government, and that its early transfer to private enterprise should be always kept in view, Government cannot but think that a knowledge of the handicrafts pursued in the factory might be disseminated throughout the country, otherwise than by the entertainment of paid and indentured apprentices; for these, as has been already seen on a former occasion, when their time had expired, were described as "a dead* weight on the establishment," and for whom† employment under Government was sought.

5. The scarcity of good workmen has been, it is said by Dr. Forbes, a source of loss and inconvenience. If no workmen at all were to be had, then it might be necessary to have recourse to apprentices; but so long as tolerable workmen are procurable, it is desirable that Government should not hamper itself by educating boys who have been described as a dead weight upon the establishment.

Bombay Castle,
9 September 1857.

(signed) J. D. Inverarity,
Acting Chief Secretary to Government.

* Collector of Dharwar to Revenue Commissioner, No. 1392, dated 20th August 1856, para. 3.
† Revenue Commissioner, Southern Division, to Government, No. 1943, dated 2d July 1856, paras. 10 and 11.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1261

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25 September 1857.—V. 7434 to 7437.

III.
Bombay.

(No. 2010 of 1857.)

MEMORANDUM from the Revenue Commissioner, Southern Division.

FORWARDED* for the information and order of Government, with reference to their resolution, No. 2320, of 11th ultimo.

V. 7434.

Poonah,
Revenue Commissioner's Office,
20 June 1857.

(signed) *H. W. Reeves*,
Revenue Commissioner, Southern Division.

(No. 948 of 1857.)

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Revenue Commissioner, Southern Division.

Sir,

IN reply to your endorsement, No. 1624, dated the 20th ultimo, on a correspondence with Government relative to the employment of apprentices in the Dharwar Cotton Gin Factory, have the honour to transmit, for the information of Government, the copy of a letter from Dr. Forbes, dated the 3d instant, No. 59, which will, I hope, prove satisfactory.

V. 7435.

2. I may explain, with reference to the 4th para. of Government resolution, No. 2826, dated 23th July 1856, that the apprentices hitherto employed in the factory are of a superior class and grade to the 25 lads whom Dr. Forbes now wishes to engage. The latter, whilst proving extremely useful to the factory, would, it is believed, eventually be the means of raising the standard of mechanical skill in the country. The young men themselves would be able to earn their own livelihood after they had completed their term of servitude in the factory, and it is not improbable that they would find permanent employment in the Public Works Department, or under enterprising Europeans like those composing the firm of Messrs. Brice & Co.

3. The senior apprentice in the factory, Mr. Courpalais, has been appointed, under para. 3 of Government Resolution, No. 806, dated the 19th February last, mechanical overseer of the factory, on 100 rupees per mensem.

4. Dr. Forbes explains, that he cannot expect to retain the apprentices whom he wishes to employ sufficiently long, unless they receive some pay. Unpaid lads would hardly take the same interest in their work, or be under the same control as they would be if they were remunerated.

5. For further information, in regard to the operations of the factory, I beg to refer to my letter to the Revenue Commissioner's address, dated the 25th March last, No. 427, handing up Dr. Forbes' report of the operations of the establishment during the half year ending the 30th November 1856.

Dharwar, Collector's Office,
13 June 1857.

I have, &c.
(signed) *T. Ogilvy*,
Collector.

(No. 59 of 1857.)

To *T. Ogilvy*, Esq., Collector of Dharwar.

Sir,

WITH reference to your endorsement, No. 825, dated 26th May 1857, and its accompaniments herewith returned, I have the honour to report, that the explanation alluded to by the Acting Chief Secretary to Government in the latter part of the first paragraph was forwarded to your address on the 11th August 1856; and in my letters, as per margin,† I reported to you that both the junior apprentices had resigned their situations at the factory, having procured employment elsewhere. The instructions conveyed in the 5th para. of Government Resolution, No. 806 of 1857, dated 19th February last, provides for the employment of the senior apprentice, Mr. Charles Courpalais, at an increased salary of 100 rupees per mensem.

2. With regard to the 3d para. of the same communication, I beg to observe that the purpose of indenturing the apprentices would be to secure their remaining until properly instructed; without this precaution, they would leave as soon as they found themselves qualified

* Letter from the Collector of Dharwar, No. 948, dated 13th June 1857, with enclosures.

† Letter, No. 91, of 24th September 1856. Letter, No. 10, of 14th February 1857.

III.
Bombay.

qualified to earn a livelihood. This has already occurred with some of those admitted gratis; and the object in view, viz., that of training and disseminating throughout the districts a class of expert and well-taught workmen, would not be accomplished.

3. The gin factory at present employs about 90 workmen, and the value of work turned out averages about 1,200 rupees per month. Its operations are at present restricted to making and repairing of gins and model carts, and the degree of usefulness it exercises among the surrounding population is, therefore, comprised in the number of these articles which it distributes throughout the districts.

4. As regards the provision the factory contains within itself for imparting instruction, I may state that the construction of a saw-gin embraces various handicrafts. Besides common carpenter and smith work, there is turning in wood and metals, casting, filing, and fitting of bearings, screw and nut-making, &c. An artisan well trained to these, independent of being able to repair a cotton-gin with safety, would also be found a very useful member of any community in the district, where at present no such person exists. In addition to the above branches, I have mentioned in my report, dated 11th February 1856 (when first bringing forward the proposal), that a sufficiency of work of every other description would be procurable, if desired, and this would afford means of rendering the course of instruction as complete as could be wished for, without incurring any expense to Government, or even at a profit; but from what I have above stated it will be apparent that this latter can only be ensured by having the boys indentured, because their services will increase in value according to the time they have been under instruction, and during the latter period they will make up for any deficiency at the commencement.

Dharwar, Cotton Gin Factory,
3 June 1857.

I have, &c.
(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

RESOLUTION of Government.

V. 743G.

THE factory at Dharwar, it is reported, at present employs about 90 workmen, and the value of the work turned out averages about 1,200 rupees per mensem, its operations being restricted to making and repairing gins and model carts, the construction of which embraces the handicrafts of carpenter, smith, and turner in wood and metals.

2. The Honourable the Court of Directors have in their despatch, No. 6, dated 17th June 1857, expressed themselves as having no objection to the continuance of factories for the supply of gins and machinery; but as in the case of American cotton culture, from which they withdrew when it no longer required the fostering care of Government, so in regard to this factory, it will undoubtedly be their desire that Government should withdraw from all interference with private enterprise, so soon as the saw-gin and its construction are well understood by the natives of the country.

3. It is no doubt desirable that the fullest possible advantage be taken of the Dharwar factory, and that as many persons should be instructed in the construction of the saw-gins, &c., as possible. If, therefore, other workmen are not to be had, it may be necessary to have recourse to apprentices indentured for short periods (three or four years); but if journeymen can be procured, it is better to employ them; for already knowing, as they must do, something of their work, and improving as they would in the factory, they are evidently of more use and value than boy apprentices, who must begin with the rudiments of their profession, and are considered perfect only at the close of their apprenticeship.

Bombay Castle,
15 September 1857.

(signed) J. D. Inverarity,
Acting Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 8th July 1857.—V. 5224 to 27.

(No. 1458 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

V. 5224.

SUBMITTED* with reference to Government Resolution, No 2182, dated 5th ultimo.

2. Perhaps his Lordship in Council will deem it desirable to obtain the opinion of the Chamber of Commerce on the three samples of cotton herewith sent, in continuation of their letter No. 35, dated 9th April last.

Tanna Districts,
Revenue Commissioner's Office,
Camp Mahteran,
3 June 1857.

(signed) E. G. Fawcett,
Revenue Commissioner,
Northern Division.

* Letter from the Collector of Khandeish, No. 945, dated 28th May 1857, with enclosure.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1263

(No. 945 of 1857.)

From *S. Mansfield*, Esq., Collector of Khandeish, to *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division.

Sir,

In reply to your endorsement No. 1159, of the 8th instant, transmitting a correspondence regarding some sample of native ginned cotton, I have the honour to forward copy of a letter* from Mr. Brenham with three samples of cotton.

2. I have addressed letters to the different native merchants, pointing out to them the loss they sustained in sending such inferior cotton to market, and suggesting to make themselves well acquainted with the principles of gin machinery, and to keep a watchful eye over the persons they employ to work the gins.

Khandeish,
Collector's Camp, Suptshring,
28 May 1857.

I have, &c.
(signed) *S. Mansfield*,
Collector.

(No. 49 of 1857.)

From Mr. *George Brenham*, Overseer in Charge Government Factory, to *Samuel Mansfield*, Esq., Collector of Khandeish.

Sir,

I beg to acknowledge the receipt of the Revenue Commissioner's memorandum No. 1159, dated the 8th instant, bearing your endorsement No. 826, of the 14th idem, accompanied by copies of the decision of the Chamber of Commerce on some samples of ginned cotton sent from Khandeish, and the resolution of Government thereon.

In your endorsement I am requested to forward any explanation I may have to offer regarding the conclusion come to by the Chamber of Commerce; this conclusion being unfortunately very unfavourable as to the working of the gins sold and hired from the factory.

Against the opinion of so high an authority, I most respectfully beg to state that I can have but little to say; yet, feeling convinced that this unfavourable opinion was chiefly based upon an error in the first instance, in thinking "the samples are all cotton of the same character, and may be grouped together," I humbly beg to send (enclosed) three samples of seed cotton, not ginned, of exactly the same kinds as the ginned samples before sent; thinking that in this state the most unpractised eye will detect a material difference between them, more especially between sample No. 3 and the others. The sample No. 3 is a different kind of cotton altogether, and is of very short fibre; yet it appears, from the report of the Chamber of Commerce, that this shortness of fibre is wholly attributed to its having "suffered much in the ginning."

I would respectfully beg to state, that I am aware of there being superior saw-ginned cotton in Bombay received from Khandeish to that of the sample. I have seen it go from this province, and I know that the fibre suffers more with the gins in the hands of the native merchants than it would with the gins at the factory, or under the immediate supervision of those experienced in working them. But there is another reason. The native merchant, as in the case of No. 3, knowingly, and as a speculation, purchases at times an inferior kind of cotton in the first instance; the bad quality of the staple of which, I would humbly submit, should not be charged to the gins being in bad order.

I most respectfully beg to state that, during the ginning season, I frequently visited the different stations at which the native merchants had gins at work, inspecting the gins, and giving instructions for their working; and that, whenever requested, or whenever I thought it necessary, workmen were sent from the factory to the utmost limit of my very small establishment, to repair and keep the gins in order; and that, as far as it is possible, I will exert myself still further, although with the increasing number of gins bought and hired by the native merchants, the distance of the places from each other at which they work, the smallness of my establishment, and the known apathy and carelessness of the native character even where their own interests are concerned, I am still afraid I may scarcely be able to come up to the high standard demanded by the Chamber of Commerce. But I will try my best to come up to this standard.

Agreeably to the request of the Revenue Commissioner, I respectfully beg to append a list of the names of the native merchants by whom the cotton was cleaned.

Kissundass Bolaram, Anundram Bucketram, Sewlall Kissundass, Shamrow Ramchunder, Luximondass Wittuldass, Bickaree Tattoo Sett.—These individuals had their cotton ginned at their villages, and the gins were put in order at different times by the factory establishment.

Shamrow Ramchunder.—This individual had four gins on hire at the Government factory, which were kept in order for him by the establishment.

Government Factory, Dhurrumgaum,
23 May 1857.

I beg, &c.
(signed) *Geo. Brenham*,
Overseer in Charge Government Factory.

* No. 49, of the 23d idem.

III.
Bombay.
V. 5226.

RESOLUTION of Government.

THE opinion of the Chamber on these minute samples of seed cotton does not appear to be called for, seeing they have already passed an unfavourable opinion on the same cotton in its ginned state, and seeing they, on the 29th ultimo, recorded a remark, "that experience has shown how little benefit is derived from the production of mere samples."

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 22 July 1857.—V. 5955 to 5958.

(No. 1714 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division, dated 7 July 1857.

V. 5955.

SUBMITTED* with reference to Government Resolution, No. 2250, dated 8 May 1857.

2. As para. 2 of Mr. Brenham's letter appeared to be somewhat ambiguous, inquiry was made whether it was to be understood that the total of the machinery alluded to was four cattle-power machines and 92 gins; also, whether the 55 saw-gins remaining in the factory were idle or at work, and if the latter, how much they had realised by hire for cleaning cotton during last year. The following is his reply: "There are three cattle-power machines, one belonging to Government, and two belonging to private individuals; and 92 saw-gins, 23 belonging to private individuals, and 69 belonging to Government. Of these, 14 have been hired by the native merchants during the last season, and 55 were idle in the factory.

"I humbly beg to state that rupees (292. 7. 5.) two hundred and ninety-two, annas seven, and pies five, have been realised on account of the hire of the 14 gins during the last season."

(signed) *E. G. Fawcett*,
Revenue Commissioner, Northern Division.

Revenue Commissioner's Office,
Poonah, 7 July 1857.

(No. 974 of 1857.)

V. 5956.

TRUE copy forwarded for the information of the Revenue Commissioner, Northern Division, with reference to his memorandum No. 1239, of 14th ultimo.

2. The information required in 2d para. of the Government resolution No. 2250, of 8th instant, is given in Mr. Brenham's second and following paras.

(signed) *S. Mansfield*,
Collector.

Khandeish Collector's Camp, Suptshring,
1 June 1857.

(No. 508 of 1857.)

From Mr. *George Brenham*, Overseer in Charge Government Factory, to
Samuel Mansfield, Esq., Collector of Khandeish.

Sir,

I most respectfully beg to acknowledge the receipt of the Revenue Commissioner's Memorandum No. 1239, dated the 14th instant, bearing your endorsement No. 870, of the 20th idem, accompanied with copies of the Revenue Commissioner's letter, recommending an increase to my salary, and the resolution of Government calling for further information respecting the duties which I perform.

With regard to the information required, I most respectfully beg to state that there are one cattle-power machine and 69 gins under my superintendence, two cattle-power machines bought and in possession of native merchants, and one belonging to the factory, which is already hired by another native merchant for the coming season. That there are 23 gins purchased by native merchants, and 14 on hire, with 55 remaining in the factory. That the whole of this machinery is kept in order and repair by the factory establishment under my superintendence. If any gin require much repairing, it is brought to the factory; but for slight repairs, after inspection by me, workmen with tools are sent out to the different stations, the native merchants paying the expenses of the repair of their own gins, the repair of the gins on hire being charged to Government.

That during the ginning season constant calls were made, for the purpose of repairing gins and putting them in order, upon myself and my establishment; so that some merchants had to wait until workmen were relieved from other stations, as there are now more gins worked by native merchants than at any other time previously since the factory was established, with a promise of still more being engaged, which favourable result I trust I may be permitted to attribute to the exertions which I have constantly and steadily made to introduce the saw-gin into use in this province.

I would also respectfully beg to state that the Government buildings, at the factory at Dhurrungaum, and smaller buildings at other stations, are also in my charge for annual estimate and repairs.

That

* Memorandum from the Collector of Khandeish, No. 974, dated 1st June 1857, with enclosures.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1265

III.
Bombay.

That I have not only to perform the duties of the English clerk, who was formerly allowed, the duties of whose office are not lessened by the reduction of the establishment, but to supply information which has been called for respecting the accounts of the factory since its commencement, and the cost of gins sent to other stations; to try experiments, and give opinions upon the working of gins on new plans; and, with the exception of the actual construction of new gins, which duty I could perform were it required of me, I humbly submit that I have, since being in charge, performed the duties of the former superintendents, and that there is much more to do than merely keeping 20 gins in repair, which I am with great sorrow afraid is the estimated amount of my duties, as calculated by Government.

I beg to state that I draw batta at the rate of 12 annas per diem, when actually travelling on duty, in connexion with the factory alone, which, as the journeys are made as quick as possible, amount but to a small sum; but that from the nature of my duties since being in charge of the factory, I have been obliged to keep up permanent carriage.

Finally, were it not from the increase and more important nature of the duties which I now perform, and the increased responsibility and trust imposed upon me, I would alone humbly and earnestly solicit Government for an increase to my salary; in accordance with the well-known generosity in such cases that it never requires an assistant in any office or situation to perform the duties of his chief without some additional remuneration, and I earnestly hope that I may not be made an exception to this call.

I beg, &c.

(signed) G. Brenham,

Overseer in Charge Government Factory.

Government Factory,
Dhurrungaum, 26 May 1857.

RESOLUTION of Government.

It appears from this communication that Mr. Brenham superintends the repair of 23 saw-gins and two cattle power machines, the property of merchants; and has charge of one cattle-power machine, and 69 saw-gins belonging to Government, of which 14 have been hired out and 55 are idle in the factory.

V. 5957.

2. Government cannot consider that a sufficient case has been made out to go before the Government of India for an increase to Mr. Brenham's salary of 75 rupees per mensem, with travelling allowance, stated to be 12 annas per diem when actually travelling.

(signed) J. D. Inverarity,

Acting Chief Secretary to Government.

Bombay Castle,
21 July 1857.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25 September 1857.—V. 6695 and 6696.

(No. 1899 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division

SUBMITTED* to Government for information.

2. The proceedings, as reported, are satisfactory, and call for no remark.

V. 6695.

3. The letter, quoted by Mr. Brenham at the conclusion of his remarks, in column 56, was subjoined to para. 2 of the Revenue Commissioner's memorandum, No. 1714, dated 7th ultimo, replied to by Government resolution, No. 3389, dated 21st idem.

(signed) E. G. Fawcett,

Revenue Commissioner, Northern Division.

Revenue Commissioner's Office,
Poona, 1 August 1857.

(No. 1253 of 1857.)

From Samuel Mansfield, Esq., Collector of Khandeish, to E. G. Fawcett, Esq.,
Revenue Commissioner, Northern Division, Poona.

Sir,

I do myself the honour to transmit the half-yearly report of the Government factory at Dhurrungaum, ending 31st May last, forwarded by Mr. G. Brenham in charge of the factory.

V. 6696.

2. The work performed during the half-year, by the establishment employed in this factory, has been stated in the column of remarks of the report under review, and does not require any comments from me.

I have, &c.

(signed) S. Mansfield,

Collector.

Khandeish Collector's Camp, Malligaum,
24 July 1857.

* Letter from the Collector of Khandeish, No. 1253, dated 24th July 1857, with enclosure.

HALF-YEARLY REPORT of the Government COTTON FACTORY.

Number.	NAMES.	Station.	Prospect of the Season, and State of the Crops regarding each Sort of Cotton.	Extent in Bheegas of Cotton Cultivation.								Of which,				
				New Orleans.		Broach.		TOTAL.		Country Cotton.		New Orleans.				
				Extent in Bheegas.	Estimated Produce in Candies.	Extent in Bheegas.	Estimated Produce in Candies.	Extent in Bheegas.	Estimated Produce in Candies.	Extent in Bheegas.	Estimated Produce in Candies.	Quantity in Candies.	Rate per Candy.	Amount.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.		
1	Dhoolia	1	The past has been a very favourable season.	-	-	-	-	-	-	-	-	-	-	-	-	
2	Amulnair	1		-	-	-	-	-	-	-	-	-	-	-	-	-
	Betawad	1		-	-	-	-	-	-	-	-	-	-	-	-	-
3	Errondole	1		-	-	-	-	-	-	-	-	-	-	-	-	-
	Cassoda	1		-	-	-	-	-	-	-	-	-	-	-	-	-
	Dhurrungaum	1		-	-	-	-	-	-	-	-	-	-	-	-	-
	Paldee	1		-	-	-	-	-	-	-	-	-	-	-	-	-
4	Bhurgaum	1		-	-	-	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	1		-	-	-	-	-	-	-	-	-	-	-	-	-
6	Malligaum	1		-	-	-	-	-	-	-	-	-	-	-	-	-
7	Bhaglau	1		-	-	-	-	-	-	-	-	-	-	-	-	-
8	Punpelnair	1		-	-	-	-	-	-	-	-	-	-	-	-	-
9	Nundooibar	1		-	-	-	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	1		-	-	-	-	-	-	-	-	-	-	-	-	-
11	Thalnair	1		-	-	-	-	-	-	-	-	-	-	-	-	-
12	Chopra	1		-	-	-	-	-	-	-	-	-	-	-	-	-
	Arrawud	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	Yawul	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	Sowda	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	Nusseerabad	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Julgaum	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	Jamnair	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Parola	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TOTAL	11	-	-	-	-	-	-	-	-	-	-	-	-	-	

Number.	NAMES.	Gins		Amount expended on the Construction of Gins and Machines.	Quantity of Cotton Ginned.								Difference in Price per Candy in favour of Ginned Cotton to that cleaned by the Churks	
		Sold for Government.			Foreign.				Country.				Laid down in Bombay.	Sold on the Spot.
		Number.	For what Amount.		New Orleans.		Broach.		TOTAL.		Country.			
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	
1	Dhoolia	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Amulnair	-	-	-	-	-	-	-	-	-	-	-	-	-
	Betawad	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Errondole	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cassoda	-	-	-	-	-	-	-	-	-	-	-	-	-
	Dhurrungaum	-	-	-	-	-	-	-	-	-	95	95	11 to 12	7 -
	Paldee	-	-	-	-	-	-	-	-	-	295	295	-	-
4	Bhurgaum	-	-	-	-	-	-	-	-	-	48	48	-	9 6
5	Challisgaum	-	-	-	-	-	-	-	-	-	-	-	-	7 -
6	Malligaum	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Bhaglau	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Punpelnair	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Nundooibar	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Chopra	-	-	-	-	-	-	-	-	-	-	-	-	-
	Arrawud	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Yawul	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Sowda	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-	-	-	-
	Julgaum	-	-	-	-	-	-	-	-	-	18	18	Not known, being sent	-
16	Jamnair	-	-	-	-	-	-	-	-	-	-	-	-	-
	Parola	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	-	-	-	-	-	-	-	456	456	-	-

Remarks.—During the half-year under report, six gins have been altered on Dr. Forbes' plan, and five gins have been thoroughly repaired, also three gins have been set up at Dhurrungaum, for Shamrow Ramchunder, who has hired them for the season, and the gins hired by the native merchants, at the different stations, have been kept in working order by the establishment.

Applications for the hire of the Chopra cattle-power machine, and four gins altered on Dr. Forbes' plan for the coming season, have already been received and sanctioned by the Collector of Khandeish.

In the Columns from 42 to 47 are shown the details called for in the Government Resolution (No. 1837), dated the 26th May 1856.

N.B.—A mistake has been made in my letter (No. 56, of the 27th ultimo), in the amount of the hire of gins; it should be Rs. 282 7. 4.

Dhurrungaum, Government Factory, }
1 June 1857.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA

1267

at Dhurrungaum, ending 31st May 1857.

purchased for Government :									Total Amount of Cotton purchased for Government.	Gins					
Brosch.			TOTAL.			Country Cotton.				In Use.		Out of Use.		Completed.	
Quantity in Candles.	Rate per Candy.	Amount.	Quantity in Candles.	Rate per Candy.	Amount.	Quantity in Candles.	Rate per Candy.	Amount.		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.
16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
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										14	6	57	15		

Saving effected in cleaning one Candy by Gins, after deducting one Rupee per Candy for Dirt extracted in Ginning.	Net Profit on a Candy of Clean Cotton, cleaned by the Gins.	Total Amount expended in Ginning, &c., on account of Government.	Other Items of Expenditure during the Half-year under Report.				Total Amount, including Cotton Ginning, &c.	Amount expended up to the last Half-year.	Total Expenditure up to the Half-year under Report.
			Buildings and Temporary Establishment.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
46.	47.	48.	49.	50.	51.	52.	53.	54.	55.
.	1,770 3 4	1,770 3 4
.	1,984 12 8	1,984 12 8
.	2,299 2 11	2,299 2 11
.	849 6 11	849 6 11
.	442 14 2	442 14 2
1	8		21 1 10	48 5 8		711	780 7 6	1,31,181 14 4	1,31,962 5 10
1	12 to 13								
1	10 6 8								
.
.
.	4,161 12 -	4,161 12 -
.	212 15 3	212 15 3
.	380 9 8	380 9 8
.	15,563 5 8	15,563 5 8
.	2,491 11 11	2,491 11 11
.	4,343 7 -	4,343 7 -
.	35 8 -	35 8 -
.	1,018 2 11	1,018 2 11
.	23,160 13 9	23,160 13 9
.	2,280 15 7	2,280 15 7
			21 1 10	48 5 8		711	780 7 6	1,92,177 12 1	1,92,958 3 7

The undermentioned amounts have been realised by the department during the season :

On account of hire of gins -	Rs. 252 7 4
" screwing 1,237 bales of cotton -	154 10 -
" of the sale of one old gin, of 20 saws -	105 1 8
" hire of godown -	4 - -
" slightly repairing two gins for Shamrow Ramchunder -	3 3 2
TOTAL - - -	Rs. 519 6 8

instead of Rs. 292. 7. 5.; also two gins more have been added as belonging to private individuals.

Ordered. That the foregoing be recorded.
(signed) H. Young,
Chief Secretary to Government.

(signed) G. Brenham,
Overseer in Charge Government Factory.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue ;
dated 3 November 1857—V. 7760 to 7767.

(No. 1132 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division,

V. 7760. SUBMITTED * to Government for instructions.

2. As Mr. Daley had reported that the gins, according to Dr. Forbes' plan, did not work as well as those he had already, it was thought advisable to ascertain what opinion might be entertained of them elsewhere. A reference was accordingly made to the Collector of Khandeish, and the above † is the reply.

† Below transcribed.

3. It will be observed that the trial reported by Mr. Brenham does not give altogether a fair comparison, inasmuch as the new gins from being lately constructed were not in good and free working order. The Revenue Commissioner thinks it will be advisable to await the result of the trial contemplated in para. 6 of Mr. Brenham's letter; he has, therefore, called for a report on the subject.

Mr. Brenham's
clause, first of
para. 7.

4. The peculiarity noticed by Mr. Brenham, which renders Dr. Forbes' gin difficult of adjustment, would be an obstacle to the general use of gins, and, therefore, much to be avoided. Mr. Brenham acted judiciously in introducing in the Khandeish gin such portions of the arrangements as seemed to him to be improvements, rejecting what he thought objectionable, apparently on sufficient grounds.

5. The Revenue Commissioner is not prepared to support Mr. Mansfield's suggestion relative to the employment of Mr. Laidlaw in this department. There are only two ginning factories in the Northern Division, viz., in Ahmedabad and Khandeish. Mr. Daley, who superintends the former, has passed a very creditable examination in mechanics, and Mr. Brenham, in charge of the latter, possesses a practical knowledge of the construction and working of gins sufficient for all ordinary purposes.

(signed) E. G. Fawcett,
Revenue Commissioner, N. D.
Tanna Districts,
Revenue Commissioner's Office, Camp Mahteran,
7 May 1857.

(No. 640 of 1857.)

From S. Mansfield, Esq., Collector of Khandeish, to E. G. Fawcett, Esq.,
Revenue Commissioner, Northern Division.

Sir,

V. 7761.

I HAVE the honour to acknowledge the receipt of your letter, No. 755, dated 26th ultimo, with accompaniments, copies of which I forwarded to Mr. Brenham, with a request that he would test the comparative merits of the old Khandeish saw-gins with those improved after Dr. Forbes' plan, in the presence of Mr. Laidlaw, the superintendent of Messrs. Ritchie, Stuart & Co.'s factory, and some native merchants, and I now beg to forward copy of a letter from him, reporting the result of the trial, and also copies of two letters addressed to me direct by Mr. Laidlaw.

2. From these letters it would appear that, though the actual quantity of cotton cleaned by the gins, altered according to Dr. Forbes' plan, was larger than that turned out by the other gins, neither Mr. Brenham or Mr. Laidlaw approve of former gins, which they state are more difficult to work and less easy to adjust than the others.

3. I would take this opportunity to bring to your notice Messrs. Ritchie, Stuart & Co are about to close their concern in Khandeish, when Mr. Laidlaw's services will be no longer required, and I am respectfully of opinion that advantage should be taken by Government to secure his services to superintend all the factories in the Presidency.

4. He has been brought up as a civil engineer, and understands machinery perfectly. He was for several years in the Government establishment at Broach, and for the last six years has presided over Messrs. Ritchie, Stuart & Co.'s factory.

5. The persons employed at the different Government establishments are not generally professional engineers, and, therefore, must often be very much at a loss when called on to solve practical questions connected with working of machinery; and I think if Mr. Laidlaw were employed as a superintendent, and required to visit annually every Government establishment, and report on the merits of the machinery used in each, very great benefit would be derived both to Government and the public in the improved working of the machinery used in cleaning cotton.

I have, &c.
(signed) S. Mansfield,
Collector.

Khandeish, Collector's Camp, Moolhen,
20 April 1857.

* Collector of Khandeish's letter, No. 640, dated 20th April 1857, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA 1269

(No. 38 of 1857.)

III.
Bombay

From Mr. G. Brenham, Overseer in Charge Government Factory, to Samuel Mansfield, Esq.,
Collector of Khandeish.

Sir,

WITH reference to your memorandum, No. 534, dated the 1st instant, with accompaniments, I most respectfully beg to bring to your notice that I yesterday got four gins in working order, two altered on Dr. Forbes' plan, and two Khandeish gins, and gave them a trial in the presence of Mr. Laidlaw, agent to the firm of Messrs. Ritchie, Steuart & Co., and two of the principal cotton merchants of this place. Mr. Laidlaw timed the working of the machines, and the cotton merchants weighed the seed and the wool, to satisfy themselves as to the proportion of seed and wool cleaned, and the following results have been obtained :

Number of Gins.	DESCRIPTION of GINS.	Number of Men Working.	Time occupied in Cleaning.	Weight of Seed Cotton.	OUT-TURN.		
					Seed.	Wool.	Loss in Dirt, &c.
1.	2.	3.	4.	5.	6.	7.	8.
			<i>Minutes.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
1	20 saws, altered on Dr. Forbes' plan, with saws of nine teeth to the inch -	5	70	84	61½	21	1½
2	20 saws, altered on Dr. Forbes' plan, with saws of eight teeth to the inch -	5	52	84	60	22½	1½
3	20 saws, Khandeish gin, with eight teeth to the inch -	5	115½	84	61	20	3
4	20 saws, Khandeish gin, with nine teeth to the inch -	5	45½	84	59½	23	1½

2. Having frequently observed that a gin of 20 saws, with nine teeth to the inch, cleaned a maund, or more, of cotton in the day than a similar gin with saws that had eight teeth to the inch, and to give the four gins a fair trial, I have worked one of the altered gins with saws of the nine teeth to the inch, and the other with saws of eight teeth to the inch. The Khandeish gins were worked in like manner.

3. It will be seen that the result of the working of these four gins are very irregular, although this is not difficult to account for.

4. In the first place the gins altered on Dr. Forbes' plan were subjected to a much greater friction in the parts altered than No. 4, a Khandeish gin, which had until lately been in full work, and consequently all its parts were smooth and in good working order; so great is the difference on this account, that while a wholly new gin of 20 saws will only turn out in a day about six maunds of cotton at first, a gin of the same construction, that has been for some time at work, will turn out about 10 maunds a day. No. 3, a Khandeish gin, just had new bearings fixed to it; hence the slowness of its working.

5. There are other irregularities in working the gins on the present trial, such as No. 1 gin, with saws of nine teeth to the inch, not working so well as No. 2, which had saws of eight teeth to the inch, which can only be accounted for by the difference in the strength and the exertions of the men who worked them, which alone has often been observed to cause a considerable difference in the turn-out of the gins.

6. I would therefore respectfully suggest that the only method by which a fair comparison of the gins altered on Dr. Forbes' plan with the Khandeish gins could be made, would be to let them work together in the ginning season for at least a fortnight's time, when the roughness of the new parts would be smoothed down, and by an occasional change of the men working the gins from one gin to another, a fair deduction could be arrived at.

7. There are a few objections in the construction of Dr. Forbes' gin sent up as a pattern, which would, I fear, not allow its being worked with advantage in the districts.

1st. The axle of the saws and brush are so fitted on the bearings, that there is no means of adjusting them when the saws come in contact with the bars of the grates, which is generally caused by one of the bearings wearing down before the other. This would cause unnecessary trouble and delay to the gins at the different stations, as the people working them would not be able to put them in order without the aid of artificers from head quarters; whereas the Khandeish gins can be adjusted by the people working them by means of adjusting screws at the end of the axle.

III.
Bombay.

2d. The axles of the saws and brush of Dr. Forbes' gin are revolved by means of friction rollers, by which more power is required to work the gin than it would if drums were placed on the axles of the saw and brush, with a small strap of leather connecting them.

3d. The bearings used in Dr. Forbes' 10-saw gin are made of zinc, which will wear away under the friction of the iron axles sooner than the brass bearings would which are in use in the gins in this province.

8. I have therefore thought it better to obviate these objections in the gins altered by me on Dr. Forbes' plan.

9. The advantage of Dr. Forbes' plan I conceive to be in the bend of the grates, and in rounding the corners of the teeth of the saws, which will ultimately, in my opinion, cause the gin to clean a greater amount of cotton, and injure the fibre less when not impeded by the friction of the new parts, than a gin under equal circumstances upon the old plan. There is another simple but great advantage to be noticed, that in Dr. Forbes' plan the seed falls out freely in consequence of the bend of the grates, which obviates all risk to the man feeding it, in his not having to put his hand into the hopper.

10. Taking the average result of the trial just made, it is certainly in favour, under all the disadvantages of friction, from the altered parts of the gins on Dr. Forbes' plan giving in these gins 61 minutes each to clear 84 lbs. of seed cotton, with a yield of 60 $\frac{1}{2}$ lbs. seed to 21 $\frac{1}{2}$ lbs. of wool, and 1 $\frac{1}{2}$ lbs. loss. The Khandeish gins, upon an average, took 80 $\frac{1}{2}$ minutes each to clean 84 lbs. of seed cotton, with a yield of 60 $\frac{1}{2}$ lbs. of seed to 21 $\frac{1}{2}$ lbs. of wool, with 2 $\frac{1}{2}$ lbs. loss.

I beg, &c.
(signed) *G. Brenham*,
Overseer in Charge, Government Factory.

Government Factory,
Dhurrumgaum, 15 April 1857.

To *Samuel Mansfield*, Esq., Collector and Magistrate, Khandeish.

Sir,

I RESPECTFULLY beg to acknowledge receipt of your communication (No. 531) of 31st ultimo, with accompaniments, and, in reply, beg to add, that it will afford me pleasure to assist at trial of the hand-gins in question, at any place you may direct.

Mr. Brenham, of the Government factory here, showed me Dr. Forbes' small gin, which seems very well got up; but from the fact of it having no adjusting screws affixed to saw cylinder spindle, will cause the cylinder to vibrate, and consequently give a wiped or cut an appearance to the cotton, which would deteriorate its market value.

* S. o. The brush-fan is driven by friction roller (that is, two pulleys rubbing against each other), an objectional* principle in a country where wood is so liable to shrink, and which will soon get out of working order. The old method of driving fans with a leather band is more simple, works easier, and not so liable to go wrong as gins would be with friction rollers.

The bend of the grate seems the same as that in use in the Government establishment of Belgaum, Dharwar, and Goozrat, in the season 1848-49. This I know from my connexion with these establishments; in fact, the principle of the machine is the same as those in use, the only difference being the application of friction-rollers.

The cause of the difference of out-turn in quantity is entirely owing to the placing of the grates, which I observe, in a number of Government hand-gins, are fitted on in such a manner that the root of tooth takes the grate first, and drives the cotton from it; consequently brings down the daily out-turn from 10 maunds of 40 seers to six and seven, which prevents sowcars taking to them, as they are then found not to pay, and which is caused by no practical engineer being now employed in these establishments that knows about such work. The grates are fitted to without reference to the angle teeth; and when it so happens that a new set of saws with an acuter angle are fitted in, they then find an access in quantity, which they consider is caused by the difference of bend. This is just what Mr. Brenham has done; he stripped two old gins, and bent the grates according to Mr. Forbes' plan, into which gins he fitted a new set of saws he had on hand here, with teeth at an acuter angle than the old ones; he consequently finds an access of quantity cleaned by them, which he attributes to the bend of grates, but which is entirely owing to the new saws in question. I venture to affirm, if a set of grates from each establishment are sent me, though of different bend, I will put them to any old gins, and the out-turn will be found the same as to quantity in each case, thus showing that the whole secret lies in the setting. If the old saws that were taken out of the two gins alluded to were replaced, I could then show that I would be able to get as large a quantity with the old bend differently set as that procured from the two gins in question, though they have a new set of saws.

The whole gins ought to be manufactured under one head, who ought to be held responsible for the quantity cleaned per diem, which he might easily supply at a greatly reduced cost to the whole of the Government establishment.

I have, &c.
(signed) *W. Laidlaw*,
Civil Engineer.

Dhurrumgaum, 14 April 1857.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1271

Sir,
To Samuel Mansfield, Esq., Collector of Khandeish.

III. 111
Bombay.

In continuance of my letter, dated 4th instant, I beg to apprise you that the trial of the four 20 saw-gins took place this morning in the Government Factory here; the result is as follows:—

No. of Gins.	Description of Gins, each of 20 Saws.	Men Working.	Time Occupied.	Weight of Seed Cotton.	Out-turn.			REMARKS.
					Seed.	Dirt, Refuse, and Loss.	Wool.	
1	Dhurrungaum, manufactured with Dr. Forbes' bend, saws deepened ⁿ	5	70	Lbs. 84	Lbs. 61½	Lbs. 1½	Lbs. 21	The people got blown and were allowed to rest, which time is here omitted.
2	Dhurrungaum, manufactured with Dr. Forbes' bend, and new set of saws - - - -	5	52	84	60	1½	22½	
3	Dhurrungaum, manufactured as worked in Government Factory	5	116	84	61	3	20	
4	Ditto - ditto - - -	5	45½	84	59½	1½	23	

From the above you will perceive that the time occupied in clearing the quantity bears out what I anticipated in my previous communication.

I have, &c.
Dhurrungaum, 14 April 1857. (signed) W. Laidlaw, Civil Engineer.

(No. 1798 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

SUBMITTED * to Government with reference to para. 5 of the Revenue Commissioner's memorandum, No. 1132, dated 7th May 1857.

V. 7762.

(signed) E. G. Fawcett,
Revenue Commissioner, Northern Division.

Revenue Commissioner's Office, Poonah,
15 July 1857.

(No. 1168 of 1857.)

MEMORANDUM from the Collector of Khandeish.

FORWARDED to the Revenue Commissioner, Northern Division.

V. 7763.

(signed) S. Mansfield, Collector.

Khandeish, Collector's Camp, Malligaum,
11 July 1857.

Sir,
To S. Mansfield, Esq., Collector of Khandeish.

I HAVE the honour to state for the information of Government, that I have received information from Messrs. Ritchie, Steuart & Co., of the termination of my engagement with them on the 31st instant, on account of the abolition of their agency in Khandeish, and I beg respectfully to offer my services to Government for further employment, and to draw your attention to Government letter, No. 19, dated Bombay Castle, 3d January 1848, stating that my services would be taken into consideration when the instructions of the Honourable Court of Directors were requested at the expiration of the period for which I covenanted to serve.

Should my services not be required by Government, I beg to be informed what steps I must take to present my claim for a free passage to England, in accordance with the terms of my covenant with the Honourable Court of Directors, and of a letter from Government, No. 4302 of 1850, Territorial Department, Revenue, dated Bombay Castle, 25th May 1850, on the transfer of my services from Government to Messrs. Ritchie, Steuart & Co., Bombay.

I have, &c.
Dhurrungaum, 8 July 1857. (signed) W. Laidlaw, Civil Engineer.

(No. 2185 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

SUBMITTED to Government for orders with reference to the Revenue Commissioner's memorandum, No. 1798, dated 15th July 1857.

V. 7764.

(signed) E. G. Fawcett,
Revenue Commissioner, Northern Division.

Revenue Commissioner's Office, Poonah,
17 September 1857.

* Collector of Khandeish's memorandum, No. 1168, dated 11th July 1857.

III.
Bombay.

(No. 1477 of 1857.)

From *S. Mansfield*, Esq., Collector of Khandeish, to *E. G. Fawcett*, Esq.,
Revenue Commissioner, Northern Division, Poona.

Sir,

V. 7765. I REQUEST you will have the goodness to favour me with a reply to my letter, No. 1163, dated 11th July 1857.

2. Mr. Laidlaw has been discharged by the firm, and, should he not be engaged by Government, purposes to return to England immediately.

Khandeish Collector's Camp, Malligaum,
11 September 1857.

I have, &c.
(signed) *S. Mansfield*,
Collector.

(No. 4395 of 1857.)

From Mr. Acting Chief Secretary *Inverarity* to the Revenue Commissioner,
Northern Division.

Sir,

V. 7766. WITH reference to the documents noted in the margin,* I am directed by the Right Honourable the Governor in Council to request that you will inform the Collector of Khandeish that Mr. Laidlaw's services are not required by Government, and that with reference to Mr. Secretary Goldsmid's letter to this gentleman's address, No. 4302, dated the 24th May 1850, he should apply, on arrival in Bombay, to the Secretary to Government, Marine Department, who will carry out the orders of Government in furnishing him with a passage to England.

Bombay Castle, 30 September 1857.

I have, &c.
(signed) *J. D. Inverarity*,
Acting Chief Secretary to Government.

(4396 of 1857.)

RESOLUTION.

V. 7767. ORDERED, that a copy of the foregoing letter be transferred to the Marine Department for guidance.

2. A copy of Mr. Secretary Goldsmid's letter, No. 4302, dated the 25th May 1850, is also herewith forwarded.

30 September 1857.

(signed) *J. D. Inverarity*,
Acting Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 3 November 1857.—V. 8143 and 8144.

MEMORANDUM from the Secretary to Government in the Marine Department.

V. 8143.

THE Secretary begs to be informed what sort of a passage Mr. Laidlaw is to be furnished with. It is usual in such cases to allow a sum of money in lieu or in commutation of a public passage, and as the price of the passage, however given, will be a revenue charge, the Secretary suggests this as the easiest mode of adjusting the matter.

1 October 1857.

(signed) *P. M. Melvill*,
Secretary to Government.

(No. 4591 of 1857.)

From Mr. Acting Chief Secretary *Inverarity* to Mr. *Walter Laidlaw*.

Sir,

V. 8144.

IN a letter, No. 4395, dated the 30th ultimo, the Revenue Commissioner, Northern Division, was directed to inform the Collector of Khandeish, with reference to one dated the 8th July last, which you addressed to the latter officer, that your services were not required by Government, and that on your arrival in Bombay, you should apply to the Secretary in the Marine Department, who would carry out the orders of Government in furnishing you with a passage to England, as promised in their Secretary's letter to you of the 24th May 1850, No. 4302.

2. Government have since determined on leaving you to make your own arrangements in respect to your return to England, and have accordingly instructed the General Paymaster to pay you the price of a cabin passage on board of one of the Peninsular and Oriental Steam Navigation Company's vessels on your applying to him.

Bombay Castle, 15 October 1857.

I have, &c.
(signed) *J. D. Inverarity*,
Acting Chief Secretary to Government.

* Paras. 3 to 5 of a letter from the Collector of Khandeish, No. 640, dated the 20th April 1857. Para. 5 of a memorandum from the Revenue Commissioner, Northern Division, No. 1132, dated the 7th May 1857. Memorandum from ditto, ditto, No. 1798, dated the 15th July 1857, with accompaniments. Ditto, ditto, ditto, No. 2185, dated the 17th September 1857, with accompaniment.

HALF-YEARLY REPORTS OF COTTON PLANTERS.

AHMEDABAD.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1851.

Superintendent's Office, Ahmedabad, 31 May 1851.

Talookas.	NAMES.	Number of Stations.	Prospects of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY.		
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.*	Extent in Beegahs.	Estimated Produce in Candies.	
1	Dhundooka -	1	Prospect of the season is favourable, and the produce is expected to be much larger than the usual yearly quantity.	-	-	-	-	-	-	-	3,50,568	4,738 †
2	Gogo -	-		-	-	-	-	-	-	-	10,430	68 †
3	Dholka -	-		-	-	-	-	-	-	-	51,632	942 †
4	Veerumgaum -	-		-	-	-	-	-	-	-	75,032	2,470 †
	TOTAL -	1		-	-	-	-	-	-	-	-	4,87,662

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount of Cotton Purchased for Government.													
		NEW ORLEANS.			BROACH.			TOTAL.			COUNTRY.															
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.												
1	Dhundooka -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8 17	95 1 6 †	712 11 9	712 11 9	
2	Gogo -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Veerumgaum -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8 17	-	712 11 9	712 11 9

Talookas.	NAMES.	GINS.										Amount Expended on Construction of Gins.		
		In Use.		Out of Use.		Completed.		Sold for Government.		Number.	For what Amount.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.					
1	Dhundooka -	2 of 20 saws.	-	-	-	-	-	-	-	-	-	2 of 20 saws.	280 8 - ‡ Made over to Major Laing, Political Agent, Kattywar.	200 - -
		3 cottage gins.	-	-	-	-	-	-	-	-	2 cottage gins.			-
2	Gogo -	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Veerumgaum -	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL -	5	-	-	-	-	-	-	-	-	4	280 8 -	200 - -	

* Candy, 784 lbs.

† Produce in clean cotton.

‡ Rate per candy of clean cotton when laid down in Bombay.

§ Amount made over to the Acting Collector.

|| Advance to Contractor for materials.

REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1851—continued.

Talookas.	NAMES.	QUANTITY OF COTTON GINNED.								Total Amount Expended in Ginning &c., on Government Account.		
		FOREIGN.						COUNTRY.				
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.			
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.					
1	Dhundooka -	-	-	-	-	-	-	-	<i>Candies. lbs.</i> 8 17	<i>Candies. lbs.</i> 6 13	<i>Candies. lbs.</i> 14 30	157 1 3
2	Gogo -	-	-	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-	-	-
4	Veerungaum -	-	-	-	-	-	-	-	-	-	-	-
	TOTAL - - -	-	-	-	-	-	-	-	8 17	6 13	14 30	157 1 3

Talookas.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Amount Expended on Purchase and Ginning of Cotton.	Amount Expended up to last Half-Year.	Total Expended up to end of Half-Year under Report.
		For Buildings.	For Contingencies.	For Superintendence.	For Establishment.			
1	Dhundooka -	59 6 8	40 14 3	1,703 - -	30 - -	869 13 -	- - -	2,903 1 11
2	Gogo -	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-
4	Veerungaum -	-	-	-	-	-	-	-
	TOTAL - - -	59 6 8	40 14 3	1,703 - -	30 - -	869 13 -	- - -	2,903 1 11

Remarks.—The woodwork of the 16 gins sanctioned to be constructed for use in this zillah is being made up by contract, and it is hoped that by adopting this method the superintendent will be able to get the gins made up cheaper than by keeping up an expensive establishment of artificers for constructing them. During the half-year under report two gins of 20 saws have been disposed of, one to a merchant at Burwalen, and one to the Thakoor of Bhownggur.

(signed) T. Price,
Superintendent Cotton Experiment.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Ahmedabad Zillah for the Half Year ending 30 November 1851.

Superintendent's Office, Dhundooka, 28 December 1851.

Number of Districts.	NAMES.	Number of Stations.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	Total	Country.	New Orleans.	Broach.	Total	Country.
1	Dhundooka -	1	The yield of the cotton cultivation in the zillah was, last year, as anticipated, an unusually large one, and the price of the article having been high, it was advantageously disposed of by the ryots.	-	-	-	-	-	-	-	-
-	Ranpoor -	1		-	-	-	-	-	-	-	-
2	Gogo -	1		-	-	-	-	-	-	-	-
3	Dholka -	1		-	-	-	-	-	-	-	-
4	Veerungaum -	1		-	-	-	-	-	-	-	-
	TOTAL - -	5	-	-	-	-	-	-	-	-	1-1,000th part of entire yield of zillah,

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1275

REPORT of Cotton Experiments in the Ahmedabad Zillah for the Half-Year ending 30 November 1851—cont

Number of Districts.	NAMES.	G I N S.						Amount Expended on Construction of Gins.		
		In Use.		Out of Use.		Completed during the Half Year under Report.			Sold during the Half Year under Report.	
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.		Number.	Amount.
1	Dhundooka	- 2 of 20 saws, 3 cottage gins.	2 of 20 saws	- - -	- - -	16	- - -	- - -	- - -	1,286 9 2
-	Ranpoor	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
2	Gogo	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
3	Dholka	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
4	Veerumgaum	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
	TOTAL	- - -	- - -	- - -	- - -	16	- - -	- - -	- - -	1,286 9 2

Number of Districts.	NAMES.	Other Items of Expenditure during the Half-Year under Report.						Amount Expended up to last Half-year.	TOTAL EXPENDITURE up to the end of Half-year under Report.	Prospecta of the coming Season.	
		Purchase and Ginning Cotton.	Con-tingencies.	Buildings.	New Orleans Cotton Cultivation, and Temporary Estab-lishment.	Amount of Super-intendence.	Amount of Esta-blishment.				TOTAL AMOUNT.
		1	Dhundooka	- - -	245 8 7	466 14 -	233 14 3				2,349 - -
-	Ranpoor	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
2	Gogo	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
3	Dholka	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
4	Veerumgaum	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
	TOTAL	- - -	245 8 7	466 14 -	233 14 3	2,349 - -	80 - -	4,661 14 -	2,903 1 11	7,564 15 11	

Remarks.—The cultivation of cotton has diminished greatly this year, and the yield will also be a small one, owing to the irregular falls of rain during last monsoon. The amount of cultivation in the districts of Dhundooka, Gogo, Veerumgaum, and Dholka was last year 487,662 beegahs, and the yield in candies of clean cotton 8,818; while this year the amount of cultivation is 2,274,416 beegahs, and the yield will be about 2,448 candies, being a reduction of 53 per cent. in cultivation and 68 per cent. in yield. Sixteen new gins reported to have been commenced in last half-yearly report are completed, with the exception of placing the saws in them. The gin-house and workshop at Dhundooka are nearly completed. The New Orleans cotton cultivation has also suffered, in common with the rest of the crops of the season; but, considering it being but the first year of its trial, the result will be as favourable as can be expected

(signed) *Thos. Price,*
Superintendent Cotton Experiments.

EXTRACT Bombay Revenue Consultations, 18 August 1852.

EXTRACT of a Letter from the Revenue Commissioner, Northern Division, No. 1915, dated 29 July 1852, with Enclosures.

No. 10,441.

5. Mr. Price has devised and constructed a machine for working the gins by cattle power, a plan of which, and a memorandum of the principle upon which it has been constructed are herewith appended, to enable Government to obtain the opinion of competent persons as to its adoption in other localities. When on my tour in Dhurrungaon, I saw a somewhat similar machine, which had been erected by Messrs. Ritchie, Stewart & Co., and which appeared to perform very satisfactorily.

6. The Acting Collector has not mentioned whether he has taken any measures to prevent the extortion alluded to in the concluding part of Mr. Price's remarks, which the Revenue Commissioner concludes is the same that is alluded to in the correspondence noted on the margin.* The Acting Collector's attention will, however, be drawn to the subject, and he will be requested to report the measures he may have taken to suppress it.

(signed) *E. G. Fawcett,*
Revenue Commissioner, N. D.

Revenue Commissioner's Office, Poona,
29 July 1852.

(No. 261 of 1852.)

FORWARDED for the information of the Revenue Commissioner, Northern Division, with reference to his letter, No. 1294, dated 12th May 1851.

No. 10,442.

Ahmedabad, Collector's Office,
9 July 1852.

(signed) *S. Mansfield,*
Acting Collector.

* Para. 4 of Revenue Commissioner's letter, No. 408, of 12th February 1851.
Para. 3 of Mr. Secretary Goldsmid's letter, No. 1973, of 1st March 1851.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1852.

Superintendent's Office, Camp, Gogo, 1 June 1852.

Talooks.	NAMES.	Stations.	Prospect of the Season, and State of Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.							
				NEW ORLEANS,		BROACH.		TOTAL.		COUNTRY.	
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.
1	Dhundooka -	1	Reported to be unfavourable, owing to scanty and irregular falls of rain. Crops of both kinds of cotton unusually small.	170½	2-517	-	-	170½	2 517	1,69,343	3956 130
2	Gogo -	1		-	-	-	-	-	-	11,336	116 166
3	Dholka -	1		43½	220	-	-	43½	220	2,645	158 43
4	Veerumgaum -	1		-	-	-	-	-	-	51,793	1,080 69
	TOTAL -	4		214½	2 737	-	-	214½	2 737	2,35,117	5,310 408

Talooks.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount Expended on Cotton Purchased for Government.		
		NEW ORLEANS.			BROACH.			TOTAL.			COUNTRY.				
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.	
1	Dhundooka -	Candies lbs 2 312	-	-	-	-	-	-	2 312	-	-	-	-	-	8 - -
2	Gogo -	-	About 89 rupees a candy of 784 lbs.	118 4 11	-	-	-	-	-	118 4 11	-	-	-	118 4 11	
3	Dholka -	220	-	-	-	-	-	-	220	-	-	-	-	-	
4	Veerumgaum -	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TOTAL -	2 532	-	118 4 11	-	-	-	-	2 532	-	-	-	-	118 4 11	

Talooks.	NAMES.	G I N S.								Amount Expended on Construction of Gins.		
		IN USE.		OUT OF USE.		COMPLETED.		SOLD FOR GOVERNMENT.				
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.			
1	Dhundooka -	14 hand gins and 3 cottage gins	2 hand gins and 2 cottage gins	-	-	-	-	-	-	4 hand gins	500 - -	569 - 5
2	Gogo -	-	-	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-	-	-
4	Veerumgaum -	-	-	-	-	-	-	-	-	-	-	-
	TOTAL -	17	4	-	-	-	-	-	-	4	500 - -	569 - 5

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1852—continued.

Talooks.	NAMES.	QUANTITY OF COTTON GINNED.							Quantity Ginned during the Season.	Total Amount Expended in Ginning on Government Account.	
		FOREIGN.					COUNTRY.				
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.			By Private Individuals.
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
1	Dhundooka -	2,312	- - -	- - -	- - -	2,312	- - -	- - -	68 528	Candies lbs. 71 56	-
2	Gogo - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	58 11 1
3	Dholka - -	220	- - -	- - -	- - -	220	- - -	- - -	- - -	- - -	-
4	Veerungaum -	-	-	-	-	-	-	-	-	-	-
	TOTAL - -	2,532	- - -	- - -	- - -	2,532	- - -	- - -	68 528	71 56	58 11 1

Talooks.	NAMES.	Other Items of Expenditure during the Half-Year under Report.							Amount Expended up to last Half-Year.	Total Amount Expended up to 31st May 1852.
		Buildings	Con-tingencies.	Cultivation of New Orleans Cotton.	Purchase of New Orleans Cotton Crop, 1852.	Super-intendence.	Establish-ment.	Amount Expended during Half-Year.		
1	Dhundooka -	-	-	-	-	-	-	-	-	-
2	Gogo - -	240 11 3	122 15 2	177 9 -	177 - -	2,049 - -	240 - -	3,576 3 10	7,264 15 11	10,841 3 9
3	Dholka -	-	-	-	-	-	-	-	-	-
4	Veerungaum -	-	-	-	-	-	-	-	-	-
	TOTAL - -	240 11 3	122 15 2	177 9 -	177 - -	2,049 - -	240 - -	3,576 3 10	7,264 15 11	10,841 3 9

Remarks.—The experiments have progressed favourably during the half-year under report. The 16 gins, of which the woodwork was finished during last half-year, have since been finally completed, with grates, brushes, &c., at the reduced cost of 125 rupees each; and that by this means I have been enabled to dispose of four of them to Jumnadass of Ahmedabad for 500. It is very probable that in the coming season there will be some more sold, if bullock labour can be substituted for that of manual to work saw-gins generally; and as very many cotton merchants in the vicinity of Dhundooka were desirous to know whether this could be done, I accordingly constructed a driving cog-wheel, measuring eight feet in diameter, and had it in work for a couple of months, much to the satisfaction of those that have seen it; and though the average out-turn of the gin worked by it has not been so much as was anticipated, owing to hired bullocks being used, it is confidently expected that the profits resulting from this substitution, and the removal of the trouble and anxiety attending the employment of manual labour to work these machines, will induce many of the leading merchants of the place to patronise them. Jumnadass, in his petition forwarded to the Acting Collector, evinces a desire to work his four gins in the coming season by cattle labour, and with this intention he is at the present moment taking steps to have the driving-wheels made up at Ahmedabad during the monsoon. Five bales, containing nearly 2,000 lbs. of saw-ginned New Orleans cotton, were despatched to Bombay in April last; and considering that this quantity is the produce of the first trial undertaken by ryots, no doubt with some distrust on their part, I am sanguine that a more favourable result will be obtained in the coming season. From personal inspection of many hundred bales of cotton, and from private intercourse with parties both connected and unconnected with the cotton trade, I have every reason to believe wilful adulteration of many kinds are being partially suppressed; though I regret to mention the cause which has given rise to this practice is still existing to some extent at Dholera and Gogo, the extortion of three to four maunds of clean cotton on every dokra brought to those markets for sale by inland merchants.

(signed) T. Price,
Superintendent Cotton Experiments.

III.
Bombay.

PLAN of the BULLOCK-DRIVING MACHINE called for by Revenue Commissioner,
Northern Division, in his Enclosure, No. 1595, of 26 June 1852.

(See opposite.)

CONSTRUCTION.

It having suggested itself to me to try and construct a bullock-driving apparatus in consequence of the difficulty of obtaining labourers to work saw-gins, this circumstance operating more or less against the introduction of these machines in this zillah, I accordingly attempted to undertake the construction of it, and having completed and found it by trial to answer the purpose for which it was intended, I reported the circumstances to the then Acting Collector, in my letter of the 17th April last. The driving-wheel is 8 feet in diameter, spokes of teak wood, fellys of bauble, double, to admit pieces of wood for cogs being scratched and nailed on upright, and half teak, with braces to strengthen wheel. This horizontal wheel works a drum attached to one end of a shaft about 11 feet long, placed immediately below the cogs of the large wheel, while at the other end there is a cog-wheel, 3 feet in diameter, to accelerate the motion of the fly-wheel, in the nave of which a corresponding number of teeth is cut out. Cogs made from $2\frac{1}{2}$ to 3 inches thick, which I now find to be rather large, as they tend to give an unsteady motion to the lever, and I mention this circumstance here that it may be avoided in future. The smaller the teeth the better, but they ought, at the same time, to be proportionally strong. There is also an advantage in this plan of the cattle being made to work outside the gin-house, and having the wall between it effectually prevents dust being blown into the seed cotton brought to be ginned. The motion imparted to the gin is $(2 \times 6 \times 2\frac{1}{2} \times 7 =)$ 231 revolutions, which is about the usual rate it is generally worked. I may also state, that the machine is of the simplest kind, and as it is capable of being made up cheaply, with materials obtainable on the spot, it is more than probable that its approval by cotton merchants will eventually be the result. Cost, including temporary shed for cattle, 75 rupees.

(signed) *T. Price.*

Superintendent's Office, Camp Gogo,
8 July 1852.

No. 10,443.

MINUTE by the Honourable Board.

THIS may be recorded for the present.

2. The papers may be considered by the Survey Commissioner and Revenue Secretary when they proceed as indicated in my Minute of 21 May 1852.

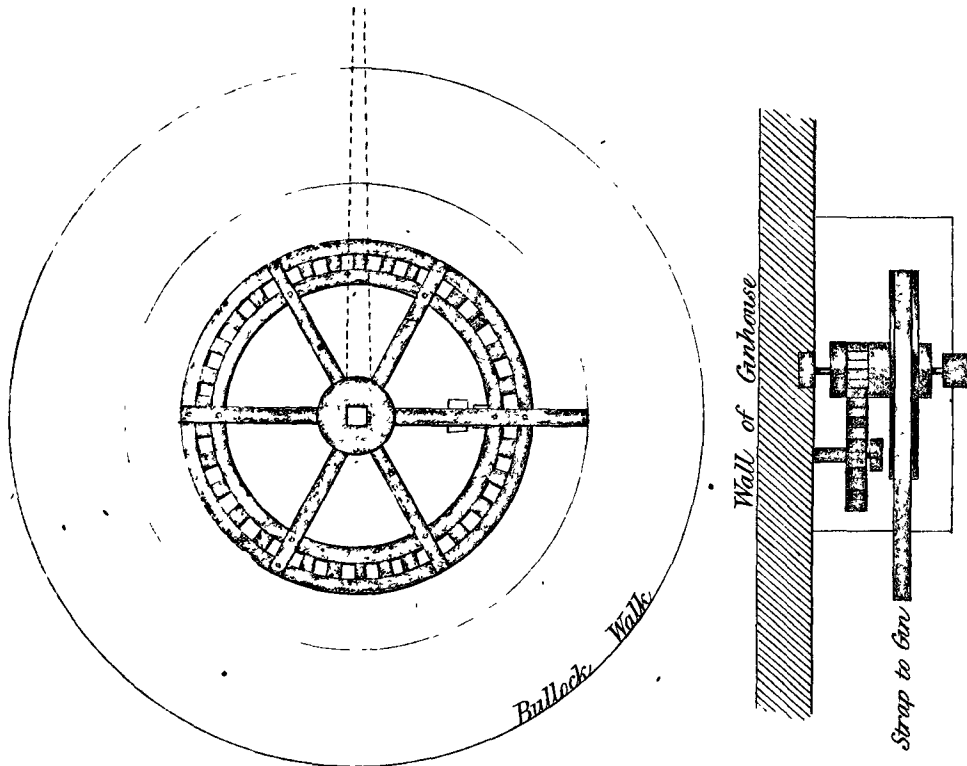
(signed) *Falkland.*
D. A. Blane.
A. Bell.

11 August 1852.

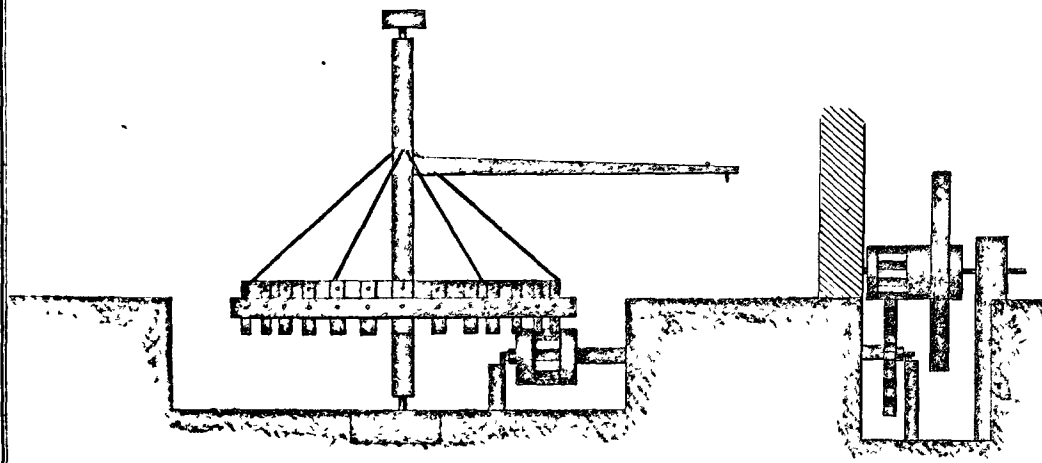
To face page 1278

PLAN OF THE BULLOCK DRIVING MACHINE,
Called for by Revenue Commissioner N.D. in his Encl. N^o 1595, of 26th June, 1852.

Plan.



Elevation.



SCALE
1 2 3 4 5 6 7 8 feet

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 30 November 1852.

Superintendent's Office, Dundooka, 1 December 1852.

No.	NAMES.	Stations under Superintendent.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been Cleaned on Saw Gins, or will be Cleaned.					
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.		
1	Dundooka -	1	Both the New Orleans and indigenous cotton suffered from irregular falls of rain, the crops of both kinds were in consequence smaller than usually obtained from the quantity of land cultivated with them.	175 lbs.	-	175 lbs.	-	The whole crop of New Orleans was ginned, making about 2,000 lbs. of clean cotton.	-	-	-	Nearly 1-70th of whole crop of 5,310 candies of clean cotton.	
-	Ranpoor -	1		-	-	-	-		-	-	-		
2	Gogo -	1		-	-	-	-		-	-	-		Whole crop.
3	Dholka -	1		-	-	-	-		-	-	-		-
4	Veerungaum -	1		-	-	-	-		-	-	-		-
	TOTAL - -	5	- - - - -	175 lbs.	-	175 lbs.	-	Whole crop.	-	Whole crop.	1-70th of the whole crop.		

No.	NAMES.	G I N S.								Amount Expended in Construction of Gins.
		In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold during the Half-Year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Dundooka -	-	6 gins of 20 saws each	-	-	-	-	-	-	-
-	Ranpoor -	14 gins of 20 saws each, and 3 cottage gins	and 2 cottage gins.	-	-	-	-	-	-	-
2	Gogo -	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-
4	Veerungaum -	-	-	-	-	-	-	-	-	-
	TOTAL - -	17	8	-	-	-	-	-	-	-

No.	NAMES.	OTHER ITEMS OF EXPENDITURE.						Total Amount.	Amount Expended up to last Half-Year	Total Expended up to end of Half-Year under Report.	Prospects of the coming Season.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	New Orleans Cotton Cultivation.	Amount of Superintendence.	Amount of Establishment.				
		22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
1	Dundooka -	-	13 11 7	-	55 8 8	2,049 - -	168 - -	2,286 4 3	10,841 3 9	13,127 8 -	More favourable than last Season.
-	Ranpoor -	-	-	-	-	-	-	-	-	-	
2	Gogo -	-	-	-	-	-	-	-	-	-	
3	Dholka -	-	-	-	-	-	-	-	-	-	
4	Veerungaum -	-	-	-	-	-	-	-	-	-	
	TOTAL - -	-	13 11 7	-	55 8 8	2,049 - -	168 - -	2,286 4 3	10,841 3 9	13,127 8 -	

Remarks.—The attention of this department during the half-year under report, was chiefly directed to the distribution of the New Orleans cotton seed obtained from the crop of last year, and its subsequent cultivation in the districts of Dhundooka, Dholka, and Gogo; which has, I am glad to say, increased from 200 last year to 500 this year; the ryots are beginning to evince a desire to sow this exotic largely, and to make use of the saw gin, provided the latter is made available for being worked by cattle power.

Note.—This report was prepared by the late Superintendent, Mr. Price. I only copied and despatched it.

(signed) T. Edwards,
Superintendent Cotton Experiments.

REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1853, prepared from the Information furnished by the Carkoon of the Experimental Department, and that on the Records of the Superintendent's Office.

Talookas.	NAMES.	Stations.	Prospects of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS UNDER REPORT.									
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY.			
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.		
				<i>Bs. vs. ws.</i>	<i>lbs.</i>			<i>Bs. vs. ws.</i>	<i>lbs.</i>	<i>Bs. vs. ws.</i>	<i>lbs.</i>	<i>Bs. vs. ws.</i>	<i>lbs.</i>
1	Dhundooka -	1	The produce of both New Orleans and indigenous cotton was unfavourable, in consequence of the irregular fall of rain.	501 14 8	2 33	-	-	501 14 8	2 33	203,271 9 8	4,073 623		
2	Gogo -	1		36 - -	- 55	-	-	36 - -	- 55	12,320 12 3	184 649		
3	Dholka -	1		104 16 19	entirely failed.	-	-	106 16 19	-	455 - 13	39 74		
4	Veerumgaum -	1		- - -	- - -	-	-	- - -	-	55,688 5 -	2,194 480		
5	Duskrohie -	1		27 14 13	- 470	-	-	27 14 13	- 470	1,612 17 4	93 167		
	TOTAL -	5		670 6 -	2 558	-	-	670 6 -	2 558	273,348 17 5	6,585 425		

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.										TOTAL Amount Expended on Cotton Purchased for Government.			
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY.				
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.		Rate per Candy.	Amount.	
1	Dhundooka -	2 23*	About 95. 15. 4. rupees a candy of 784 lbs. †	119 3 3	-	-	2 33	About 95. 15. 4. rupees a candy of 784 lbs. †	119 3 3	-	-	-	-	125 1 3 Of one candy and 252 lbs. purchased from ryots.	
2	Gogo -	- 55*		5 14 -	-	-	- 55		5 14 -	-	-	-	-		
3	Dholka -	-		-	-	-	-		-	-	-	-	-		-
4	Veerumgaum -	-		-	-	-	-		-	-	-	-	-		-
5	Duskrohie -	-		-	-	-	-		-	-	-	-	-		-
	TOTAL -	2 88		125 1 3	-	-	2 88		125 1 3	-	-	-	125 1 3		

Talookas.	NAMES.	G I N S.								TOTAL Amount Expended on Cotton Purchased for Government.	
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.		
1	Dhundooka -	3 hand gins	-	10 hand gins and 3 cottage gins.	5 hand gins and 1 hand gin.	-	-	-	-	-	125 1 3
2	Gogo -	-	-	-	2 cottage gins	-	-	-	-	-	
3	Dholka -	-	-	-	-	-	-	-	-	-	
4	Veerumgaum -	-	-	1 hand gin	-	-	-	-	-	-	
5	Duskrohie -	-	-	-	-	-	-	-	-	-	
	TOTAL -	3 gins	-	14 gins	8 gins	-	-	-	-	-	125 1 3

* These items include the quantity produced in the Government fields.

† Rate at which purchased from ryots, 1 candy and 252 lbs.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT of Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1853—continued.

Talooka.	NAMES.	QUANTITY OF COTTON GINNED.								Total Amount Expended in Ginning, on Government Account.	
		FOREIGN.						COUNTRY.			
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.		
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
1	Dhundooka	1 717	-	-	-	1 717	-	-	-	1 717	34 4 4
2	Gogo	-	-	-	-	-	-	-	-	-	-
3	Dholka	-	-	-	-	-	-	-	-	-	-
4	Veerungaum	-	-	-	-	-	-	-	-	-	-
5	Duskrohie	-	-	-	-	-	-	-	-	-	-
	TOTAL	1 717	-	-	-	1 717	-	-	-	1 717	34 4 4

Talooka.	NAMES.	Other Items of Expenditure during the Half-Year under Report.							Amount Expended up to last Half-Year.	Total Amount Expended up to 31 May 1853.
		Buildings; for Constructing four Gin Sheds at Ranpoor.	Con-tingencies.	Cultivation of New Orleans Cotton.	Purchase of New Orleans Cotton Crop.	Super-intendent.	Establish-ment.	Amount Expended during Half-Year under Report.		
1	Dhundooka	77 5 2	18 5 1	133 2 4	160 5 7	1,446 - -	182 9 1	2,017 11 3	2,286 4 3	4,303 15 6
2	Gogo	-	-	-	-	-	-	-	-	-
3	Dholka	-	-	-	-	-	-	-	-	-
4	Veerungaum	-	-	-	-	-	-	-	-	-
5	Duskrohie	-	-	-	-	-	-	-	-	-
	TOTAL	77 5 2	18 5 1	133 2 4	160 5 7	1,446 - -	182 9 1	2,017 11 3	2,286 4 3	4,303 15 6

* Rs. 47. 1. 6. have been expended up to the end of May, and Rs. 86. 10. on account of rent of the fields, and Government share of the crops have been paid in June, but the produce of cotton was received in the month of May, and therefore the amount has been included in the account.

Remarks.—Four bales containing 1 candy and 717 lbs. of saw ginned New Orleans cotton, were despatched to Bombay in May last, viz.—Two bales containing the yield of the fields cultivated by Government, amounting to 681 lbs. net clean cotton, the other two bales contained a portion of the New Orleans cotton grown by the ryots, and amounted to 820 lbs. net clean cotton; the other 155 lbs. of cotton without being ginned remaining in store, amounting in all to the quantity of 2 candy and 88 lbs. of New Orleans cotton.

(signed) J. W. Hadow,
Acting Collector.

REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 30 November 1853, prepared from the Information obtainable from the Records of the Superintendent's Office, as well as of this office as regards the Quantity of Cotton on hand and Gins, &c., has been certified by the Mamlutdar of Dhundooka to whom the Report was referred for examination.

No.	NAMES.	Station under Superintendent.	Remarks on the past Season, as to how far anticipation regarding the Crop and its disposal.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of last year's Crop which has been cleaned on Saw Gins, or will be cleaned.				
				New Orleans.	Broach.	Total	Country.	New Orleans.	Broach.	Total	Country.	
1	2	3	4	5.	6.	7.	8.	9.	10.	11.	12.	
1	Dhundooka	1	- - - - -	Lbs. 1,155	-	Lbs. 1,155	-	2,437 lbs. of whole crops, of which 1,501 lbs. of clean cotton ginned and exported to Bombay in May 1853, and 936 lbs. remaining to be ginned and cleaned.	-	2,437 lbs. of whole crops.	-	
2	Gogo	1	The produce of both New Orleans and indigenous cotton was unfavourable in consequence of the irregular fall of rain.	-	-	-	-		-		-	-
3	Dholka	1		-	-	-	-		-		-	-
4	Veerungaum	1		-	-	-	-		-		-	-
5	Duskrohie	1		-	-	-	-		-		-	-
	TOTAL	5		- - - - -	1,155	-	1,155	-	2,437	-	2,437	-

REPORT of Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 30 November 1853—continued.

No.	NAMES.	G I N S.								Amount Expended in Construction of Gins.
		In Use.		Out of Use.		Completed during the Half-year under Report.		Sold during the Half-year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Dhundooka -	3 hand gins	- -	10 hand-gins and 3 cottage gins.	5 hand gins.	-	-	-	-	-
2	Gogo - -	- -	- -	- -	1 hand gin.	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-
4	Veerumgaum -	- -	- -	1 hand gin.	2 cottage gins.	-	-	-	-	-
5	Duskrohie -	-	-	-	-	-	-	-	-	-
	TOTAL - -	3 - -	- -	14 - -	8 - -	-	-	-	-	-

No.	NAMES.	Other Items of Expenditure.						Total Amount.	Amount Expended up to last Half-year.	Total Expended up to end of Half-year under Report.	Prospects of the coming Season.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	New Orleans Cotton Cultivation.	Amount of Superintendence.	Amount of Establishment.				
		22.	23.	24.	25.	26.	27.				
1	Dhundooka -	*9 2 8	3 15 9	237 13 1	- -	1,212 - -	108 - -	1,570 15 6	15,145 3 3	16,716 2 9	} More favourable than last year.
2	Gogo - -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
3	Dholka -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
4	Veerumgaum -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
5	Duskrohie -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
	TOTAL - -	9 2 8	3 15 9	237 13 1	- -	1,212 - -	108 - -	1,570 15 6	15,145 3 3	16,716 2 9	

* Rs. 51. 14. 8. of 23 Bengal maunds of uncleaned New Orleans cotton, being the produce of the Duskrohie purgunnah, received in store in the month of November 1853, will be paid on the charge being audited by the civil auditor.

Remarks.—It appears that the superintendent kept no diary showing how his own time and that of his establishment had been occupied, as noticed in para. 3 of the Acting Collector's letter to the Revenue Commissioner (No. 267), dated 18th April, and approved of by the Revenue Commissioner in para. 4 of his letter (No. 1437) dated 25th May 1853, Mr. Edwards' attention to which was directed by the Acting Collector in his memorandum (No. 380) dated 1st June 1853.

The Acting Collector is therefore unable to furnish the requisite information in detail further than what can be collected from the Superintendent's monthly progress reports, made by him up to September 1853.

At the beginning of the monsoon Mr. Edwards proceeded to Gogo, remained there on account of ill health, and returned to Dhundooka by the end of August.

Two Bengal maunds and 20 seers of the New Orleans Cotton, grown by the ryots, were received in June; 6½ Bengal maunds of kuppas had been ginned in the same month, and 3 maunds and 17 seers had remained unginned. The gin house at Ranpoor had also been completed.

The 150 gin saws, arrived in October 1853, have been retained at Ahmedabad, as reported to the Revenue Commissioner in the Acting Collector's letter (No. 586) dated 21st October 1853.

The wishes of the natives in respect to the use of the saw gins were noticed in the Acting Collector's letter (No. 95) dated 7th February last, with its accompaniments.

Mr. Edwards had resigned the situation, under date the 1st November 1853, and delivered over charge to the Mauludtar of Dhundooka, which was reported to the Revenue Commissioner, under date the 4th idem, to which and the subsequent correspondence the Acting Collector begs to refer.

Ahmedabad Collector's Camp, Morassa, }
8 December 1854.

(signed) J. W. Hadow,
Acting Collector.

REPORT of the Cotton Experiments in the Ahmedabad Zillah for the Half-Year ending 31 May 1854, prepared from the Information furnished by the Mamlutdar of Dhundooka, as well as on the Records of this Office.

Talookas.	NAMES.	Stations.	Prospect of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.						COUNTRY.		
				NEW ORLEANS.		BROACH.		TOTAL.		Extent in Beegahs.	Estimated Produce in Candies.	
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.			
1	Dhundooka	1	More favourable than last year.	77	Lbs. 183	-	-	77	Lbs. 183	3,45,943 5 -	5,870 762	
2	Gogo	1		-	-	-	-	-	-	9,604 10 11	84 254	
3	Dholka	1		-	-	-	-	-	-	76,771 1 16	4,818 825	
4	Veerungaum	1		-	-	-	-	-	-	In acres 855 31	73,473 6 4	1,868 517
5	Duskrobie	1		-	-	-	-	-	-	2,127 12 12	123 188	
TOTAL	-	5	-	77	183	-	-	77	183	5,07,919 16 3	12,766 194	
										In acres 855 31		

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.									TOTAL Amount Expended on Cotton Purchased for Government.				
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.				COUNTRY.			
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.		Quantity.	Rate per Candy.	Amount.	
1	Dhundooka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Gogo	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Dholka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Veerungaum	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Duskrobie	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Talookas.	NAMES.	G I N S.								Total Amount Expended in Cotton Purchased for Government.			
		In Use.		Out of Use.		Completed.		Sold for Government.					
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	For Private Individuals.	Number.	For what Amount.				
1	Dhundooka	3 hand gins	-	-	10 hand gins and 3 cottage gins.	5 hand gins	-	-	-	-	-	-	-
2	Goga	-	-	-	-	1 ditto.	-	-	-	-	-	-	-
3	Dholka	-	-	-	-	-	-	-	-	-	-	-	-
4	Veerungaum	-	-	-	1 hand gin	2 cottage gins.	-	-	-	-	-	-	-
5	Duskrobie	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	3 gins	-	-	14 gins	8 gins.	-	-	-	-	-	-	-

REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1854—continued.

Talookas.	NAMES.	QUANTITY OF COTTON GINNED.								Total Amount Expended in Ginning on Government Account.	
		FOREIGN.						COUNTRY.			Quantity Ginned during the Season.
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.		
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
		<i>Candies. lbs.</i>				<i>Candies lbs.</i>				<i>Candies. lbs.</i>	
1	Dhundooka	1	152	-	-	1	152	-	-	1 152	
2	Gogo	-	-	-	-	-	-	-	-	-	
3	Dholka	-	-	-	-	-	-	-	-	-	
4	Veerumgaum	-	-	-	-	-	-	-	-	-	
5	Duskrobie	-	-	-	-	-	-	-	-	-	
	TOTAL	1	152	-	-	1	152	-	-	1 152	

Talookas.	NAMES.	Other Items of Expenditure during the Half-year under Report.							Amount Expended up to last Half-Year.	Total Amount Expended up to 31st May 1854.
		Buildings; constructing Four Gin-sheds at Ranpoor.	Contingencies.	Cultivation of New Orleans Cotton Crop.	Purchase of New Orleans Cotton Crop.	Superintendent.	Establishment.	Amount Expended during Half-Year under Report.		
1	Dhundooka	-	-	-	-	*367	-	367	16,716 2 9	17,083 2 9
2	Goga	-	-	-	-	-	-	-	-	-
3	Dholka	-	-	-	-	-	-	-	-	-
4	Veerumgaum	-	-	-	-	-	-	-	-	-
5	Duskrobie	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	-	-	367	-	367	16,716 2 9	17,083 2 9

* This item includes the amount of pay and batta for December 1853, 243 rupees drawn by Mr. Edwards which was adjusted in March 1854, as also the amount of batta, 124 rupees, drawn by Mr. Daley, during his stay in this zillah.

Remarks.—Mr. Daley, who was deputed from Surat to ascertain the suitability of the soils and climate for the New Orleans cotton, arrived in this collectorate at the end of December 1853, and returned to Surat at the end of February last. His report relative to the results of his inquiry has not yet been received by this department. The quantity of uncleaned New Orleans cotton which was in store was ginned by him after obtaining my permission, in February last.

Ahmedabad Collector's Camp, Morassa, }
8 December 1854.

(signed) J. W. Hadow,
Acting Collector.

(V. 3583.)

REPORT of the Cotton Experiment in the Ahmedabad Zillah, for the Half-Year ending 30 November 1854, prepared from the information furnished by the Mamlutdar of Dhundooka.

No.	NAMES.	Station under Superintendent.	Remarks on the past Season as to how far anticipations regarding the Crop and its disposal were realized.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Dhundooka	No superintendent for the present in this collectorate.	The crop of indigenous cotton reported to be superior to that of last year, the account of the New Orleans crop is unfavourable; the heavy rains having proved injurious to the productiveness of the plant.	<i>lbs.</i>	-	<i>lbs.</i>	-	105lbs. of the whole crops.	-	<i>lbs.</i>	-
2	Gogo			1,221	-	1,221	-		-	-	
3	Dholka			-	-	-	-		-	-	
4	Veerumgaum			-	-	-	-		-	-	
5	Duskrobie			-	-	-	-		-	-	
	TOTAL	-	-	1,221	-	1,221	-	105	-	105	-

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 30 November 1854—continued.

No.	NAMES.	G I N S.								Amount Expended in Construction of Gins. 21.
		In Use.		Out of Use.		Completed during the Half-year under Report.		Sold during the Half-year under Report.		
		Belonging to Government. 13.	Belonging to Private Individuals. 14.	Belonging to Government. 15.	Belonging to Private Individuals. 16.	For Government. 17.	For Private Individuals. 18.	For Government. 19.	For Private Individuals. 20.	
1	Dhundooka	3 hand gins	- - -	10 hand gins 3 cottage gins.	5 hand gins, 1 ditto, and 2 cottage gins	-	-	-	-	-
2	Gogo	-	-	-	-	-	-	-	-	-
3	Dholka	-	-	-	-	-	-	-	-	-
4	Veerungam	-	-	1 hand gin	-	-	-	-	-	-
5	Duskrohe	-	-	-	-	-	-	-	-	-
	TOTAL	3 hand gins	- - -	14 gins	8 gins	-	-	-	-	-

No.	NAMES.	Other Items of Expenditure.						Amount Expended up to last Half-year. 29.	TOTAL Expended up to end of Half-year under Report. 30.	Prospects of the coming Season. 31.
		Purchase and Ginning of Cotton. 22.	Contingencies. 23.	Buildings. 24.	New-Orleans Cotton Cultivation. 25.	Amount of Superintendence. 26.	Amount of Establishment. 27.			
1	Dhundooka	-	-	-	-	-	-	17,083 2 9	17,083 2 9	Favourable.
2	Gogo	-	-	-	-	-	-	-	-	
3	Dholka	-	-	-	-	-	-	-	-	
4	Veerungam	-	-	-	-	-	-	-	-	
5	Duskrohe	-	-	-	-	-	-	-	-	
	TOTAL	-	-	-	-	-	-	17,083 2 9	17,083 2 9	

Remarks.—The produce of New Orleans cotton for 1853-54 has been ginned under the superintendence of the Mamlutdar of Dhundooka in February last. The sum of Rs. 51. 14. 8, being the produce of New Orleans cotton for 1852-53, purchased on account of Government of the Duskrohe Purgunnah, and Rs. 12. 10. 7., being the produce for 1853-54 of the Dhundooka Purgunnah. Total Rs. 64. 9. 3, having been paid after the close of the half-year, and consequently not entered in this report.

Ahmedabad Collector's Camp, Dholka,
13 March 1855.

J. W. Hadow,
Collector.

(V. 7817.)

No. 590 of 1855.

REPORT of the Cotton Experiments in the Ahmedabad Zillah for the Half-Year ending 31 May 1855.

Talookas.	NAMES.	Station.	Prospect of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT OF BEEGAHS OF COTTON CULTIVATION.							
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY.	
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.
1	Dhundooka	1	- - - -	B. w.w.w. 547 10 0	C. lbs. 0 576	- - - -	- - - -	B. w.w.w. 547 10 0	C. lbs. 0 576	B. w.w.w. 1,95,214 0 0	C. lbs. 3,889 222
2	Gogo	1	Less favourable than last year, the heavy continued rain towards the end of July has interfered with the cotton sowing.	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	6,002 1 4	161 772
3	Dholka	1		Acres. goomt 45 31	2 695	- - - -	- - - -	Acres. goomt. 45 31	2 695	1,317 19 10	104 91
4	Veerungam	1		B. w.w.w. 2 10 0	- - - -	- - - -	- - - -	B. w.w.w. 2 10 0	- - - -	B. w.w.w. 68,678 10 0	
5	Duskrohe	1		1 10 0	- - - -	- - - -	- - - -	1 10 0	- - - -	2,604 6 10	135 163
		5		- - - -	551 10 0	- - - -	- - - -	- - - -	551 10 0	- - - -	2,73,816 17 4
			Acres - -	45 31	3 487	- - - -	- - - -	45 31	3 487	71 18	7,875 375

REPORT of Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1855—continued.

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount Expended on Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL.			COUNTRY.			
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.
1	Dhundooka -	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Gogo -	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Veerungaum -	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Duskrohie -	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL -	-	-	-	-	-	-	-	-	-	-	-	-	-

Talookas.	NAMES.	G I N S.								TOTAL Amount Expended in Cotton Purchased for Government.
		In Use.		Out of Use.		Completed		Sold by Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
1	Dhundooka -	3 hand gins	-	10 hand gins and 3 cottage gins.	5 hand gins 1 dito. 2 cottage gins.	-	-	-	-	-
2	Gogo -	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-
4	Veerungaum -	-	-	1 hand gin	-	-	-	-	-	-
5	Duskrohie -	-	-	-	-	-	-	-	-	-
	TOTAL -	3 gins.	-	14 gins.	8 gins.	-	-	-	-	-

Talookas.	NAMES.	QUANTITY OF COTTON GINNED.								Quantity Ginned during the Season.	Total Amount Expended in Ginning on Government Account.
		FOREIGN.						COUNTRY.			
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.		
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
1	Dhundooka -	lbs. 105	-	-	-	lbs. 105	-	-	lbs. 105	- 14 -	
2	Gogo -	-	-	-	-	-	-	-	-	-	
3	Dholka -	-	-	-	-	-	-	-	-	-	
4	Veerungaum -	-	-	-	-	-	-	-	-	-	
5	Duskrohie -	-	-	-	-	-	-	-	-	-	
	TOTAL -	105	-	-	-	105	-	-	105	- 14 -	

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half Year ending 31 May 1855—continued.

Talookas.	NAMES.	Other Items of Expenditure during the Half-Year under Report.						Amount Expended up to Last Half Year.	Total Amount Expended up to 31 May 1855.	
		Buildings; Constructing Four Gin Sheds at Ranpoor.	Contingencies.	Cultivation of New Orleans Cotton Crop.	Purchase of New Orleans Cotton Crop.	Superintendent.	Establishment.			Amount Expended during Half-Year under Report
1	Dhundooka -	-	-	-	*64 9 3	-	-	65 7 3	17,083 2 9	17,148 10 -
2	Goga -	-	-	-	-	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-
4	Veerungaum	-	-	-	-	-	-	-	-	-
5	Duskrohie -	-	-	-	-	-	-	-	-	-
	TOTAL -	-	-	-	64 9 3	-	-	65 7 3	17,083 2 9	17,148 10 -

* The sum of rupees Rs. 64. 9. 3. shown in the remarks of the report of half-year ending 30 November 1854, having been paid in the half-year under report.

(signed) J. W. Hadow, Collector.

Ahmedabad Collector's Office,
2 August 1855.

No. 106 of 1856.

REPORT of the Cotton Experiments in the Ahmedabad Zillah for the Half-Year ending 30 November 1855.

Number.	NAMES.	Station under Superintendent.	Remarks on the past Season, as to how far anticipation regarding the Crop and its disposal were realized.	Quantity of Cotton on hand on Account of Government of each Sort, Ginned or not Ginned.				Supposed Proportion of Last Year's Crop which has been Cleaned on Saw Gins, or will be Cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Dhundooka -	1	Less favourable than last year; the heavy continued rain towards the end of July interfered with the cotton sowing.	-	-	-	-	-	-	-	-
2	Gogah -	1		-	-	-	-	-	-	-	-
3	Dholka -	1		-	-	-	-	-	-	-	-
4	Veerungaum	1		-	-	-	-	-	-	-	-
5	Duskrohie -	1		-	-	-	-	-	-	-	-
	TOTAL -	5	-	-	-	-	-	-	-	-	-

Number	NAMES.	G I N S.								Amount Expended in Construction of Gins. 21.
		In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold during the Half-Year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.	
		13.	14.	15.	16.	17.	18.	19.	20.	
1	Dhundooka -	3 hand gins	-	10 hand-gins and 3 cottage gins.	5 hand gins	-	-	-	-	-
2	Gogah -	-	-	-	1 ditto and 2 cottage gins.	-	-	-	-	-
3	Dholka -	-	-	-	-	-	-	-	-	-
4	Veerungaum	-	-	1 hand gin	-	-	-	-	-	-
5	Duskrohie -	-	-	-	-	-	-	-	-	-
	TOTAL -	3 hand gins	-	14	8	-	-	-	-	-

REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 30 November 1855—continued.

Number.	NAMES.	OTHER ITEMS OF EXPENDITURE.					Total Amount.	Amount Expended up to last Half-Year.	Total Expended up to end of Half-Year under Report.	Prospects of the coming Season.	
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	New Orleans Cotton Cultivation.	Amount of Superintendence.					Amount of Establishment.
		22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
1	Dhundooka	-	-	*6 4	-	-	345 9 7	351 13 7	17,148 10	17,500 7 7	Favourable.
2	Gogah	-	-	-	-	-	-	-	-	-	
3	Dholka	-	-	-	-	-	-	-	-	-	
4	Veerungaum	-	-	-	-	-	-	-	-	-	
5	Duskrohie	-	-	-	-	-	-	-	-	-	
	TOTAL	-	-	6 4	-	-	345 9 7	351 13 7	17,148 10	17,500 7 7	

* Rs. 6. 4. expended over the buildings, is for repairing the work sheds, &c.
 † Rs. 345. 9. 7. is paid to the establishment on account of arrears of pay from 1 October 1853 to 28 February 1855, as sanctioned by Government under date the 7th June 1855.
 The sum of Rs. 13. 7. expended for packing, weighing, cart and boat hire, &c., of New Orleans cotton shipped to Bombay is not inserted in this Report, which will be brought to account after the bill is passed by the civil auditor.

Ahmedabad Collector's Camp, Peerana,
 31 January 1856.

(signed) J. W. Hadow, Collector.

SUPERINTENDENT'S REPORT on the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1856.

Number.	NAMES.	Stations.	Prospects of the Season, and State of the Crops, as regards each Sort of Cotton.	EXTENT IN BÉEGAS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.		
				Extent in Acres.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1	Duskrohie	-	After I shall have been in the collectorate for a monsoon, I will be able to pass an opinion on the prospects of the season.	-	C. lbs.	-	-	-	-	-	1,631 37 8	605 28
2	Jeytulpoor	-		-	-	-	-	-	-	-	150 13 0	41 646
3	Veerungaum	-		-	11 3	-	-	-	-	-	55,257 31 13	21,207 363
4	Purantej	-		-	-	-	-	-	-	-	32 30 0	11 156
5	Dholka	-		-	-	-	-	-	-	-	1,578 13 0	654 255
6	Dhundooka	1		-	55 3	493	-	-	-	-	84,011 20 0	22,963 24
7	Gogo	-		-	2 14	1	-	-	-	-	3,651 15 7	606 132
	TOTAL	1	-	57 28 3	494	-	-	-	-	148,314 0 12	46,089 36	

Number.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity.	Rate per Candie.	Amount.	Quantity.	Rate per Candie.	Amount.	Quantity.	Rate per Candie.	Amount.	Quantity.	Rate per Candie.		Amount.
		13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
1	Duskrohie	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Jeytulpoor	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Veerungaum	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Purantej	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Dholka	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Dhundooka	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Gogo	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT on the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1856—continued.

Number.	NAMES.	GINS								Amount Expended in Construction of Gins.	
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.		
		26.	27.	28.	29.	30.	31.	32.	33.		34.
1	Duskrohie -	-	-	-	4	-	-	-	-	-	-
2	Jeytulpoor -	-	-	-	-	-	-	-	-	-	-
3	Veerungaum -	-	-	1	-	-	-	-	-	-	-
4	Purantej -	-	-	-	-	-	-	-	-	-	-
5	Dholka -	-	-	-	-	-	-	-	-	-	-
6	Dhundooka -	-	-	12	-	-	-	-	-	-	-
7	Gogo -	-	-	-	-	-	-	-	-	-	-
	TOTAL -	-	-	13	4	-	-	-	-	-	-

Number.	NAMES.	QUANTITY OF COTTON RECEIVED.									Total Amount Expended in Ginning, &c., on Account of Government.	
		FOREIGN.						COUNTRY.		Quantity Ginned during the last Season.		
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.			
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.					
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	
1	Duskrohie -	-	-	-	-	-	-	-	-	-	30 maunds	6 4 6
2	Jeytulpoor -	-	-	-	-	-	-	-	-	-	-	-
3	Veerungaum -	-	-	-	-	-	-	-	-	-	-	-
4	Purantej -	-	-	-	-	-	-	-	-	-	-	-
5	Dholka -	-	-	-	-	-	-	-	-	-	-	-
6	Dhundooka -	-	-	-	-	-	-	-	-	-	-	-
7	Gogo -	-	-	-	-	-	-	-	-	-	-	-
	TOTAL -	-	-	-	-	-	-	-	-	-	30 maunds	6 4 6

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Amount Expended during the Half-Year under Report, including the Buying and Ginning of Cotton, &c.	Amount Expended up to last Half-Year, ending 30th November 1855.	Total Amount Expended up to Half-Year under Report.
		For Building.	For Contingencies.	For Superintendence.	For Establishment.			
		45.	46.	47.	48.			
1	Duskrohie -	16 14 3	17 - 9	2,046 - -	311 8 -	2,397 11 6	17,500 7 7	19,898 3 1
2	Jeytulpoor -	-	-	-	-	-	-	-
3	Veerungaum -	-	-	-	-	-	-	-
4	Purantej -	-	-	-	-	-	-	-
5	Dholka -	-	-	-	-	-	-	-
6	Dhundooka -	-	-	-	-	-	-	-
7	Gogo -	-	-	-	-	-	-	-
	TOTAL -	16 14 3	17 - 9	2,046 - -	311 8 -	2,397 11 6	17,500 7 7	19,898 3 1

Column 44: Rs. 6. 4. 6. expended in ginning cotton. Column 45: Rs. 16. 14. 3. expended in repairing the gin shed, workshop, gins, &c. Column 46: Rs. 17. 0. 9. expended in stationery, books, &c. Column 47: 2,040 rupees, includes the Superintendent's salary, 1,500 rupees, and batta, 546 rupees. Column 48: Rs. 311. 8. consists of pay to the establishment, 292 rupees, and Rs. 19. 8. batta to Mr. Carvalho. The latter amount has not been paid. The sum of Rs. 97. 4. 2. for the purchase of New Orleans cotton by the Mamlutdar of Dhundooka, is not inserted in this report, but which will be brought to account after the bill has been audited.

(signed) Chas. Daley,
Superintendent Cotton Experiments.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 7 May 1857.—V. 3163 to 3168.

(No. 686 of 1857.)

V. 3163.

MEMORANDUM from the Revenue Commissioner, Northern Division, dated 21 March 1857.

* Submitted to Government for information.

2. The year ending on the 30th November 1856, shows no results as to the culture of exotic cotton, owing to the seeds expected from Dharwar and Travancore not having arrived in time for sowing.

3. A trial of some Sea Island cotton seed after the proper season is reported in Mr. Daley's para. 3d to have failed; the exact cause is not stated, but probably it was owing to the fact of its being sown out of season. It is not mentioned whence the Egyptian cotton seed alluded to in para. 2d was supplied, probably by Mr. Hadow himself. It does not appear whether the seed now received is expected to be good for sowing next season, or whether any measures have been taken to procure a fresh supply. The loss of the season is much to be regretted, but, of course, the Revenue Commissioner does not attach any blame to the local officers on this account. The seed was applied for in such time that in all probability it would have arrived before the monsoon, that it did not do so, was beyond their control.

4. The sample of yellow cotton has been despatched per Bangy, and the Revenue Commissioner begs to suggest that the opinion of the Chamber of Commerce be obtained as to its marketable qualities.

5. The Revenue Commissioner is not prepared to give his assent to the Collector's para. 3. From another correspondence, it has transpired that Mr. Daley, instead of being actively engaged in moving about, spent nearly seven months at Gogo, viz., from 1st May to 30th November 1856. A copy of Mr. Daley's explanations, as received from the Collector of Ahmedabad under his endorsements, No. 32, dated 6th January last, and No. 243, dated 24th ultimo, are forwarded. The Revenue Commissioner considers Mr. Daley's explanation unsatisfactory: the villages mentioned by Mr. Daley as having been visited by him are all within the Gogo Talooka, and mostly within a few miles from the town of Gogo; while Dhundooka, a more important district, was left to the management of his assistant, who, however well acquainted he may be with matters relating to cotton, had no experience of the country. The tidal observations seem to amount to nothing more than one fact not hitherto unknown; minute, regular and exact observations on the point might have been of some use.

6. It will be satisfactory if the proposed company noticed in para. 8 is brought into existence. The order by Triboun Shet for six gins, as noted in para. 9, and the establishment of a screw press at Dhollera, noticed in the superintendent's para. 5, are satisfactory, as tending to show the decline of the objection to use machinery; information of this latter Mr. Daley appears, by the wording of his reports, to have received upon hearsay only.

Superintendent's
para. 10.

7. Mr. Daley acted rightly in refusing to gin the old kuppas for the reasons he assigns. The Revenue Commissioner does not perceive that any other cotton was ginned.

Collector's para. 5,
and Superintendent's
para. 11.

8. There seems no objection to the sale of the cottage gins at the price mentioned by the superintendent; or to the construction of new ones, whenever called for by the merchants, for which the full price of 35 rupees should be charged when sold.

9. Mr. Daley makes a request for an increase of pay, which the Collector does not support, neither can the Revenue Commissioner. It was laid down in Mr. Shaw's letter to Government, No. 2243, dated 2d September 1850, para. 3, that success alone was to be the criterion of merit. As far as results go, and information is supplied, not much trouble seems to have been taken by Mr. Daley.

10. As more than a year has elapsed since the experimental department was re-established in the Ahmedabad Collectorate, it remains for Government to decide whether its further continuance is to be sanctioned. The Revenue Commissioner thinks that unless exotic seed is ready or within certain reach for next season, it is useless to keep up this expensive establishment, and that it would be preferable to keep merely a small establishment for making or repairing gins, as in Khandesh.

(signed) E. G. Fawcett,
Revenue Commissioner, N. D.

Tanna Districts, Revenue Commissioner's
Office, Camp Oormi, 21 March 1857.

* Memorandum from the Collector of Ahmedabad, No. 182, dated 10th February 1857, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1291

(No. 182 of 1857.)

MEMORANDUM from the Collector of Ahmedabad, dated 10th February 1857.

SUBMITTED for such instructions as the Revenue Commissioner may be pleased to furnish.

1. Owing to the non-arrival of the Sea Island and the New Orleans cotton seed in time for sowing, the experiments during the half-year reported upon were confined, as the Revenue Commissioner will perceive, to sowing a few seeds of Egyptian cotton in different months, and 8 lbs. of Sea Island cotton, the latter received from General W. Cullen after the season had closed.

2. Both experiments failed, the former owing, no doubt, as Mr. Daley surmises, to the seed being old or damaged, the latter to the seed having been sown at the wrong time. Mr. Daley does not mention in what locality or in what description of soil the experiment was made.

3. Mr. Daley and his assistant, would appear to have been usefully employed in selecting sites for sowing both descriptions of exotic cotton, and it is therefore to be regretted that he had not the opportunity of making the experiments in the places he contemplated.

4. The establishment appear to have been also usefully employed in refitting and in altering and improving the gins, and the endeavours which Mr. Daley describes to have been made by himself and his assistants to induce merchants and dealers to purchase gins are likely, the Collector thinks, from what Mr. Daley states, to be successful. The necessity that exists for the introduction of machinery in the place of the churka is apparent from what is stated in para. 11.

5. The Collector sees no objection to the gins referred to in para. 11 being sold for the sums which have been offered as proposed by Mr. Daley.

6. The Collector is not prepared at present to support Mr. Daley's application for an increase of salary.

7. The sample of yellow cotton referred to in para. 2 is forwarded for the inspection of the Revenue Commissioner. The Collector would suggest the advisability of its being ascertained whether cotton of this description has at present a place in any of the markets, and if so its value with a view to determining whether its reintroduction in these districts is desirable.

Ahmedabad, Collector's Camp, Sholapoor,
10 February 1857.

(signed) *J. W. Hadow,*
Collector.

By Banghy.

(No. 3 of 1857.)

To *J. W. Hadow, Esq.,* Collector, Ahmedabad.

Sir,

I HAVE the honour to forward my half-yearly progress report of the cotton experiments in this zillah, for the half-year ending 30th November 1856.

2. The small packet of Egyptian cotton seed which you had the kindness to send me, I gave a trial, by sowing the seeds in small quantities in the months of April, May, June, July and August, and hand-watering them before the commencement of the monsoon; but not a single seed germinated, from which I would conclude that the seed must have been either very old, or in some way damaged. The seeds of the Sea Island and New Orleans cotton, from last years' sweepings of the gin house at this place, germinated beautifully, without any care whatever having been bestowed on them, and have already yielded two crops and are still vigorous. In September last the seed of some yellow cotton was sown, of the kind described in Dr. Hove's work on the Cotton Plantations of Goozerat, page 127, a sample of which will be forwarded with this letter. This cotton plant cannot be distinguished from the New Orleans until the pods burst, the leaves, flowers, and pods are alike in both; but the wool of it is much more silky in texture than the New Orleans. The colour is, however, against its fetching a better price in the market.

3. The 8lbs. of Sea Island cotton-seed, received from General W. Cullen, arrived after the season for sowing had closed; still some of it was sown and irrigated, but none of the seeds sprouted. The further supply of cotton-seed forwarded by General W. Cullen has not as yet reached me.

4. It is much to be regretted that a season has been lost, owing to neither New Orleans nor Sea Island cotton seed arriving in time to sow, as both my assistant and myself did our best to become acquainted with the climate, and in carefully selecting sites for sowing both descriptions, so as to ensure success; and successful I am certain we would have been, had the exotic seed arrived in time, as the monsoon was so propitious.

296—Sess. 2.

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Bombay.

V. 3164.

III.
Bombay.

5. When I last visited Veerungaum, the Mamlutdar convened the merchants at that station, and I explained to them the loss they sustained by packing their cotton in dokras or bags, and forwarding them in that state to Dhollera, which enable parties on the look out to pilfer the cotton, and to substitute in lieu thereof salt, dirt, &c., instead of using screw-presses to bale it, which would tend to prevent such adulteration to a considerable extent, and enhance the price of the cotton. Since then I have heard that a merchant of Dhollera acted on my suggestion, and sent up a screw-press which pays him well. This beginning is in the right direction, and a few more screw-presses on the line of road between Veerungaum and Dhollera, would soon bring the fine cotton of Kuttivar into better repute.

6. The establishment was engaged in opening and refitting four gins; in altering the bend of the grates of three gins, one belonging to Government and two to Triboun Shet of Ahmedabad; and in re-casting the brass bearings, and in re-working the iron clamps of the gins, which had to be increased in size to enable them to work more freely and effectually, and that the above work was completed to my satisfaction is attributable to the able aid which my assistant rendered me in carrying out my views. No artificers could be obtained in this and the neighbouring villages to assist my establishment, as they were and still are engaged by the Public Work department, in making centrings for the bridges on the new embanked road in progress between Ahmedabad and Gogo, and in preparing the woodwork, &c., of the traveller's bungalows erecting at Burwulla and this station.

7. My object in selecting one of Triboun Shet's altered gins, in preference to a Government one, to compete with that of Dr. Forbes's was to gain the confidence of the cotton merchants by showing them that a gin belonging to one of their own party was not inferior to a Government one.

8. Since the success of Triboun Shet's gin, I have daily visits from agents of parties in Kattywar and Goozerat, both far and near, to inspect the gins, and to ascertain their price. Some of them have promised to purchase gins from me after consulting their constituents. That there is now a growing interest attached to the saw-gins, I beg to annex a letter in the original, in proof thereof from Runchore Chotalall, an inhabitant of Ahmedabad, of the firm of Kurrumchund Premchund, Bombay, a branch of the substantial firm of Muggunbhaee Kurrumchund Shet, of Ahmedabad. This enterprise is founded on my suggestions to the Megur Shet's brother, and several merchants at Ahmedabad, who had promised to get up a company for such an undertaking. In reply I answered all his queries, and stated that I would willingly give him every assistance in my power. When such an undertaking is once established in this zillah, there will be no difficulty in obtaining a firm footing for the exotic cotton by the aid of the muhajuns.

9. Triboun Shet has lately bespoken six gins, with alterations and additions at the rate of 160 rupees each, which I am endeavouring to get completed as quickly as possible.

10. I was compelled to decline ginning the kuppas which the merchants brought to me, because it was from two to six years old, very dirty, and in such a damaged state that it reversed the order of ginning kuppas, by giving an outturn of one-fourth cotton seed, and three fourths of wool and particles of seed, either in maunds or candies, instead of two-thirds seed and one-third wool when fresh good kuppas is ginned. There are many warehouses filled with this description of kuppas, the ginning of which would pay handsomely, but I could not countenance the introduction of such deteriorated cotton into the market, and explained the reason of my refusal to the merchants. The accumulation of this kuppas is owing to the want of hands to churka the whole of the kuppas of one season before the arrival of a fresh crop, when all the old kuppas which has not been churkaed is warehoused, and the new crop taken in hand at once; steam and machinery, which are being gradually appreciated by the natives, will eventually remedy this deficiency.

11. There are three cottage gins of four saws each in store, for one of which I have been offered 25 rupees, and would beg to recommend that it be given at that price, because it is out of order and will cost about 10 rupees for repairs which the party is willing to pay for. Mr. Price, however, sold similar gins to Colonel Lang at the rate of 35 rupees each; but then they were new and in working order. The other two gins have been engaged on hire at the rate of six rupees a year each, being one-fifth the amount charged for the hire of a 20-saw gin. As I anticipate a further demand for cottage gins, I would beg to solicit sanction to my being allowed to make them up at once when required.

12. I have now been more than a year employed in this zillah, and would respectfully beg to request that you will have the goodness to recommend me for an increase of pay equal, at least, to the salary attached to the appointment that I was nominated to by Major-general C. Waddington, chief engineer of public works, and sanctioned by Government, previous to joining my present situation.

Dundooka, 31 January 1857.

I have, &c.
(signed) C. Daley,
Superintendent Cotton Experiments.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Ahmedabad Zillah for the Half-Year ending 30 November 1856.

Number.	NAMES.	Station.	Remarks on the past Season, as to how far the anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on Hand on Account of Government of each sort, Ginned on account of Government.				Supposed Proportion of last Year's Crop which has been cleaned on the Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Duskrohis	-	-								
2	Jeytulpoor	-	-								
3	Veerungaum	-	-								
4	Purantej	-	-								
5	Dholka	-	-								
6	Dhundooka	1	-								
7	Gogo	-	-								
TOTAL - -		1	-	-	-	-	-	-	-	-	-

Number.	NAMES.	G I N S								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold during the Half-Year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	Amount.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Duskrohis	-	-	34	-	-		-	-	-
2	Jeytulpoor	-	-	-	-	-		-	-	-
3	Veerungaum	-	-	-	-	-		-	-	-
4	Purantej	-	-	-	-	-		-	-	-
5	Dholka	-	-	-	-	-		-	-	-
6	Dhundooka	-	-	-	-	-		-	-	-
7	Gogo	-	-	-	-	-		-	-	-
TOTAL - -		-	-	34	-	-	-	-	-	-

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.						Total Amount.	Amount Expended up to the last Half-Year ending 31st May 1856.	Total Expenditure from June 1851 up to the Half-Year under Report.	Prospects of the coming Season.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	Temporary Establishment and New Orleans Cultivation.	Amount of Superintendence.	Amount of Establishment.				
		22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
1	Duskrohis	94 4 2	3 9 6	7 9 -	-	2,052 --	593 5 4	2,750 12	19,898 3 1	22,648 15 1	} Very favourable.
2	Jeytulpoor	-	-	-	-	-	-	-	-	-	
3	Veerungaum	-	-	-	-	-	-	-	-	-	
4	Purantej	-	-	-	-	-	-	-	-	-	
5	Dholka	-	-	-	-	-	-	-	-	-	
6	Dhundooka	-	-	-	-	-	-	-	-	-	
7	Gogo	-	-	-	-	-	-	-	-	-	
TOTAL - -		94 4 2	3 9 6	7 9 -	-	2,052 --	593 5 4	2,750 12	19,898 3 1	22,648 15 1	

Remarks.—The expenditure on account of alterations to the gins will be shown in the next Half-yearly Progress Report.

To the Collector of Ahmedabad.

(signed) C. Daley,
Superintendent Cotton Experiments.

III.
Bombay.

To the Superintendent of the Experimental Cotton Farm at Dhundooka.

Sir,

BEING desirous of establishing a saw-gin establishment, to be worked by steam power; at or near Dhundooka, I am respectfully induced to request the favour of your enlightening me on the following points at your convenience:—

1. The proposed saw-ginning factory is to contain the same kind of machinery as used at Broach by Mr. Landon and a Parsee gentleman in similar factories. Do you think there can be any difference in the nature of the Dhundooka cotton that the machinery which answers for the Broach cotton may not suit the Dhundooka cotton? There is a report current among the native merchants that the cotton cleaned by a saw-gin gets its fibre cut off so much that it does not get a ready market. I see the Broach saw-ginned cotton has no such objection, because it is purchased very eagerly; and therefore I wish to know, if we were to obtain the same kind of machinery, would it not answer our purpose equally well at Dhundooka?

2. Do you think whether there can be any objection on the part of Government or the Collector to allow a private individual like me to establish such a concern?

3. Can you suggest any other place besides Dhundooka as a more suitable locality for such a concern? The place should be such where we might get large quantity of kupas to gin.

I am a native of Ahmedabad, and seeing the success with which similar concerns are carried on at Broach, am anxious to see one established in the Ahmedabad zillah; but before giving orders for the purchase of machinery, I have thought it proper to ask your advice on the subject, because I am confident that your experience with the cotton business, and your residence at Dhundooka, will make your opinion more valuable to me.

I trust you will excuse me for the liberty I have taken to trouble you with these questions without having the pleasure of previous acquaintance.

Bombay,
23 December 1856.

I remain, &c.
(signed) Runchore Chotalall.

P.S.—An early reply to this will greatly oblige me, for I wish to send order for the purchase of machinery to England as soon as possible.

(No. 55 of 1856.)

To J. W. Hadow, Esq., Collector, Ahmedabad.

Sir,

WITH reference to your endorsement, No. 1011, of the 10th instant, on the Revenue Commissioner's letter of the 6th idem, No. 3011, I have the honour to state that I arrived at Gogo on the morning of the 17th April, and left that place for Broach on the 23d to inspect the spinning machinery, &c., and returned on the 1st May last. It was my intention to have returned to Dhundooka before the commencement of the rains in the event of no exotic cotton seed being then received, but the arrival of my assistant obviated the necessity of my doing so. To my great relief, I found that he had considerable experience in the culture of New Orleans cotton, which induced me to request him to visit as many of the villages in the neighbourhood of Dhundooka during the monsoon, as the weather would permit, and to collect as much information as possible for me. To enable him to carry out my views, I gave him the use of one of my horses, as I was aware that he could not get on without one; and even with the aid of a horse he could not do much before the end of September, owing to the foggy nature of the soil in the neighbourhood, whereas in the Gogo talooka I found no such difficulty. Last monsoon was the highest that I had ever encountered, although it was considered by the ryots as heavy, but favourable; the rains were so very light, 27 inches only by the Dispensary pluviometer, that I was enabled to visit more of the country than I had anticipated, to note the strength and height of the highest spring-tides along the gulf, and to select eligible sites for sowing exotic cotton. The highest spring-tides in the gulf I found to be in the months of June and November; the former was, however, two feet higher than the latter.

2. As I did not get any exotic seed before the monsoon, I had hopes of receiving the New Orleans cotton seed from Vingorla in September, but which, I regret to state, did not arrive before the 12th of November, as reported in my letter, No. 50 of the 17th idem. On the 29th September I received your memorandum, No. 803, on Lieutenant-general W. Cullen's letter, in which that officer intimated that he had been promised a small supply of Sea Island cotton seed. On the 11th October I received your memorandum, No. 838, on another letter from Lieutenant-general Cullen in which that officer stated that he had received, on the 6th September, 130 lbs. of Sea Island cotton seed, and that on the same date

date he had made up two parcels of 4 lbs. each, out of the above quantity, which he had despatched by post, and the remainder he had forwarded on to Cochin to be shipped. The two former were received by my assistant on the 7th October, and the result of his experiments I will include in my half-yearly report, which is in hand. Again, on the 23d November, I received another memorandum from you, No. 952, on a copy of a letter from Mr. Chief Secretary Young, in which that gentleman intimates that a box, containing Sea Island cotton seed, had been sent to the Deputy Commissary-General on the 12th idem, for transmission to me, which induced me to remain a few days longer at Gogo, in the hope of its reaching me on or about the 28th before the fall of the second or highest spring tide in the year. So soon, however, as the fall began, I left Gogo for Dhundooka, which was on the 30th ultimo. From the above, you will perceive that I remained at Gogo so long only as there was a chance left of sowing the exotic cotton.

3. The box containing the Sea Island cotton seed has not as yet reached me.

Dhundooka,
30 December 1856.

I have, &c.
(signed) *C. Daley*,
Superintendent Cotton Experiments.

(No. 32 of 1857.)

Ahmedabad Collector's Camp, Veerungaum,
6 January 1857.

FORWARDED to the Revenue Commissioner, Northern Division, in reply to his letter of the 6th ultimo, No. 3011.

The Collector considers the explanation offered by Mr. Daley satisfactory.

(signed) *J. W. Hadow*,
Collector.

(No. 7 of 1857.)

To *J. W. Hadow*, Esq. Collector of Ahmedabad.

Sir,

IN reply to your memorandum, No. 145 of the 31st ultimo, on a copy of the Revenue Commissioner's letter, No. 144 of 1857, I have the honour to state that I visited the under-mentioned villages, most of them repeatedly; viz., Boombe, Bhooleswur, Awaina, Aquara, Liggree, Bhoodil, Oojeedar, Soorka, Ruttoupoor (large and small), Kooda, Cooliai, Mahdeo, Nuklung, Sehedsir, Naisra, Bhojpoora, Vurtej Kurtej, Gauglee, the extensive marshy valley containing the Rivers Kaloo Bhar and Souar, and a few other villages which I did not note down, because they did not suit my purpose.

2. My tidal observations were taken near the light stand on the Bunder Head at Gogo, and at a sporting lodge of the Thakore of Bhownuggur, situated on the eastern extremity of the cultivated lands between the villages of Awaina and Aquara, on the road between Gogo and Bhownuggur.

Dhundooka,
21 February 1857.

I have, &c.
(signed) *Charles Daley*,
Superintendent Cotton Experiments.

(No. 243 of 1857.)

Ahmedabad Collector's Camp, Ambareylee,
24 February 1857.

FORWARDED to the Revenue Commissioner, Northern Division, in reference to his memorandum, No. 144, dated 19th January 1857.

(signed) *J. W. Hadow*,
Collector.

RESOLUTION of GOVERNMENT.

GOVERNMENT do not recognise in the report submitted by Mr. Daley any special proofs of zeal and activity in the performance of the duties entrusted to him.

2. As arrangements have been made to procure a considerable quantity of Egyptian cotton seed, a trial of which proved very successful in the Southern Mahratta country,
296—Sess. 2. Government

III.
Bombay.

Government are unwilling to lose the opportunity of making a fair trial of this variety of cotton in Guzerat. Mr. Daley will therefore be retained in his appointment for the present and he should be instructed to make complete arrangements for a fair trial of the expected seed, as well as of the Sea Island seed with which he has been supplied in the various soils met with in his districts.

3. The sample of yellow cotton to be submitted to the Chamber of Commerce, with a request that they will favour Government with their opinion of its marketable value.

4. Government disapprove of Mr. Daley's prolonged stay in the Gogo districts, and desire that it be not repeated.

5. The proceedings in the gin factory department appear to Government generally satisfactory, and the proposals regarding the sale and manufacture of cottage gins made in Mr. Daley's eleventh para. are approved and sanctioned.

6. Mr. Daley's application for increased salary is negatived.

(No. 1981 of 1857.)

V. 3168. From Mr. Chief Secretary *Young* to the Acting Secretary to the Chamber of Commerce.

Sir,

I AM directed to forward the accompanying sample of yellow cotton sown last year in the Ahmedabad Collectorate, and to request that the Chamber will favour Government with their opinion as to its marketable value.

2. The cotton in question is the produce of the kind of seed described at part paras. 127 and 130 of the publication entitled as per margin*, of which a copy was sent to the Chamber on the 4th October 1855.

Bombay Castle,
28 April 1857.

I have, &c.
(signed) *H. Young*,
Chief Secretary to Govt.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 16 May 1857.—V. 3851 & 3852.

(No. 44 of 1857.)

V. 3851. From the Acting Secretary to the Chamber of Commerce, to Mr. Acting Chief Secretary *Inverarity*.

Sir,

I HAVE the honour to acknowledge the receipt of the Chief Secretary Mr. Young's letter, No. 1,981 of 1857, dated 28 April last, in the Territorial Department, Revenue, accompanied by a sample of yellow cotton sown last year in the Ahmedabad Collectorate, and requesting that the Chamber will favour Government with their opinion as to its marketable value.

In reply, I am directed by the Committee of the Chamber, to inform you, that the cotton in question is from its colour and staple ill adapted to the requirements of commerce, and that no valuation can be placed upon it. It appears to be identical with that referred to in the following extract from the Chamber's report for the fourth quarter of the year 1843-44.

A sample of tawny cotton grown by Dr. Bradley of Ellichpore, has been transmitted to your committee by Dr. Gibson, superintendent of the botanical garden at Howra, for their opinion. This cotton is similar in colour to brown nankeen, and quite unsuitable for, and unsaleable in this market, and your committee, consequently, could not with any confidence express an opinion upon its precise value.

Bombay Chamber of Commerce,
8 May 1857.

I have, &c.
(signed) *J. Mawson*,
Acting Secretary.

* Tours for Scientific and Economical Research made in Guzerat, Kattiawar, and the Konkans, in 1787-88. By Dr. Hove.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA: 1297

(No. 2319 of 1857.)

COPY forwarded to the Revenue Commissioner, Northern Division, for information and for communication to the local officers, with reference to Government Resolution No. 1980 of 28 April 1857.

Bombay Castle,
11 May 1857.

(signed) *J. D. Inverarity,*
Acting Chief Secy. to Govt.

III. 11
Bombay. 1

V. 3852.

PROCEEDINGS connected with Cotton Experiments during the Fourth Quarter of 1857.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 31 December 1857.—V. 9455 to 58.

(No. 2367 of 1857.)

MEMORANDUM from the Revenue Commissioner, Northern Division.

Submitted* to Government for information.

2. The report is satisfactory, in as far as the gin and presses seem to be making favourable way among the natives of Guzerat.

3. Instructions have been issued to the Collector, to comply with Mr. Daley's request for 1,000 maunds of khala or cotton in pod, and he has been requested to order a regular account to be kept of the manner in which it may be disposed of.

4. The cotton oil may probably be of commercial value, the Revenue Commissioner begs to suggest that some of the quantity sent down, be subjected to chemical analysis, if its qualities are not already well known.

5. Mr. Daley does not explain the cause of his delay in submitting his report. His attention will be drawn to this point, and greater punctuality for the future inculcated.

Tanna Districts, Rev. Comr's Office,
Camp Maliteran, 26 October 1857.

(signed) *E. G. Fawcett,*
Revenue Commissioner, N. D.

V. 9455.

(No. 1043 of 1857.)

MEMORANDUM from the Collector of Ahmedabad.

Submitted† to the Revenue Commissioner, Northern Division.

Mr. Daley's time appears to have been chiefly occupied in endeavouring to extend the introduction of screw presses and the use of the saw gin in preference to the churka, and it is satisfactory to find that his endeavours have proved in some degree successful.

Mr. Daley will be requested to forward a small quantity of the cotton oil as a specimen, which the Collector will forward to Bombay, in view to its quality and the use to which it might be applied, being ascertained.

The Collector sees no objection to the mamlutdar of Dhundooka making over to Mr. Daley the quantity of khala he wishes to be supplied with, and if the Revenue Commissioner should be pleased to approve, the Mamlutdar will be directed accordingly.

Ahmedabad, Collector's Office,
15 October 1857.

(signed) *J. W. Hadow,*
Collector.

V. 9456.

(No. 40 of 1857.)

To *J. W. Hadow*, Esq., Collector, Ahmedabad.

Sir,

I HAVE the honour to forward my half yearly progress report of the cotton experiments in this zilla, for the half-year ending 31st May 1857.

2. All the old kuppas that had been stored in the warehouse since 1853, I used in my gins, to make the gearing easy, and as there was such a demand for cotton, the wick and ropemakers

* Memorandum from the Collector of Ahmedabad, No 1043, dated the 15th October 1857, with enclosure.

† Letter from the Superintendent, Cotton Experiments, No. 40, dated the 12th October 1857.

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ropemakers could not get any, I took advantage of the occasion and sold the cotton to them for Rs. 143 12., and the damaged cotton seed to a mahajun for 30 rupees, but I took the precaution not to allow the damaged cotton to enter the market.

3. I visited the following talookas, viz., Gogo, Dundooka, Dholka, Duskrobie, a part of Jajlamara, and on my way to Wandul, in the Veerungam district, my horse fell with me, and I was severely hurt, which compelled me to remain at Ahmedabad for medical aid: but I despatched my assistant and carcoon to persuade the merchants at that station to introduce screw presses to which they would not listen. On my return to Dhundooka, I consulted some of the mahajuns on the subject, and was informed that most of the mahajuns at Dhollera had decided to send screw presses to all the principal stations between Maudul and Dhollera, and that there were two screw presses already sent to Veerungam. By the introduction of screw presses, the "dokra" or bag system would soon be done away with, and the cotton be brought in a far cleaner state into the market than at present.

4. The banians at Dhundooka were of opinion that the outturn by the churka was greater than by the gin in cotton wool, and that it was on this account that they did not like to purchase the gins. To remove this impression from their minds, I requested them to bring their best churka and best workmen, together with two maunds of kuppas, and that I would prove to them that they were mistaken. The result of the trial was that the gin in a maund of kuppas gave an outturn of 1½ lbs. of cotton wool more than the churka. This result so satisfied a banian by name Vulla Gulla that he brought all the kuppas he had left in his warehouse to be ginned, which I agreed to do at the rate of five maunds of cotton seed for a rupee; whereas the churka price was four maunds for a rupee.

For 80 maunds of cotton seed at 5 maunds per rupee	-	-	-	Rs.	a.	p.
Expenses incurred in ginning and oil	-	-	-	7	-	-
Giving a profit, in round numbers, of 100 per cent.	-	-	Rs.	9	-	-

The banian sold the cotton to a Parsee broker at Dhollera for three rupees a candy more than the churkaed cotton and the broker told him that if his constituents in Bombay approved of the sample, he would give him extensive orders. The reply was favourable, but it was received too late in the season. However the banian set to work immediately, and purchased some thousand maunds of khalla, but he could not get it cleaned owing to the labourers having left for their villages to commence field operations. On the 8th of June Vulla called on me with two other banians, and they told me that the khalla could not be cleaned then, but immediately after the monsoon they would bring all their kuppas. Now that there is a demand for ginned cotton, I hope to be able to sell all other gins on hand gradually.

5. I tried some experiments on the cotton-seed, and find that it yields an oil well adapted for lighting, much better than the Jingelly oil; but as my process was rather expensive, I got an oilman to extract some oil for me in his mill in the presence of many persons, and they appeared to be astonished to see the oil ooze out. The mahajuns and oilmen were quite pleased at the result, and they told me that they had never heard nor seen cotton-oil before (neither did I). The cotton plant has already risen in their estimation, and I beg to request that you would have the goodness to ascertain from a chemist whether cotton-seed oil could be used as an article of diet, like the Jinjelly, as it would give the plant an additional value, and would also, I believe, tend greatly to the extension of the cultivation of the plant. The cattle would not suffer if the oil be extracted from the seed, as the "kul," or refuse of the mill could be given to them like the "kul" of the Jinjelly seed. Cotton seed is at present sold for almost a trifle.

6. I would respectfully beg to suggest that the Mamlutdar of Dhundooka be directed to make over to me (1,000) one thousand maunds of khalla out of the Government share in that talooka, to enable me to work a couple of gins with the view of showing the gins at work, and the quality of the cotton obtained, to the numerous merchants and agents that visit the gin-house from different towns and villages, and as cotton is in such demand I would be able to sell the ginned cotton on the spot to different parties at advantage, and probably obtain more orders for it from other merchants in Bombay to their agents at Dhollera. The price obtained for the cotton could be paid at once to the Mamlutdar at Dhundooka.

7. My diary was returned to me on the evening of the 29th ultimo.

Gogo,
12 October 1857.

I have, &c.
(signed) C. Daley,
Superintendent of Cotton Experiments.

SUPERINTENDENT'S REPORT on the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1857.

Number.	NAMES.	Stations.	Prospects of the Season, and State of the Crops, as regards each Sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.		
				Extent in Acres.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1	Duskrohie	1	The season was a favourable one. The indigenous cotton crop a fair season one. No exotic having arrived in time, none was sown.	-	-	-	-	-	-	A. g. s.	C. lbs. g.	
2	Jeytulpoor	-		-	-	-	-	-	-	-	970 19 8	328 40 0
3	Veerungam	-		-	-	-	-	-	-	-	158 37 0	61 644 0
4	Purantej	-		-	-	-	-	-	-	-	36,579 28 4	12,864 34 3,750
5	Dholka	1		-	-	-	-	-	-	-	22 12 0	4 837 0
6	Dhundooka	1		-	-	-	-	-	-	-	3,108 18 0	659 644 0
7	Gogo	1		-	-	-	-	-	-	-	77,040 36 0	21,553 397 0
	TOTAL	4	-	-	-	-	-	-	-	2,840 18 7	500 461 5,633	
										1,20,721 9 3	35,972 505 6,756	

Number.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.
1	Duskrohie	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Jeytulpoor	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Veerungam	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Purantej	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Dholka	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Dhundooka	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Gogo	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-

Number.	NAMES.	G I N S.								Amount Expended in Construction of Gins.			
		In Use.		Out of Use.		Completed.		Sold for Government.					
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.				
1	Duskrohie	4	2	-	-	-	-	4	2	-	-	-	48 15 10
2	Jeytulpoor	-	-	-	-	-	-	-	-	-	-	-	-
3	Veerungam	-	-	1	-	-	-	-	-	-	-	-	-
4	Purantej	-	-	-	-	-	-	-	-	-	-	-	-
5	Dholka	-	-	-	-	-	-	-	-	-	-	-	-
6	Dhundooka	-	-	31	-	-	-	-	-	-	-	-	-
7	Gogo	-	-	-	-	-	-	-	-	-	-	-	-
		4	2	32	-	-	-	4	2	-	-	-	48 15 10

REPORT of the Cotton Experiments in the Ahmedabad Zillah, for the Half-Year ending 31 May 1857—continued.

Number.	NAMES.	QUANTITY OF COTTON RECEIVED.								Total Amount Expended in Ginning, &c., on Account of Government.		
		FOREIGN.						COUNTRY.			Quantity Ginned during the Season.	
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.			
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.					
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	
1	Duskrohie	—	—	—	—	—	—	—	Mds. 3	—	Mds. 223	5 2 6
2	Jeytulpoor	—	—	—	—	—	—	—	—	—	—	—
3	Veerungam	—	—	—	—	—	—	—	—	—	—	—
4	Purantej	—	—	—	—	—	—	—	—	—	—	—
5	Dholka	—	—	—	—	—	—	—	—	—	—	—
6	Dhundooka	—	—	—	—	—	—	—	—	—	—	—
7	Gogo	—	—	—	—	—	—	—	—	—	—	—
	TOTAL	—	—	—	—	—	—	—	3	—	223	5 2 6

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Amount Expended during the Half-Year under Report, including the Purchase of Cotton, Ginning, &c. &c.	Amount Expended up to last Half-Year, ending 30 November 1856.	Total Amount Expended up to end of Half-Year, under Report.
		For Buildings.	For Contingencies.	For Superintendence.	For Establishment.			
		45.	46.	47.	48.			
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1	Duskrohie	— 14 —	22 13 9	2,043 — —	600 — —	2,720 14 1	22,648 15 1	25,369 13 2
2	Jeytulpoor	—	—	—	—	—	—	—
3	Veerungam	—	—	—	—	—	—	—
4	Purantej	—	—	—	—	—	—	—
5	Dholka	—	—	—	—	—	—	—
6	Dhundooka	—	—	—	—	—	—	—
7	Gogo	—	—	—	—	—	—	—
	TOTAL	— 14 —	22 13 9	2,043 — —	600 — —	2,720 14 1	22,648 15 1	25,369 13 2

Remarks.—Column 34, Rs. 48. 15. 10. expended in the construction of Gins. Column 44, Rs. 5. 2. 6. expended in ginning cotton. Column 45, 14 rupees expended in repairing gin shed. Column 46, Rs. 22. 13. 9. expended in stationery, books, &c. Column 47; 2,043 rupees superintendent's pay and allowances. Column 48, 600 rupees pay to the establishment. As the sum of Rs. 97. 4. 2. for the purchase of New Orleans cotton by the mamlutdar of Dhundooka in 1853 has been realised, as described in the second paragraph of my report, the amount will be paid into his treasury.

(signed) C. Daley,
Superintendent Cotton Experiments.

To the Collector of Ahmedabad.

(No. 5222 of 1857.)

V. 9457.

From Mr. Chief Secretary Young to the Revenue Commissioner, Northern Division.

Sir,

I AM directed to acknowledge the receipt of your Memorandum, No. 2367, dated the 26th October last, forwarding one from the Collector of Ahmedabad with its accompanying report by Mr. C. Daley of the cotton experiments in that collectorate for the half-year ending 31st May 1857.

2. Owing to the late arrival of the New Orleans cotton seed, none was sown during the season, but the crop of indigenous cotton appears to have been a fair one. The Governor in Council is glad to observe that Mr. Daley's exertions in extending into the districts the introduction of screw-presses and the use of the saw-gin have proved successful.

3. Government approve of the instructions issued by you to make over to Mr. Daley, for the purpose indicated in the 6th para. of his report, 1,000 maunds of khalla or cotton pod out of the Government share in the Dhundooka talooka.

4. The cotton-seed oil extracted by Mr. Daley, and referred to in your 4th para., will, on its arrival in Bombay, be sent to Dr. Giraud for analysis, as also to the Chamber of Commerce, with a view to ascertain its quality and the uses to which it may be applied. Mr. Daley should, in the meantime, furnish Government with a statement of the price at which it could be offered for sale with moderate profit to the producer.

I have, &c.

(signed) H. Young,
Chief Secretary to Govt.

Bombay Castle,
5 December 1857.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1301

(No. 5223 of 1857.)

III.
Bombay

COPY of the papers noted in the margin * is forwarded to the Revenue Commissioner, Southern Division, for information, and for communication to the superintendent of the gin factory at Dharwar.

V. 9453.

Bombay Castle,
5 December 1857.

(signed) *H. Young,*
Chief Secretary to Govt.

SURAT.

SURAT.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 30th July 1851.—V. 12,842 and 43.

(No. 1921 of 1851.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

SUBMITTED for the information of Government. The Revenue Commissioner sees nothing in Mr. Daley's report which calls for any remark.

V. 12,842.

2. Returns should have been furnished in accordance to the instructions of Government; they have not, in this instance, been called for, the Collector will, however, be reminded that the form prescribed is in future to be adhered to.

Revenue Commissioner's Office,
Poona, 9 July 1851.

(signed) *A. N. Shaw,*
Revenue Commissioner, N. D.

(No. 11 of 1851.)

To *J. M. Davies, Esq.,* Collector, Surat.

Sir,

WITH reference to your Memorandum, No. 304, of the 24th ultimo, transmitting copies of a correspondence relative to the progress reports of the cotton experiments in this collectorate, I beg to submit for the information of the Revenue Commissioner, Northern Division, a summary of the progress of this department from January up to the 26th of June 1851.

V. 12,843.

2. Immediately after my arrival here, I made it a point to conciliate the good-will of the principal cotton merchants in this city and at Randier to the experiments entrusted to me, and am happy to state that I have been much more successful than I had anticipated; I then visited the principal "dres" in the talookas of Chowrasee and Olpar, and selected 57 beegas in the former talook, and 70 in the latter for experimental purposes. Put the gin and warehouses in order for the reception of the gins, and on their arrival, set up two in Surat, and ginned six bhars of kuppas, the only quantity that could be got, and that too with great difficulty and at an exorbitant price, as the cotton season was at its close. Sold three gins, and the remaining three are bespoke for the ensuing season, and 17 new ones have been applied for. After baling the ginned cotton, visited the talookas of Koorsud and Parchole, and selected 40 beegas in the former talook, and 25 in the latter for experimental purposes. Visited the talookas of Koorsud and Olpar a second time. With the assistance of the komavisdars, induced the ryots to cultivate the New Orleans cotton to the following extent, at their own expense:

Talooka Koorsud	-	-	-	-	-	-	-	-	71	beegas.
Ditto Olpar	-	-	-	-	-	-	-	-	50	"
Ditto Chowrasee	-	-	-	-	-	-	-	-	30	"
									100	"
Ditto Bugwara	-	-	-	-	-	-	-	-	10	"
									261	beegas.

On the 4th instant, received 1,900 lbs. of cotton seed from Belgaum, but as the seed was mixed, consisting of New Orleans and Sea Island, they were carefully separated, and on the 10th, 1,566 lbs. of new Orleans cotton seed were despatched for the use of the cultivators.

I am now awaiting the transfer to this department of the lands that I have selected for experiments.

I have, &c.
(signed) *Charles Daley,*

Superintendent of Cotton Experiments.

Surat, 26 June 1851.

* Letter from the Superintendent of Cotton Experiments at Ahmedabad, No. 40, dated the 12th October 1857. Government letter to the Revenue Commissioner, Northern Division, No. 5222, dated 5th December 1857.

III.
Bombay.

EXTRACT Bombay Revenue Consultations, 22 September 1852.

No. 12,176.

RECORDED the following letter from the Revenue Commissioner, Northern Division, No. 2273, dated 2d September 1852, with enclosures.

Submitted with reference to Government letter, No. 2524, dated 29th April 1848.

No. 18, of 17 July 1852.

2. This progress report for the half year ending 30th November last, was received in this office on the 16th June last, and returned on the 18th idem to the Collector for further information, which he has obtained and submitted. The cause of its not having been submitted when due, is explained by Mr. Daley in para. 1 of his communication, but the half yearly report ending 31st May 1851, alluded to in the same para., has not yet been received in this office.

3. The total expense, in the half year under report, was rupees one thousand seven hundred and forty-seven, and pies nine (*Rs. 1,747. 0. 9.*); up to the end of the previous half year, it was rupees one thousand and twenty-three, annas three, and pies seven, and the aggregate amount expended up to the end of 30th November 1851, was rupees three thousand four hundred and seventy, annas four, and pies four (*Rs. 3,470. 4. 4.*). Although the experiment in this collectorate is yet in its infancy, it is gratifying to observe the progress that has been made in the way of extending the growth of exotic cotton. On a reference to para. 6 of Mr. Daley's letter, it would appear that 292 beegas were sown with New Orleans, and four beegas with South Sea Island seed; had the Revenue Commissioner been aware of this circumstance, he would not have made the remark he did in para. 3 of his memorandum, No. 1652 of 5th July last.

4. The Revenue Commissioner is not disposed to approve the slow method of proceeding described in para. 4 of Mr. Daley's letter, in trying to suit the convenience of the merchants in viewing the working of the gins. It would, he conceives, be better to give previous notice what days the gins would be at work, and leave it to the pleasure of the merchants to avail themselves of the opportunity offered them.

5. The Revenue Commissioner does not understand what circumstances induced the ryots to secrete their kuppas, *vide* latter part of para. 6 of Mr. Daley's letter, nor why the Superintendent should have interfered, as he appears to have done. Information will be called for on this point, and the necessary instructions will be issued, if it should appear that the Superintendent has unnecessarily interfered with the ryots.

6. The obscurity in the headings in columns 29 and 30 in the statement, was pointed out by this department to which the Superintendent alludes in para. 5. He will be directed in future to write the heading of columns 28, 29, and 30, as per margin.*

7. The half yearly report for the half year ending 31st May 1852, has not been received; the Collector will be requested to expedite its transmission.

Revenue Commissioner's Office,
Poona, 2 September 1852.

(signed) *E. G. Fawcett*,
Revenue Commissioner, N. D.

No. 12,177.

(No. 311 of 1852.)

To *Edward Gordon Fawcett*, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

IN acknowledging the receipt of your letter, No. 1538, of the 18th June last, requesting certain explanations on the half yearly cotton report, submitted with my memorandum, No. 203, dated the 10th idem, I have the honour to forward the accompanying copy of a letter, No. 18, of the 17th July last, from Mr. Daley, Superintendent of cotton experiments at this station, and trust it will afford the whole information required.

2. Having joined my present appointment only in March last, my experience is not as yet such as to enable me to form an opinion of the future prospects of the cotton experiments at present carried on in this zillah, I have therefore been induced to consult the Superintendent on the subject.

3. The statement returned with your letter, is herewith re-transmitted.

Surat, Collector's Office,
6 August 1852.

I have, &c.
(signed) *J. H. Pelly*, Collector.

* Col. 28: Total amount expended during the half-year under report. Col. 29: Amount expended up to last half-year. Col. 30: Total amount expended up to the end of the half-year under report.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1303

(No. 18 of 1852.)

III.
Bombay.

To J. H. Pelly, Esq., Collector, Surat.

Sir,

IN acknowledging the receipt of your letter, No. 230, of the 23d ultimo, transmitting an extract, paras. 2 to 5, from a letter from the Revenue Commissioner, Northern Division, No. 1538, of the 18th idem, I beg to state that the delay in the transmission of my half-yearly report of progress of the cotton experiments, carried on under my superintendence for the half year ending 31st November 1851, was caused by my not thoroughly understanding the figured statement (which was the first of its kind that I had seen); on which account I made references to Mr. Price, superintendent of cotton experiments in the Ahmedabad zillah, who had been in the habit, for some years past, of filling in similar statements; and after I had received the necessary information, and completed the half-yearly progress report for the half year ending 31st November 1851, I thought it incumbent on me to complete the previous half-yearly progress report ending 31st May 1851, although it was not called for, so as to show completely what had been done by me since my arrival in January 1851, and there was some little time taken up in completing it; but I beg most respectfully to assure you that no such delay will occur again.

2. The permanent establishment entered in the half-yearly progress report for the half year ending 31st November 1851, consists of a mehta on a salary of rupees 10 (10 rupees) a month, whose duty it is to write Goozerattee letters to the hoozoor and to the mamlutdars, and to answer all references made by them; to keep copies of all contracts entered into with the ryots, &c., and to keep an account of receipts and disbursements of this department; I consider the above work sufficient to keep this individual employed.

3. The temporary establishment consists of a coonbee, on a monthly salary of rupees three and annas eight (Rs. 3. 8), who has charge of the two experimental fields placed at my disposal in the Chourassee purgunnah, near the village of Moogood (one containing about 14 and the other 10 beegas); I beg to state that I am satisfied with this individual's attention and industry. I also entertain for half a month only one mehta, at eight rupees (8 rupees), and one tola, at (5) five rupees a month.

4. With regard to the two gins belonging to Government, entered in column 13, to have been in use for the period under report, I beg to explain that in my letter, No. 4, of the 24th March 1851, I stated that rupees twelve thousand four hundred and nineteen (12,419 rupees) would be required to keep the six gins at work for the season; but as the season was fast closing, and the gins had not then been received by me, I requested to be allowed one thousand rupees (1,000 rupees), merely to satisfy the merchants, &c. at this place and Randier of the superiority of the saw-gins over churka. On the 27th April 1851, I received the sanction of Government to my request; but some days previous to this date I had set up and occasionally worked two gins. With the greatest difficulty I obtained six bhars of very dirty kuppas at Randia, at the high rate of rupees forty-two (42 rupees) a bhar, through the influence of the late fujdar at that station. In Surat not a maund of kuppas was procurable. These six bhars I was obliged to husband, to enable me to show the working of the gins to as many of the merchants, brokers, &c., as I possibly could. One day a party of merchants would visit the gins, and four or five days after another party would follow, and so on; thus time was frittered away which would have been much more profitably employed by me in the districts. However, these six bhars of kuppas, after being so dilatorily ginned, gave 2 candies and 85 lbs. of cotton wool, or 275½ lbs. of cotton wool, to one bhar of kuppas; which result is pretty fair, considering the dirty state of the kuppas; but the price of one candy of cotton came up to the high amount of rupees one hundred and fifteen (115 rupees), on account of the high price of kuppas at the time, and having to pay the coolies occasionally half a day's wages for a couple of hours' work. One gin alone would have ginned the six bhars of kuppas in nine days, working daily; I therefore did not set up the remaining two gins; and I hope the above remarks will satisfactorily explain why the two gins alluded to in column 15 were out of work, and also why the two gins that were at work worked only for a short while.

5. Regarding the headings in columns 29 and 30, I beg to state that if they were respectively headed thus, they would be much more clear. Column 29: "Amount expended up to last half year ending 31st May 1851," instead of "Amount expended up to last half year;" and column 30: "Total expenditure from 1st January 1851, up to end of half year under report," instead of "Total expenditure up to end of half year under report."

6. With regard to the progress of the experiments, and their prospect of future success, I have the honour to state, for your information, that in the months of June, July, and August 1851, 292 beegas were sown with New Orleans cotton seed, and four beegas with South Sea Island seed; and I beg to annex a statement showing the name of the talookas, and number of beegas sown in each, and also the number of beegas destroyed by the rains, &c.

1304 PAPERS RELATING TO MEASURES TAKEN SINCE '1847

III.
Bombay.

TALOOKAS.	New Orleans Cotton.	South Sea Island.	TOTAL.	Deduct, destroyed during the Monsoon.	Number of Beegas which yielded Kuppas.
Chowrasce - - - -	142	3	145	15	130
Oolpar - - - -	50½	- -	50½	14	36
Koorsud - - - -	60	1	61	45	16
Parchole - - - -	8	- -	8	3	5
Bugwarra - - - -	32	- -	32	32	-
TOTAL Beegas - - -					187

In the principal cotton talookas of this zillah, the beega is about half an acre, and the yield, in a fair season of 13 beegas, is equal to one candy of 784 lbs. of cotton wool. Now this assumption, 187 beegas should yield 14 candies of cotton wool; but, as last season was a very unfavourable one, I would assume one-third of a fair season's yield for it, and that would give 4½ candies of cotton wool for 187 beegas. Instead of receiving the above quantity, I only received two candies and 18 lbs.; and out of this I sent one candy and 497 lbs. of clean cotton wool to the collector of customs, Bombay; and the remaining 305 lbs., which are stained and insect-eaten, I have kept back to be sold to the manufacturers of cotton rope, wick-makers. As I had, however, inspected all the fields sown with New Orleans cotton, when ready to be picked, in company with the mamlutdars, and found every one of them far superior to the two fields placed at my disposal, I was rather surprised to find that the yield of my two fields (two maunds of kuppas per beega) was much greater than the yield of the other fields; that is, from one-half to one maund per beega. I told the mamlutdars that I suspect much of the kuppas was secreted by the cultivators, and requested them to be on the look out. A few days ago the mamlutdar of Oolpar sent me 12 maunds and 19 seers of kuppas, which had been secreted by the cultivators. This quantity, when ginned, will yield 166 lbs. of cotton wool, making a grand total of two candies and 181 lbs. of exotic cotton wool. This season I expect to have about 800 or 1,000 beegas sown with New Orleans cotton seed. After this season's crop will have been received, I beg to state that I shall then be able to form an opinion as to whether there will be any chance of the exotic cotton obtaining a firm footing in this collectorate.

I have, &c.
(signed) *Charles Daley*,
Superintendent Cotton Experiments.

Surat, 17 July 1852.

P.S.—The individuals by whom the two gins were purchased like them well, but they have not as yet succeeded in getting their workpeople to work them on the conditions that they get their kuppas “churkaed;” that is, for every five maunds of cotton seed “churkaed,” they pay one rupee. I have also not yet succeeded with my work people, although I offered one rupee for four maunds of ginned kuppasia.

(signed) *Charles Daley*.

(No. 203 of 1852.)

THE within half-yearly report of the progress of the cotton experiments in the Surat collectorate is forwarded to the Revenue Commissioner, Northern Division, with reference to his letters, Nos. 1295 and 1012, dated respectively the 12th May 1851 and 29th April last.

(signed) *J. H. Pelly*,
Collector.

Surat, Collector's Camp, Kim Chowkee,
Koorsud Talooka, 10 June 1852.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1305

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 30 November 1851.

Surat, 26 May 1852.

Number.	NAMES.	Stations under Superintendent.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on hand on account of Government of each Sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gigs, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Chowrasee	1	The yield of the cotton cultivation in the zillah was last year much greater than anticipated. The price of the cotton having been high, it was favourably disposed of by the ryots.				Ginned, C. lbs. 2 85				
2	Olpar										
3	Koorsud										
4	Surbhon										
5	Kurrode										
6	Walor										
7	Soopa										
8	Parchole										
9	Chicklee										
10	Bulsar										
11	Parneera										
12	Bugwarra										
13	Chandree										
TOTAL		1					2 85				

Number.	NAMES.	GINS								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold during the Half-Year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	Amount.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Chowrasee	2 of 20 saws	2 of 20 saws	2						
2	Olpar									
3	Koorsud									
4	Surbhon									
5	Kurrode									
6	Walor									
7	Soopa									
8	Parchole									
9	Chicklee									
10	Bulsar									
11	Parneera									
12	Bugwarra									
13	Chandree									
TOTAL		2 of 20 saws	2	2						

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.							Amount Expended up to the end of Half-year under Report.	TOTAL EXPENDITURE up to the end of Half-year under Report.	Prospects of the coming Season.
		Purchase and Ginning of Cotton.	Contingencies.	Building.	Temporary Establishment and New Orleans Cotton Cultivation.	Amount of Superintendence.	Amount of Establishment.	TOTAL AMOUNT.			
		22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
1	Chowrasee		100		138 - 9	1,449	60	1,747 - 9	1,723 3 7	3,470 4 4	Unfavourable.
2	Olpar										
3	Koorsud										
4	Surbhon										
5	Kurrode										
6	Walor										
7	Soopa										
8	Parchole										
9	Chicklee										
10	Bulsar										
11	Parneera										
12	Bugwarra										
13	Chandree										
TOTAL			100		138 - 9	1,449	60	1,747 - 9	1,723 3 7	3,470 4 4	

Remarks.—The cultivation of cotton has increased this year, but the yield will be much less than that of last year, on account of the irregular and scanty falls of rain during last monsoon. The amount of cultivation in this Collectorate last year was 72,703 beegas, and the yield in candies of clean cotton 17,064; and this year the amount of cultivation is 76,950, and the probable yield will be 6,412 candies of clean cotton.

The New Orleans cultivation has also suffered in common with the other crops of the season, and the yield will be as favourable as can be expected under the circumstances.

(signed) Chas. Daley,
Superintendent Cotton Experiments.

III.
Bombay.

EXTRACT, Bombay Revenue Consultations, 2d February 1853.

From the Revenue Commissioner, Northern Division, No. 3280, with Enclosures.

No. 1142.

SUBMITTED with reference to Government Letter, No. 2524, of 29th April 1848.

2. This progress report was received on the 20th September; and on the 25th of the same month it was returned for amendment, and for further information which the Collector had submitted in a memorandum, dated 24th ultimo.

3. The following is an epitome of the contents of the report under review.

4. Beegas 214 were sown with New Orleans, and 76,740 beeg. 5 w. 5 w. with indigenous; of the former, 1 candy 497 lbs. were purchased for Government at 100 rupees per candy, and ginned by the Superintendent.

5. Of the 21 gins belonging to Government, four were in use during the period under report.

6. The charges incurred in the period under review, and from the commencement of the experiment, amounted to—

For the purchase of New Orleans cotton in the half-year under report	Rs.	a.	p.
	163	5	—
Amount expended in ginning, &c.	46	—	—
„ for building	18	12	3
„ for contingencies	102	8	6
„ for superintendence	1,449	—	—
„ for establishment	80	—	—
TOTAL	1,859	9	9
Amount expended up to last half-year ending 30th November 1851	3,470	4	4
TOTAL expended up to end of half-year under report	5,329	14	1

7. The Superintendent refers to imperfections in the 17 saw-gins received from Mr. Frost at Belgaum. No actual alteration has as yet been made in them, as might be inferred from the manner the Superintendent expresses himself, and the Revenue Commissioner has since received the suggestions offered, which are under reference to the Superintendent in Khandeish, and will be laid before Government in due course.

8. The inquiry alluded to by the collector of Surat, in para. 2 of his memorandum, No. 369, has reference, it would appear, to Mr. Daley's proposition to alter Mr. Frost's gins, the referring to para. 3 of the Superintendent's letter appears to be a clerical error for para. 4.

(signed) E. G. Fawcett,

Revenue Commissioner, Northern Division.

Revenue Commissioner's Camp,
Ahmedabad Districts, Dholera,
17 December 1852.

No. 369 of 1852.

1143.

TRUE copies submitted with reference to his endorsement, No. 2274 of the 2d instant, for the information of the Revenue Commissioner, Northern Division.

2. The subject of Mr. Daley's 3d para. is under inquiry.

(signed) J. H. Pelly, Collector.

Surat Collector's Office,
15 September 1852.

(No. 25 of 1852.)

To J. H. Pelly, Esq., Collector, Surat.

Sir,

I HAVE the honour to forward my progress report of the cotton experiments in this zillah for the half-year ending 31st May 1852.

2. The yield of the exotic cotton last season was equal to that of the indigenous, which was about one-third of a fair season produce; and the seed of the exotic was sown in the same way as the indigenous, and not on the American ridge system.

3. Having only had to gin the New Orleans cotton crop during the half-year under report, I had in consequence leisure to visit a good many villages in the three principal cotton-growing talookas of this collectorate, and the result is that nearly 300 beegas have been sown with exotic cotton this season.

4. The 17 saw-gins received from Mr. Frost not being so efficient as those received from Khandeish, they will remain on my hands until the necessary alterations are made to them, and in anticipation of the sanction of Government they are being taken to pieces.

I have, &c.

(signed) C. Daley,
Superintendent Cotton Experiments.

Surat, 25 August 1852.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1307

(No. 1143.)

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 31 May 1852.

Talooks.	NAMES.	Stations.	Prospects of the Season, and State of the Crops as regards each Sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.		
				Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1	Chowrassee	1	As anticipated in the last half-yearly report, the season was a bad one, the yield of both the indigenous and exotic cotton crops was one-third of what it would have been in a fair season.	145	C. lbs. 11 241	-	-	-	-	-	-	C. lbs. 964 244
2	Oolpar	1		37	2 60	-	-	-	-	-	-	742 274
3	Koorsod	1		16	1 180	-	-	-	-	-	-	3,507 415
4	Surbhon	-		-	-	-	-	-	-	-	-	174 209
5	Kurrode	-		-	-	-	-	-	-	-	-	173 424
6	Walor	-		-	-	-	-	-	-	-	-	177 454
7	Soopa	-		-	-	-	-	-	-	-	-	303 120
8	Parchole	-		-	8	- 482	-	-	-	-	-	239 492
9	Chicklee	-		-	-	-	-	-	-	-	-	- 690
10	Bulsar	-		-	-	-	-	-	-	-	-	-
11	Parneira	-		-	-	-	-	-	-	-	-	-
12	Bugwara	-		-	8	- 482	-	-	-	-	-	-
13	Mandvee	-		-	-	-	-	-	-	-	-	111 601
TOTAL			-	214	15 481	-	-	-	-	76,740 5 5	6,395 3	

Talooks.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.
1	Chowrassee	C. lbs. 1 497	100	163 5 -	-	-	-	C. lbs. 1 497	100	163 5 -	-	-	-	163 5 -
2	Oolpar	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Koorsod	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Walor	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Parneira	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		1 497	100	163 5 -	-	-	-	1 497	100	163 5 -	-	-	-	163 5 -

Talooks.	NAMES.	G I N S.							Amount Expended on Construction of Gins.	
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.		For what Amount.
1	Chowrassee	4 of 20 saws	-	17	-	-	-	-	-	-
2	Oolpar	-	-	-	-	-	-	-	-	-
3	Koorsod	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-
6	Walor	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-
11	Parneira	-	-	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-	-	-
TOTAL		4 of 20 saws	-	17	-	-	-	-	-	-

REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 31 May 1852—continued.

Talooks.	NAMES.	QUANTITY OF COTTON GINNED.								Total Amount Expended in Ginning, and on Government Account.	
		FOREIGN.						COUNTRY.			
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.		Quantity Ginned during the Season.
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.
		C lbs.				C lbs.				C lbs.	
1	Chowrassee	1 497	- -	- -	- -	1 497	- -	- -	- -	1 497	46 - -
2	Oolpar	-	-	-	-	-	-	-	-	-	-
3	Koorsod	-	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-	-
6	Walor	-	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-	-
11	Parneira	-	-	-	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-	-	-	-
	TOTAL	1 497	- -	- -	- -	1 497	- -	- -	- -	1 497	46 - -

Talooks.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Total Amount Expended during the Half-Year under Report, including the Purchase of Cotton, and Ginning, &c.	Amount Expended up to last Half-Year ending 30 November 1851.	Total Expended up to end of Half-Year under Report.
		For Building.	For Contingencies.	For Superintendence.	For Establishment.			
		45.	46.	47.	48.			
1	Chowrassee	18 12 3	102 8 6	1,449 - -	80 - -	1,859 9 9	3,470 4 4	5,329 14 1
2	Oolpar	-	-	-	-	-	-	-
3	Koorsod	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-
6	Walor	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-
11	Parneira	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-
	TOTAL	18 12 3	102 8 6	1,449 - -	80 - -	1,859 9 9	3,470 4 4	5,329 14 1

Remarks.—The 17 saw-gins received from Mr. Frost having been found on trial to be deficient in many points in comparison with the gins received from Khandeish, the superintendent has submitted, through the collector, a plan and section of one of the Khandeish gins to Mr. Frost for any remarks that he may have to offer thereon previous to applying for sanction to make the requisite alterations in the gins.

(signed) C. Daley,
Superintendent Cotton Experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1309

III.
Bombay.

EXTRACT Bombay Revenue Consultations, 20th April 1853.

From the Revenue Commissioner, Northern Division, (No. 849), dated 23d March 1853, with Enclosures.

No. 4430.

SUBMITTED for the information of Government. The half-yearly statement exhibits the following details of expenditure for the period reported on, as also from the commencement:

	Rs.	a.	p.
Contingencies - - - - -	59	-	-
Temporary establishment and New Orleans cultivation - - - -	40	3	-
Amount of superintendence - - - - -	1,449	-	-
Amount of establishment - - - - -	240	-	-
TOTAL Rs.	1,788	3	-
Add amount up to last half-year ending 31 May 1852 - - -	5,329	14	1
TOTAL Expenditure from the 1st January 1851 up to end of 30th November 1853 - - - - - Rs.	7,118	1	1

2. The prospects of the season are represented to be favourable, and the amount of cotton cultivation is stated to have amounted to 77,694 beegas, which is satisfactory.

3. The Collector has been requested to ascertain and report the facts upon which Mr. Daley has arrived at the conclusion that New Orleans can be as safely cultivated in this zillah as the indigenous; and what persons are alluded to in his third paragraph; and also in what specific instance he has reason to think that they have not honestly exerted themselves. The result of this reference will be communicated to Government hereafter.

4. The Collector's proceedings indicate that he is taking a lively interest in the subject.

Revenue Commissioner's Camp,
Surat Districts, Teethul, 23 March 1853.

(signed) E. G. Fawcett,
Revenue Commissioner, N. D.

(No. 117 of 1853.)

No. 4431.

SUBMITTED for the information of the Revenue Commissioner, Northern Division.

2. With reference to the latter part of the concluding para. of Mr. Daley's letter now submitted, the Collector begs to observe, that immediately on his joining the collectorate, he issued instructions to the different mamludars (on the 21st December 1852), inviting their most cordial and honest exertions in regard to extending the growth of exotic cotton, and explaining to the ryots the benefits derivable from a clean picking of their cotton crop. The Collector will also make it a point of personally explaining to the patells and ryots on their meeting at the Jummabundy settlement, the high benefit resulting from a clean picking and increasing the cotton cultivation.

3. The Collector has requested Mr. Daley, superintendent of cotton experiments, to prepare for distribution a memorandum, showing the manner in which New Orleans cotton seed is to be sown, when pruned, how preserved, what aspect the plant bears during its maturity, &c.; such information the Collector is humbly of opinion is necessary as a guide to ryots, as, from their ignorance, in some places of the Mandvie district plants have been dug up on the leaves being dried up in about the month of December, which is generally the case with the foreign cotton before it brings forth pods.

Surat Collector's Camp, Mandvie,
4 March 1853.

(signed) H. Liddell, Collector.

1310 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

(No. 5 of 1853.)

To H. Liddell, Esq., Collector, Surat.

Sir,

I BEG to forward my half-yearly report of the cotton experiments in this zillah, for the half-year ending 30th November 1852.

2. I would, however, respectfully beg to remark, that after two seasons' experiments, I am perfectly satisfied the New Orleans cotton can be as safely cultivated in this zillah as the indigenous, and that the yield will be greater, provided the seed is sown in the same manner and at the same time as the indigenous, and that the same care be paid to it as to the latter. In the rich Gorat and black soils the New Orleans cotton plants are liable to become trees if they are not topped or pruned when they get up as high as three feet, and the yield will in consequence be branches and leaves, instead of bolls and kuppas; but if the plants be topped when they get up to three feet in height, the yield is generally half as much again as that of the indigenous. In the poorer soils the plants seldom attain the height of three feet, but the yield is even then greater than that of the indigenous.

3. On a terrace-floor where the choonam plaster had been scraped off I threw a few New Orleans cotton seed during the early part of the monsoon, from which I obtained plants about six inches in height, which flowered and balled, and which you have yourself seen. I have now no hesitation in stating that the New Orleans cotton plant is a far harder one than the indigenous, and I believe that if the native officials were to honestly exert themselves in behalf of the exotic, it would not be many years before it would supplant the indigenous in this collectorate.

4. I regret to state that fever has been the principal cause of the delay in the transmission of this report.

I have, &c.

Surat, 23 February 1853.

(signed) Charles Daley,
Superintendent of Cotton Experiments.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 30 November 1852.

23 February 1853.

No.	NAMES.	Stations under Superintendent.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed proportion of last Year's Crop, which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Chowrassee	1	- - - - -	12 mnds.	-	12 mnds.	-	-	-	-	-
2	Oolpar	1	- - - - -	-	-	-	-	-	-	-	-
3	Koorsud	1	- - - - -	-	-	-	-	-	-	-	-
4	Surbhon	-	- - - - -	-	-	-	-	-	-	-	-
5	Kurrrode	-	- - - - -	-	-	-	-	-	-	-	-
6	Walor	-	The yield of the cotton cultivation in the zillah was, last year, much less than anticipated, but owing to the high price obtained for it, it was favourably disposed of by the ryots.	-	-	-	-	-	-	-	-
7	Sucpa	-	- - - - -	-	-	-	-	-	-	-	-
8	Parchole	-	- - - - -	-	-	-	-	-	-	-	-
9	Chicklee	-	- - - - -	-	-	-	-	-	-	-	-
10	Bulsar	-	- - - - -	-	-	-	-	-	-	-	-
11	Parneira	-	- - - - -	-	-	-	-	-	-	-	-
12	Bugwara	-	- - - - -	-	-	-	-	-	-	-	-
13	Mandvee	-	- - - - -	-	-	-	-	-	-	-	-
	TOTAL	3	- - - - -	12	-	12	-	-	-	-	-

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1311

REPORT of the Cotton Experiments in the Surat Zillah, for the Half year ending 30 November 1852—continued.

No.	NAMES.	G I N S.								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed during the Half-year under Report.		Sold during the Half-Year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	Amount.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Chowrassee	4 of 20 saws.	-	17 To be altered, awaiting sanction.	-	-	-	-	-	-
2	Oolpar	-	-	-	-	-	-	-	-	-
3	Koorsud	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-
6	Walor	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-
11	Parceira	-	-	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-	-	-
TOTAL		4	-	17	-	-	-	-	-	-

No.	NAMES.	Other Items of Expenditure during the Half-year under Report.							Amount Expended up to last Half-year, ending 31 May 1852.	TOTAL EXPENDITURE from 1 Jan. 1851, up to end of Half-year under Report.	Prospect of the coming Season.
		Purchase and Ginning of Cotton.	Con-tingencies.	Buildings.	Temporary Estab-lishment, and New Orleans Cotton Cultivation.	Amount of Super-intendence.	Amount of Estab-lishment.	TOTAL AMOUNT.			
		22.	23.	24.	25.	26.	27.	28.			
1	Chowrassee	-	59	-	40 3	1,449	240	1,788 3	5,329 14 1	7,118 1 1	Middling.
2	Oolpar	-	-	-	-	-	-	-	-	-	
3	Koorsud	-	-	-	-	-	-	-	-	-	
4	Surbhon	-	-	-	-	-	-	-	-	-	
5	Kurrode	-	-	-	-	-	-	-	-	-	
6	Walor	-	-	-	-	-	-	-	-	-	
7	Soopa	-	-	-	-	-	-	-	-	-	
8	Parchole	-	-	-	-	-	-	-	-	-	
9	Chicklee	-	-	-	-	-	-	-	-	-	
10	Bulsar	-	-	-	-	-	-	-	-	-	
11	Parceira	-	-	-	-	-	-	-	-	-	
12	Bugwara	-	-	-	-	-	-	-	-	-	
13	Mandvee	-	-	-	-	-	-	-	-	-	
TOTAL		-	59	-	40 3	1,449	240	1,788 3	5,329 14 1	7,118 1 1	

Remarks.—The cultivation of cotton has slightly increased this year, and the yield will be much superior to that of last year, although the cotton crop has partially suffered by blight, owing to the unseasonable falls of rain during last monsoon. The amount of cultivation in this collectorate last year was 76,950 beegas, and the yield in candies of clean cotton, 6,412, and this year the amount of cultivation is 77,694, and the probable yield will be 10,000 candies of clean cotton.

The yield of the New Orleans Cotton will also be much superior to that of last year.

(signed) Charles Daley,
Superintendent Cotton Experiments.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 26th March 1856.—V. 1777 to 1780.

(No. 363 of 1856.)

V. 1777. The Revenue Commissioner, Northern Division, to Mr. Officiating Chief Secretary Young.
Sir,

WITH reference to the correspondence quoted in the margin,* I have the honour to submit herewith a letter from the Collector of Surat, No. 726, of the 17th October last, with accompaniment from Mr. C. Daley, formerly superintendent cotton experiments in his collectorate, being half-yearly reports for the periods ending 31st May 1853, 30th November 1853, 31st May 1854, 30th November 1854, 31st May 1855, from the latter of which it will be perceived that the total expenditure up to the close of the period under report was Rs. 16,149. 1. 4.

2. I delayed forwarding this report, as I was desirous of knowing the actual state of the financial results of the department up to the date of its abolition; Mr. Liddell's letter detailing them only came to hand lately; and in my communication of this day's date, I have placed before Government full information on the point.

3. I am unable to consider Mr. Daley's explanation of the cause of the delay in submitting the aforesaid return satisfactory. The experimental department having been abolished, and matters connected therewith generally disposed of by Government Resolution, No. 3803, dated 10th September 1855, I have no remarks to offer beyond expressing my concurrence in the opinion expressed by Mr. Liddell in para. 4. If Mr. Daley felt that there was any backwardness on the part of any mamlutdar, he should have reported the case on the specific instance.

4. Adverting, however, to Mr. Daley's letter, No. 20, dated 21 August last, I beg to state that I have communicated the purport thereof to the Collector of Ahmedabad, with instructions that measures should be adopted to avoid entailing losses on the tullatees, and that they should be informed that their per-centage will not be affected by any remission which may be granted on account of failures of exotic cotton sown under Mr. Daley's superintendence.

5. In his letter No. 13 of the 28th May last, Mr. Daley gives an interesting account of an experiment he made regarding the keeping quantities of cotton during the monsoon, from which it appears that, where properly warehoused, it is not damaged in the least.

Revenue Commissioner's Office,
Camp Oometa,
5 February 1856.

I have, &c.
(signed) E. G. Fawcett,
Revenue Commissioner, N. D.

(No. 726 of 1855.)

Territorial Department, Revenue.

V. 1778. From H. Liddell, Esq., Collector of Surat, to E. G. Fawcett, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

Surat, Collector's Office, 17 October 1855.

WITH reference to your letters enumerated in the margin,† I have the honour to forward the half-yearly reports of the cotton experiments for the period intervening between November 1853 and May 1855, received from Mr. Daley, and to offer the following few remarks:

2. The returns for the year 1853-54 were received on the 31st May last, soon after which they were under examination by this department; and on the discovery of some discrepancies, a reference was made to Mr. Daley, who, in reply, submitted amended ones, which were only received on the 5th instant along with those of subsequent periods.

3. The cause of the extraordinary delay in not submitting his reports at the time when they became due is explained by Mr. Daley in the letter, No. 13, dated the 28th May last, accompanying his report for the half-year ending May 1853. The delay is also attributable to his illness, to which an allusion is made in my letter, No. 367, dated the 23d May 1855.

4. With regard to para. 4 of Mr. Daley's letter No. 14 of the 29th May last, accompanying his report for the half-year ending the 30th November 1853, I would respectfully beg

* Government Resolution, No. 1070, dated 10 March 1855; Government Resolution, No. 1650, 24 April 1855; Government Resolution, para. 6, of ditto, No. 3803, 10 September 1855.

† 1. No. 851, dated 23 March 1853; 2. No. 1710, dated 11 July 1854; 3. No. 2092, dated 29 August 1854; 4. No. 2713, dated 21 November 1854; 5. No. 528, dated 7 March 1855; 6. No. 560, dated 14 March 1855; 7. No. 916, dated 25 April 1855.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1313

III.
Bombay.

beg to observe that, in my opinion, none of the mamlutdars of the cotton districts are to blame, as the ryots themselves were unwilling to sow the exotic cotton without any encouragement and promise from Government, as will be seen by a reference to my letter, No. 374, dated the 25th May last. Moreover, Mr. Daley does not appear to have brought this circumstance to my notice previous to the date of his letter; had he done so, I would have taken steps to take notice of those mamlutdars who were backward in their endeavours for the introduction of the New Orleans cotton in this country.

5. As regards the tultatees having exerted themselves to thwart the introduction of the New Orleans cotton, to which an allusion has been made at the end of para. 4 of Mr. Daley's letter, No. 20 of the 21st August last, submitting the half-yearly report for the 30th November 1854, I would beg to observe, that no instance of this kind was ever brought to my notice; had it been so, I would have taken some remedial measures. The causes of the failure of the experiments in this zillah, however, have been so fully detailed in my letter, No. 374, dated the 25th May last, that I need scarcely say a word more here, as in all probability Mr. Daley's complaints arise entirely from his want of success.

6. Under the circumstances stated above, I have issued orders for disbursing the salaries due to Mr. Daley and his establishment since the last 12 months, which had been stopped by me as per correspondence ending with your memorandum, No. 916, dated the 25th April 1855, till his submitting the several returns, &c. due by him.

7. In concluding this, I have to request the favour of your allowing me to strike off from the list of my unanswered references the letter noted on the margin,* received from your department.

I have, &c.
(signed) H Liddell, Collector.

(No. 13, of 1855.)

To H. Liddell, Esq., Collector, Surat.

Sir,

I BEG to forward my half-yearly report of the cotton experiments in this zillah, for the half-year ending 31 May 1853.

2. The amount for buildings Rs. 50. 8., is composed of the following items, viz.:

	Rs.	a.	p.	Rs.	a.	p.
Matting and dividing a room in a house engaged for a gin at						
Oolpar - - - - -	10	5	3			
Ditto - - ditto - - - at Kosar - - -	11	10	9	22	-	-
Rent for the gin-house at Oolpar, at Rs. 1. 8. per month -	9	-	-			
Ditto - - ditto at Kosar, at Rs. 3. 4. per month	19	8	-	28	8	-
				Rs.	50	8 -

The rent sanctioned for each of the gin-houses is eight rupees a month, but on inspecting the premises selected by the mamlutdars for each of the gins, I found them rather extensive, and in consequence, selected smaller premises, which will account for the lower rent being paid for them.

3. Rs. 102. 9. 6. for contingencies, comprise the following items:

	Rs.	a.	p.
Coonbee for guarding the field at Moogood, for three months and a half -	7	-	-
Landing the bullock-power machine received from Broach - - -	3	1	-
Fixing saw-gin and bullock-power machine - - - - -	6	-	-
Model saw-gin received from Bombay, and making a fly-wheel, frame, &c. for it - - - - -	7	13	-
2 Carpoons, one for Oolpar, and the other for Kosar, for five months, at six rupees each - - - - -	60	-	-
Stationery - - - - -	2	7	6
Coolies for removing and replacing the gins, for the purpose of getting the gin-house at Surat cowdunged, and also for separating the dirty kuppas from the clean - - - - -	16	4	-
	Rs.	102	9 6

4. The

* No. 2,728, dated 23 October 1852.

III.
Bombay.

4. The cause of the delay in the transmission of this report was partly occasioned by my experimenting on three bales of cotton which had been ginned in May 1853. I was anxious to obtain information as to how far the current belief that cotton warehoused during the rains became deteriorated in quality, was true. One bale I placed in the gin-house; the second I exposed to the rains during the whole of the monsoon, and the third I opened and exposed on a terrace-floor to the rains, the result was, as follows:

The first bale was not in the least affected by the rain, neither did it deteriorate in quality.

The second bale was slightly damaged, the rain penetrated it on each side about seven inches, but the core of the bale was uninjured. The portion of the cotton that was saturated with rain was so far damaged that the red stains in the cotton wool were in some spots enlarged, which slightly deteriorated the quality of the cotton. The red stain in the cotton wool is caused by insects attacking the seed in the pod of some of the plants for the saccharine matter contained in it; and from the perforated holes in the seed there exudes a reddish liquid, which stains the wool in the pod.

The third bale appeared after the monsoon to have been considerably damaged by the exposure; but on drying and thrashing it on a charpae with split bamboo battens, with the view of separating the foreign matter which had mixed up with it, the cotton was found to be slightly damaged, about 50 pounds out of 400, or 12½ per cent. This was a severe test; the red stains in the cotton was at first greatly enlarged, but the particles of choonam and earth which eventually got mixed up with it, absorbed the colouring matter to some extent.

I also placed some loose cotton in a small gunny bag, which after exposure to the monsoon became quite mouldy, and lost its beautiful glossy texture.

From the above experiments, it would appear that the tighter a cotton bale is screw-pressed, the risk of damage incurred is proportionably less, and that cotton bales carefully warehoused are not damaged in the least.

5. The other cause of the delay is attributable to my having asked the more opulent patells and ryots to endeavour to sell such portion of the exotic cotton that they had on hand immediately after the monsoon, when there would be little or no cotton in the market, so as to ascertain whether an increased price would be given for it. In consequence of which I was obliged to keep my accounts ending May 1853 open, till I knew the result. As soon as I heard that they could not obtain a greater price than the indigenous, I took such portions of cotton as they were willing to sell off their hands, and closed my accounts. Soon after I was directed to proceed to the Ahmedabad district, and the cause of the further delay in the transmission of this document has been detailed in my letter, No. 8, of the 12th ultimo, to the address of the Collector of Ahmedabad.

I have, &c.

(signed) C. Daly,
Superintendent of Cotton Experiments.

Surat, 28th May 1855.

SUPERINTENDENT'S REPORT on the Cotton Experiments in the Surat Zilla, for the Half-Year ending 31 May 1853.

Talookas.	NAMES.	Stations.	Prospect of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BERGAS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.		
				Extent in Acres.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
					<i>C. Lbs</i>							
1	Chowrasee	1		260	20					13,972 17 14½	1,074	
2	Olpar	1		198	15 160					11,330 3 0	871	
3	Koorsud	1		235	20 120					38,931 18 16¼	2,994	
4	Surbhon		In the last half-yearly report it was anticipated that the season would be favourable, the rains commenced very favourably, but the latter rains completely failed; the indigenous and exotic crops were however average ones.							1,826 11 5	141	
5	Kurrode			1	60						2,727 2 10	209
6	Walore			2	120						1,643 13 5	126
7	Soopa			4	210						3,542 10 10	272
8	Parchole			12	720						2,158 3 17½	166
9	Chuckle										2 10 5	—
10	Bulsar										5 0 0	—
11	Parnera				6	360					—	—
12	Bugwarra										—	—
13	Mandavee				8	480					1,554 5 10	111
	TOTAL	3			776	57 692					77,694 16 13¼	5,964

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT on the Cotton Experiments in the Surat Zilla, for the Half-Year ending 31 May 1853—continued.

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.
		13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.		24.
1	Chowrasee	C. 2	lbs. 200	234 5 4	-	-	-	C. 2	lbs. 200	234 5 4	-	-	-	234 5 4
2	Olpar	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Koorsud	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Walore	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Parnara	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Bugwarra	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Mandavee	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	2	200	234 5 4	-	-	-	2	200	234 5 4	-	-	-	234 5 4

G I N S.

Talookas.	NAMES.	IN USE.		OUT OF USE.		COMPLETED.		SOLD FOR GOVERNMENT.		Amount Expended in Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
		26.	27.	28.	29.	30.	31.	32.	33.	
1	Chowrasee	4 of 20 Saws	-	17	-	-	-	-	-	-
2	Olpar	-	-	-	-	-	-	-	-	-
3	Koorsud	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-
6	Walore	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-
11	Parnara	-	-	-	-	-	-	-	-	-
12	Bugwarra	-	-	-	-	-	-	-	-	-
13	Mandavee	-	-	-	-	-	-	-	-	-
	TOTAL	4 of 20 Saws	-	17	-	-	-	-	-	-

Talookas.	NAMES.	QUANTITY OF COTTON RECEIVED.								TOTAL Amount Expended in Ginning, &c., on Government Account.	
		FOREIGN.						COUNTRY.			Received during the last Season.
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.		
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
35.	36.	37.	38.	39.	40.	41.	42.	43.	44.		
1	Chowrasee	C. 2	lbs. 200	-	-	-	-	C. 2	lbs. 200	-	42 - -
2	Olpar	-	-	-	-	-	-	-	-	-	-
3	Koorsud	-	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-	-
6	Walore	-	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-	-
11	Parnara	-	-	-	-	-	-	-	-	-	-
12	Bugwarra	-	-	-	-	-	-	-	-	-	-
13	Mandavee	-	-	-	-	-	-	-	-	-	-
	TOTAL	2	200	-	-	-	-	2	200	-	42 - -

REPORT on the Cotton Experiments in the Surat Zilla, for the Half-Year ending 31 May 1853—continued.

Talookas.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Amount Expended during the Half-Year under Report, including the Purchase of Cotton and Ginning, &c.	Amount Expended up to last Half-Year.	TOTAL Expended up to end of Half-Year under Report.
		For Building.	For Contingencies.	For Superintendence.	For Establishment.			
		45.	46.	47.	48.			
1	Chowrasee -	50 8 -	102 9 6	1,446 - -	240 - -	2,073 6 10	7,118 1 1	9,181 7 11
2	Olpar -	-	-	-	-	-	-	-
3	Koorsud -	-	-	-	-	-	-	-
4	Subhoh -	-	-	-	-	-	-	-
5	Kurrode -	-	-	-	-	-	-	-
6	Walore -	-	-	-	-	-	-	-
7	Soopa -	-	-	-	-	-	-	-
8	Parchole -	-	-	-	-	-	-	-
9	Chicklee -	-	-	-	-	-	-	-
10	Bulsar -	-	-	-	-	-	-	-
11	Parnera -	-	-	-	-	-	-	-
12	Bugwarra -	-	-	-	-	-	-	-
13	Mandavee -	-	-	-	-	-	-	-
TOTAL - - Rs.		50 8 -	102 9 6	1,446 - -	240 - -	2,073 6 10	7,118 1 1	9,181 7 11

Remarks.—Sanction having been accord d to the alterations and additions to the 17 Saw Gins received from Mr. Frost; the establishment is engaged in completing them.

(signed) C. Daley,
Superintendent of Cotton Experiments.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 30 November 1853.

No.	NAMES.	Stations under Superintendent	Remarks on the past Season, as to how far anticipations regarding the Crops and its disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or Unginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	{ Chowrasee - Surat - }	1	The yield of cotton cultivation in the zillah, was, last year, much more than anticipated, although the after rains had completely failed. But the heavy rains which fell in June, July and part of August kept the ground moist, which materially assisted the cotton crop in developing itself in January and February	37 maunds of kuppas and 3 bales of cotton.		37 maunds of kuppas and 3 bales of cotton.		Half the crop.			
2	Oolpar -	1									
3	Koorsud -	1									
4	Subhoh -	-									
5	Kurrode -	-									
6	Walor -	-									
7	Soopa -	-									
8	Parchole -	-									
9	Chicklee -	-									
10	Bulsar -	-									
11	Parnera -	-									
12	Bugwarra -	-									
13	Mandvee -	-									
TOTAL - - -		3		37 mds & 3 bales.		37 mds & 3 bales.					

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 30 November 1853—continued.

No.	NAMES.	G I N S.								
		In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold during the Half-Year under Report.		Amount Expended on Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	Amount.	
13.	14.	15.	16.	17.	18.	19.	20.	21.		
1	{ Chowrassee - { Surat - }	4 of 20 saws	- -	17 Being altered agreeably to sanction.	-	-	-	-	-	-
2	Oolpar -	-	-	-	-	-	-	-	-	-
3	Koorud -	-	-	-	-	-	-	-	-	-
4	Surbhon -	-	-	-	-	-	-	-	-	-
5	Kurrode -	-	-	-	-	-	-	-	-	-
6	Walor -	-	-	-	-	-	-	-	-	-
7	Soopa -	-	-	-	-	-	-	-	-	-
8	Parchole -	-	-	-	-	-	-	-	-	-
9	Chicklee -	-	-	-	-	-	-	-	-	-
10	Bulsar -	-	-	-	-	-	-	-	-	-
11	Parneira -	-	-	-	-	-	-	-	-	-
12	Bugwarra -	-	-	-	-	-	-	-	-	-
13	Mandvee -	-	-	-	-	-	-	-	-	-
TOTAL - - -		4 of 20 saws	- -	17	-	-	-	-	-	-

No.	NAMES.	Other Items of Expenditure during the Half-Year under Report.							Amount Expended up to last Half-Year ending 31 May 1853.	TOTAL EXPENDITURE from 1 Jan. 1851, up to end of Half-Year under Report.	Prospects of the coming Season.
		Purchase and Ginning of Cotton.	Con-tingencies.	Buildings.	Temporary Esta- bishment, and New Orleans Cotton Cultivation.	Amount of Super- intendence.	Amount of Esta- bishment.	TOTAL AMOUNT.			
		22.	23.	24.	25.	26.	27.	28.			
1	{ Chowrassee - { Surat - }	- -	11 13 8	28 8 -	- -	1,449 - -	240 - -	1,729 5 8	9,181 7 11	10,910 13 8	Average.
2	Oolpar -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
3	Koorud -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
4	Surbhon -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
5	Kurrode -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
6	Walor -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
7	Soopa -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
8	Parchole -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
9	Chicklee -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
10	Bulsar -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
11	Parneira -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
12	Bugwarra -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
13	Mandvee -	- -	- -	- -	- -	- -	- -	- -	- -	- -	
TOTAL - - Rs.		- -	11 13 8	28 8 -	- -	1,449 - -	240 - -	1,729 5 8	9,181 7 11	10,910 13 8	

Remarks:--Sanction having been accorded to the alterations and additions to the 17 saw gins received from Mr. Frost, the establishment is engaged in completing them. The cause of the decrease in the cultivation of the exotic cotton is attributable to the change of mamludars, the new ones having been appointed a little before the monsoon.

(signed) C. Daley,
Superintendent of Cotton Experiments.

SUPERINTENDENT'S REPORT ON the Cotton Experiments in the Surat Zilla, for the Half-Year ending 31 May 1854.

Talookas.	NAMES.	Stations.	Prospect of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.		
				Extent in Acres.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1	Chowrassee	1	In the last half yearly Report it was anticipated that the season would be an average one; instead of which it proved to be a favourable one. The heavy rains merely retarded the cotton crops coming to maturity as early as usual.	16	2½	-	-	-	-	7,271½	1,118	
2	Olpar	1		8	1¼	-	-	-	-	-	5,026½	773
3	Koorsud	1		14	2½	-	-	-	-	-	26,510	4,078
4	Surbhon	-		¼	-	-	-	-	-	-	700	107
5	Kurrodee	-		-	-	-	-	-	-	-	1,420½	218
6	Walore	-		-	-	-	-	-	-	-	592½	91
7	Soopa	-		-	-	-	-	-	-	-	1,638½	252
8	Parchole	-		-	-	-	-	-	-	-	1,582½	243
9	Chicklee	-		-	-	-	-	-	-	-	7	1
10	Bulsar	-		-	-	-	-	-	-	-	-	-
11	Parnera	-		-	-	-	-	-	-	-	-	-
12	Bugwara	-		-	-	-	-	-	-	-	-	-
13	Mandvee	-		-	-	-	-	-	-	-	924½	126
	TOTAL	3	-	38¼	5½	-	-	-	-	45,674½	7,007	

COTTON PURCHASED FOR GOVERNMENT.

Talookas.	NAMES.	NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			TOTAL Amount of Cotton Purchased for Government.	
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.		
		13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.		25.
1	Chowrassee	8 maunds	86 Rupees per Candy.	11	-	-	-	8 maunds	86 Rupees per Candy.	11	-	-	-	11	
2	Olpar	-		-	-	-	-	-		-	-	-	-	-	-
3	Koorsud	-		-	-	-	-	-		-	-	-	-	-	-
4	Surbhon	-		-	-	-	-	-		-	-	-	-	-	-
5	Kurrodee	-		-	-	-	-	-		-	-	-	-	-	-
6	Walore	-		-	-	-	-	-		-	-	-	-	-	-
7	Soopa	-		-	-	-	-	-		-	-	-	-	-	-
8	Parchole	-		-	-	-	-	-		-	-	-	-	-	-
9	Chicklee	-		-	-	-	-	-		-	-	-	-	-	-
10	Bulsar	-		-	-	-	-	-		-	-	-	-	-	-
11	Parnera	-		-	-	-	-	-		-	-	-	-	-	-
12	Bugwara	-		-	-	-	-	-		-	-	-	-	-	-
13	Mandvee	-		-	-	-	-	-		-	-	-	-	-	-
	TOTAL	8 maunds	-	11	-	-	-	8 maunds	-	11	-	-	-	11	

GIN S.

Talookas.	NAMES.	In Use.		Out of Use.		Completed.		Sold for Government.		Amount Expended in Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
		26.	27.	28.	29.	30.	31.	32.	33.	
1	Chowrassee	4 of 20 saws	-	17 saws	1	-	-	-	-	-
2	Olpar	-	-	-	-	-	-	-	-	-
3	Koorsud	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-
5	Kurrodee	-	-	-	-	-	-	-	-	-
6	Walore	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-
11	Parnera	-	-	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-	-	-
	TOTAL	4 of 20 saws	-	17 saws	1	-	-	-	-	-

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1319

REPORT of the Cotton Experiments in the Surat Zilla, for the Half-Year ending 31 May 1854—continued.

Talookas.	NAMES.	QUANTITY OF COTTON RECEIVED.								Received during the last Season.	TOTAL Amount Expended in Ginning, &c., on Government Account.	
		FOREIGN.						COUNTRY.				
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.			
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.					
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	
1	Chowrassee	6 maunds	-	-	-	37 maunds	-	-	-	-	37 maunds	20 10 6
2	Olpar	-	-	-	-	-	-	-	-	-	-	-
3	Koornud	-	-	-	-	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-	-	-	-	-
6	Walore	-	-	-	-	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-	-	-	-	-
11	Parnera	-	-	-	-	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	6 maunds	-	-	-	37 maunds	-	-	-	-	37 maunds	20 10 6

Talookas.	NAMES.	For Building.	For Contingencies.	For Superintendence.	For Establishment.	Amount Expended during the Half-Year under Report, including the Purchase of Cotton and Ginning, &c.	Amount Expended up to last Half-Year.	TOTAL Expenditure up to end of Half-Year under Report.
		45.	46.	47.	48.	49.	50.	51.
1	Chowrassee	38 8 -	7 6 9	1,446 - -	240 - -	1,752 9 3	10,910 13 9	12,663 6 11
2	Olpar	-	-	-	-	-	-	-
3	Koornud	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-
6	Walore	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-
8	Parchole	-	-	-	-	-	-	-
9	Chicklee	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-
11	Parnera	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-
13	Mandvee	-	-	-	-	-	-	-
	TOTAL	38 8 -	7 6 9	1,446 - -	240 - -	1,752 9 3	10,910 13 8	12,663 6 11

Remarks.—Sanction having been accorded to the alterations and additions to the 17 saw gins received from Mr. Frost, the establishment is engaged in completing them.

(signed) C. Daley,
Superintendent of Cotton Experiments.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Suzat Zillah, for the Half-Year ending 30 November 1854.

Number.	NAMES.	Stations under Superintendent.	Remarks on the Past Season, as to how far anticipations regarding the Crops and its Disposal were realised.	Quantity of Cotton on hand on account of Government, of each sort, Ginned or not Ginned.				Supposed proportion of last Year's Crop which has been Cleaned on Saw-Gins, or will be Cleaned.				
				New Orleans.	Broach.	TOTAL.	Country.	New Orleans.	Broach.	TOTAL.	Country.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1	{ Chowrasee - Surat - }	1	The yield of Cotton Cultivation in the Zilla was last year an average one, as anticipated.	37 maunds of kuppas and 3 bales of Cotton.	-	37 maunds of kuppas and 3 bales of cotton.	-	Half the Crop.	-	-	-	
2	Olpar -	1		-	-	-	-		-	-	-	-
3	Koorsud -	1		-	-	-	-		-	-	-	-
4	Surbhon -	-		-	-	-	-		-	-	-	-
5	Kurrode -	-		-	-	-	-		-	-	-	-
6	Walor -	-		-	-	-	-		-	-	-	-
7	Soopta -	-		-	-	-	-		-	-	-	-
8	Parchole -	-		-	-	-	-		-	-	-	-
9	Chicklee -	-		-	-	-	-		-	-	-	-
10	Bulsar -	-		-	-	-	-		-	-	-	-
11	Parneira -	-		-	-	-	-		-	-	-	-
12	Bugwara -	-		-	-	-	-		-	-	-	-
13	Mandvee -	-		-	-	-	-		-	-	-	-
TOTAL	-	3	-	37 maunds and 3 bales.	-	37 maunds and 3 bales.	-	-	-	-		

G I N S.

Number.	NAMES.	In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold during the Half-Year under Report.		Amount Expended on Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	Amount.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	{ Chowrasee - Surat - }	4 of 20 saws	-	17 being altered agreeably to sanction.	-	-	-	-	-	-
2	Olpar -	-	-	-	-	-	-	-	-	-
3	Koorsud -	-	-	-	-	-	-	-	-	-
4	Surbhon -	-	-	-	-	-	-	-	-	-
5	Kurrode -	-	-	-	-	-	-	-	-	-
6	Walor -	-	-	-	-	-	-	-	-	-
7	Soopta -	-	-	-	-	-	-	-	-	-
8	Parchole -	-	-	-	-	-	-	-	-	-
9	Chicklee -	-	-	-	-	-	-	-	-	-
10	Bulsar -	-	-	-	-	-	-	-	-	-
11	Parneira -	-	-	-	-	-	-	-	-	-
12	Bugwara -	-	-	-	-	-	-	-	-	-
13	Mandvee -	-	-	-	-	-	-	-	-	-
TOTAL	-	4 of 20 saws.	-	17	-	-	-	-	-	-

Number	NAMES.	Other Items of Expenditure during the Half-Year under Report.						Total Amount.	Amount Expended up to last Half-Year, ending 30 November 1854.	Total Expenditure from 1 January 1851 up to end of Half-Year under Report.	Prospect of the Coming Season.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	Temporary Establishment, and New Orleans Cotton Cultivation.	Amount of Superintendence.	Amount of Establishment.				
		22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
1	{ Chowrasee - Surat - }	11 --	7 6 9	28 8 --	- -	1,449 --	240 --	1,735 14 4	12,663 6 11	14,399 5 3	Average
2	Olpar -	-	-	-	-	-	-	-	-	-	
3	Koorsud -	-	-	-	-	-	-	-	-	-	
4	Surbhon -	-	-	-	-	-	-	-	-	-	
5	Kurrode -	-	-	-	-	-	-	-	-	-	
6	Walor -	-	-	-	-	-	-	-	-	-	
7	Soopta -	-	-	-	-	-	-	-	-	-	
8	Parchole -	-	-	-	-	-	-	-	-	-	
9	Chicklee -	-	-	-	-	-	-	-	-	-	
10	Bulsar -	-	-	-	-	-	-	-	-	-	
11	Parneira -	-	-	-	-	-	-	-	-	-	
12	Bugwara -	-	-	-	-	-	-	-	-	-	
13	Mandvee -	-	-	-	-	-	-	-	-	-	
TOTAL - Rs.	-	11 --	7 6 9	28 8 --	- -	1,449 --	240 --	1,735 14 4	12,663 6 11	14,399 5 3	-

Remarks.—Sanction having been accorded to the alterations and additions to the 17 saw-gins received from Mr. Frost, the establishment is engaged in completing them.

(signed) C. Daley,
Superintendent Cotton Experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1321

SUPERINTENDENT'S REPORT on the Cotton Experiments in the Surat Zillah, for the Half-Year ending 31 May 1855.

Talookas.	NAMES.	Stations.	Prospect of the Season, and State of the Crops, as regards each Sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON		
				Extent in Acres.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Acres.	Estimated Produce in Candies.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
				<i>A. y. ft.</i>	<i>C. lbs.</i>						<i>C. lbs.</i>	
1	Chowrassee	1	In the last half-yearly report it was anticipated that the season would be an average one, which it proved to be.	1 4,084 4	1 0					8,191 $\frac{1}{2}$	1,260 0	
2	Oolpar	1		1 848 8	1 0						5,319 $\frac{1}{2}$	818 0
3	Kooraud	1									25,132 $\frac{1}{2}$	3,866 0
4	Surbhon										1,312 $\frac{1}{2}$	202 0
5	Kurrode										868	132 0
6	Walor										1,972	303 0
7	Soopa										2,409	369 0
8	Parchole										1,886	290 0
9	Chicklee										12	1 0
10	Bulsar											
11	Parnara											
12	Bugwara											
13	Mandavee										1,262	194 0
	TOTAL	3		3 93 3	1 $\frac{1}{2}$ 0						48,361 $\frac{1}{2}$	7,434 0

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											TOTAL Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.	Amount.	Quantity.	Rate per Candy.		Amount.
	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	
1	Chowrassee	5 $\frac{1}{2}$ maunds		7				5 $\frac{1}{2}$ maunds		7				7
2	Oolpar													
3	Kooraud													
4	Surbhon													
5	Kurrode													
6	Walor													
7	Soopa													
8	Parchole													
9	Chicklee													
10	Bulsar													
11	Parnara													
12	Bugwara													
13	Mandavee													
	TOTAL	5 $\frac{1}{2}$ maunds		7				5 $\frac{1}{2}$ maunds		7				7

Talookas.	NAMES.	G I N S.								
		In Use.		Out of Use.		Completed.		Sold for Government.		Amount Expended in Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
	26.	27.	28.	29.	30.	31.	32.	33.	34.	
1	Chowrassee	4 of 20 saws		23 saws	1					
2	Oolpar									
3	Kooraud									
4	Surbhon									
5	Kurrode									
6	Walor									
7	Soopa									
8	Parchole									
9	Chicklee									
10	Bulsar									
11	Parnara									
12	Bugwara									
13	Mandavee									
	TOTAL	4 of 20 saws		23 saws	1					

REPORT of the Cotton Experiments in the Surat Zillah, for the Half-Year ending 31 May 1855—*continued.*

Talookas.	NAMES	QUANTITY OF COTTON RECEIVED.									TOTAL Amount Expended in Ginning, &c. on Government Account.	
		FOREIGN.						COUNTRY.		Received during the last Season.		
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.			
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.					
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	
1	Chowrassee	5½ maunds	-	-	-	5½ maunds	-	-	-	-	5½ maunds	-
2	Oolpar	-	-	-	-	-	-	-	-	-	-	
3	Koorsud	-	-	-	-	-	-	-	-	-	-	
4	Surbhon	-	-	-	-	-	-	-	-	-	-	
5	Kurrode	-	-	-	-	-	-	-	-	-	-	
6	Walor	-	-	-	-	-	-	-	-	-	-	
7	Soopa	-	-	-	-	-	-	-	-	-	-	
8	Parehole	-	-	-	-	-	-	-	-	-	-	
9	Chuckle	-	-	-	-	-	-	-	-	-	-	
10	Bulsar	-	-	-	-	-	-	-	-	-	-	
11	Parnera	-	-	-	-	-	-	-	-	-	-	
12	Bugwara	-	-	-	-	-	-	-	-	-	-	
13	Mandavee	-	-	-	-	-	-	-	-	-	-	
	TOTAL	5½ maunds	-	-	-	5½ maunds	-	-	-	5½ maunds	-	

Talookas.	NAMES	Other Items of Expenditure during the Half-Year under Report.				Amount Expended during the Half-Year under Report, including the Purchase of Cotton, and Ginning, &c.	Amount Expended up to last Half-Year, ending, &c.	TOTAL Expended up to End of Half-Year under Report.
		For Building.	For Contingencies.	For Superintendence.	For Establishment.			
		45.	46.	47.	48.			
1	Chowrassee	38 8 -	18 5 -	1,446 - -	240 - -	1,749 13 -	14,399 5 3	16,149 1 4
2	Oolpar	-	-	-	-	-	-	-
3	Koorsud	-	-	-	-	-	-	-
4	Surbhon	-	-	-	-	-	-	-
5	Kurrode	-	-	-	-	-	-	-
6	Walor	-	-	-	-	-	-	-
7	Soopa	-	-	-	-	-	-	-
8	Parehole	-	-	-	-	-	-	-
9	Chuckle	-	-	-	-	-	-	-
10	Bulsar	-	-	-	-	-	-	-
11	Parnera	-	-	-	-	-	-	-
12	Bugwara	-	-	-	-	-	-	-
13	Mandavee	-	-	-	-	-	-	-
	TOTAL	38 8 -	18 5 -	1,446 - -	240 - -	1,749 13 -	14,399 5 3	16,149 1 4

Remarks.—Sanction having been accorded to the alterations and additions to the 17 saw-gins received from Mr. Frost, the establishment completed them during this half-year.

(signed) C. Daley,
Superintendent of Cotton Experiments.

KHANDEISH.

No. 126 of 1849—Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable East India Company, London.

Honourable Sirs,

With reference to our despatches, dated respectively the 12th April, 27th May and 6th December, and 30th April last, Nos. 28, 51, 158, and 57, we have now the honour to submit our proceedings in connection with the half-yearly progress reports of the cotton experiments in Khandeish, ending respectively on the 31st May and 30th November 1848, furnishing an account of these operations subsequent to the resignation of Mr. Simpson, the American cotton planter employed in that district.

2. The expenditure during the first year is stated at Rs. 15,216. 12. 10., and from the commencement of the experiment at Rs. 40,553. 4. 9., making a total of Rs. 55,770. 1. 7.; this was increased during the next half-year by Rs. 3,719. 9. 1. to Rs. 59,489. 10. 8. At the close of the season reported on, the want of a few seasonable showers had caused the cotton, both native and American, to ripen prematurely, thus creating the apprehension of a short crop.

3. The produce of the New Orleans variety, weighing in all 2,956 lbs. of clean cotton, was raised from seed sent from Dharwar at the beginning of the rains of

1848.

1848. It appears to have varied considerably per beega, ranging from 9 lbs. in the Amulnair talooka to 54 lbs. in the Yawal talooka, while the result of a small cultivation in the factory compound at Dhurrumgaum under the immediate supervision of Mr. Price, the assistant superintendent in charge, where, it is presumed, more care was bestowed upon it, was 200 lbs. of seeded cotton per beega. We consider this may be attributable partly perhaps to the seed being damaged in transit, in consequence of the late period at which it was forwarded, as well as to the unfavourable circumstances of weather reported.

4. The Revenue Commissioner, Northern Division, recommended that the whole lot of New Orleans cotton brought to the factory should be sent to England. We informed that officer that it was not intended, in distributing the seed to the ryots, that Government should purchase the produce, and that such a course is objectionable as a general rule. As, however, the quantity raised was small, and there seemed little probability of your Honourable Court objecting to the measure, we have acceded to Mr. Shaw's proposition in this instance; and as the season was far advanced, we requested the Collector of Khandeish to have the cotton transmitted without loss of time to the Presidency for shipment, so as, if possible, to arrive before the rains. This cotton, we beg to add, formed a part of the consignment transmitted to Liverpool by the ship "George Buckham," specified in para. 2 of our despatch, No. 91, of the 21st June last.

5. A sample of the above cotton was sent, under date the 29th March last, to the Collector of Customs at the Presidency, with a request that he would submit it for the early report of the Chamber of Commerce. The opinion of the Chamber is as follows: "The sample of cotton is dull in colour, and the staple somewhat weak and irregular. It is clean, however, and free from seed. As the produce of New Orleans seed, it is considered rather an inferior parcel, but much superior to the indigenous cotton. Its freeness from impurities would secure it a ready sale, at say 10 to 12 rupees per candy above the ordinary Khandeish cotton."

V. 4486.

V. 5215.

6. The Collector has been instructed in future to endeavour to induce the ryots and dealers to undertake the disposal of the New Orleans cotton grown by them, on their own account, as it is only by so doing that the real objects of the experiment can be furthered, or their success fairly tested.

7. Besides the New Orleans cotton alluded to above, 324 candies and 234 pounds of indigenous cotton were purchased from the ryots and cleaned by the saw-gin under Mr Price's superintendence. The number of saw-gins in use appears to have been six (6) of sizes from 10 to 25 saws at two stations during the first half-year reported on, and fourteen (14) at six stations during the half-year ending 30th November last. Full particulars of the cost, &c. of these machines will be found in the statements accompanying the progress reports, and in the letter from the Collector of Khandeish, No. 978, of the 21st of July last, handed up by the Revenue Commissioner, Northern Division, under date the 3d ultimo, copies of which accompany this despatch, to which we beg to refer your Honourable Court.

We have, &c.
(signed) *Falkland.*
J. P. Willoughby.
D. A. Blanc.

Bombay Castle, 15 September 1849.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 4th April 1849.—V. 4483 to 86.

(No. 521 of 1849.)

From the Revenue Commissioner, Northern Division, to Mr. Acting Secretary Courtney.

V. 4483.

Sir,

In submitting the accompanying correspondence* for the information of the Right Honourable the Governor in Council, I do myself the honour to state that I have not awaited the reply of the Collector of Khandeish to my letter, No. 522 of this date, as I expect before the season becomes too far advanced to be favoured with the instructions of Government regarding the disposal of the 8,763 lbs. of New Orleans cotton, amounting to between 11 and 12 candies of cotton, which I beg to recommend should be consigned to the Honourable the Court of Directors as a specimen of New Orleans cotton grown in Khandeish from
Dhatwar

* Collector's letter, No. 302 of 10th March 1849, with accompaniment. Revenue Commissioner's letter to Collector, No. 522, of 19th instant.

1324 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

Dharwar seed, and should it realise in England a remunerating price, it will be an encouragement to increase its cultivation in that province.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, Northern Division.

Revenue Commissioners' Camp, Allibagh,
19 March 1849.

(No. 302 of 1849.)

V. 4484.

To the Revenue Commissioner, Northern Division.

Sir,

As directed by Government in their letter, No. 2524, of the 29th April last, bearing your endorsement, No. 816 of the 4th May following, I do myself the honour herewith to submit two half-yearly progress reports received from Mr. Price, assistant superintendent in charge of cotton experiments in this collectorate, ending respectively the 31st May and the 30th November last.

2. The figures under the head of "country cotton" in the column of "estimated produce in candies," in the statement ending 31st May last, have been calculated on the maximum rate of out-turn per beega, but I have issued orders to the mamlutdars to adopt a medium rate in similar calculations in future.

3. From the monthly progress reports received from him since the arrival of the accompanying returns, I learn that Mr. Price has completed the construction of five additional saw-gins, which make the total number of gins manufactured by him 15; of these, two gins of 20 saws each have lately been sold to a cotton merchant, Gurdhural Chutoorbhoy, for rupees three hundred and sixty eight, annas seven, and pies six, (Rs. 368. 7. 6.), which are reported in my letter No. 301 of this day's date, to your address.

4. I take this opportunity of submitting two parcels* containing an ordinary sample of saw-ginned cotton, the produce this season of the New Orleans seed received from Dharwar last June, at the commencement of last rains, and distributed to the cultivators in this collectorate, in order that, should it be the pleasure of Government, this sample of cotton may be submitted for the inspection of the Bombay Chamber of Commerce, or sent to the Honourable the Court of Directors for the purpose of ascertaining its relative value compared with the indigenous Indian cotton.

5. I beg also to append extract paras. 4 to 6 of Mr. Price's progress report for the past month, No. 44, as it contains interesting information regarding the growth of the New Orleans cotton in this province this season. The rates of out-turn per beegah of 32,400 square feet in the different talookas are very variable, ranging from 9 lbs. in Amulnair, to 54 lbs. in Yawul, while the result of a small cultivation in the factory compound at Dhurrungaum under the immediate superintendence of Mr. Price, where I presume more care was bestowed, was 200 lbs. per beegah.

* Both parcels contain the same sample.

I have, &c.
(signed) A. Elphinston,
Collector.
Khandeish Collector's Office,
Camp Dhurrungaum, 10 March 1849.

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending the 31st May 1848.

Numbers.	TALOOKAS.	Stations visited by the Superintendent.	Prospects of the Season, and State of the Crops, as regards each Sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.										
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.				
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.			
				Beeg. p.	Can. lbs.	Beeg. p.	Can. lbs.	Beeg. p.	Can. lbs.	Beeg. lbs.	Can. lbs.			
1	Dhonia -	-	The several reports received from the district functionaries of the prospects of the season were favourable, and expectations of a rich return. The latter rainy, however, from the lateness of their occurrence, have tended greatly to spoil the cotton, inasmuch as they had prevented in a great measure the process of picking being performed early in the season, and therefore the ripe cotton, which should otherwise have been picked, was torn off the pods and scattered over the fields; hence the reason for last year's crop being so dirty.	-	-	-	-	-	-	11,630 1½	2,372 18			
2	Amulnair -	-		-	-	-	-	-	-	-	15,230 15	3,108 248		
3	Errendole -	1		-	-	-	-	-	-	-	19,671 0	4,014 384		
4	Dhurrungaum -	-		-	-	-	-	-	-	-	24,556 11½	3,758 515½		
5	Bhurgaum -	-		-	-	-	-	-	-	-	3,072 3½	626 766		
6	Challeesgaum -	-		-	-	-	-	-	-	-	1,725 7½	1,408 368		
7	Malligaum -	-		-	-	-	-	-	-	-	296 1¼	45 245½		
8	Baglan -	-		-	-	-	-	-	-	-	1,507 12½	346 108½		
9	Pimpulnair -	-		-	-	-	-	-	-	-	10,105 2½	6,724 733		
10	Nundoorbar -	-		-	-	-	-	-	-	-	3,118 8	715 752		
11	Sooltanpoor -	-		-	-	-	-	-	-	-	2,497 5	445 752		
12	Thalnair -	-		-	-	-	-	-	-	-	10,954 10	2,738 396		
13	Choprah -	-		-	-	-	-	-	-	-	10,347 5	4,223 288		
14	Yawul -	-		-	5	0	0	416	5	0	0	416	8,867 2½	3,121 462
15	Sowdah -	-		-	-	-	-	-	-	-	-	-	12,033 15	12,279 264
16	Nusseerabad -	1		-	-	-	-	-	-	-	-	-	38,209 10	23,393 448
	Julgaum -	-	-	-	-	-	-	-	-	-	-	-	-	
	Jamnair -	-	-	-	-	-	-	-	-	-	-	-	-	
	TOTAL	2	-	5	0	0	416	5	0	0	416	1,73,822 10½	69,323 476½	

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish—continued.

Numbers.	TALOOKAS.	COTTON PURCHASED FOR GOVERNMENT.												TOTAL Amount of Cotton Purchased for Government.
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	
13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.		
		Can. lbs.	Rs. a. p.	Can. lbs.	Rs. a. p.	Can. lbs.	Rs. a. p.	Can. lbs.	Rs. a. p.	Can. lbs.	Rs. a. p.	Rs. a. p.		
1	Dhoolis -	-	-	-	-	-	-	-	-	-	-	-	-	
2	Amulnair -	-	-	-	-	-	-	-	-	-	-	-	-	
3	{ Errendole - Dhurrungaum }	-	-	-	-	-	-	-	-	221 476	14 8	3,812 4 7	3,812 4 7	
4	Bhurgaum -	-	-	-	-	-	-	-	-	-	-	-	-	
5	Challeesgaum -	-	-	-	-	-	-	-	-	-	-	-	-	
6	Malligaum -	-	-	-	-	-	-	-	-	-	-	-	-	
7	Baglan -	-	-	-	-	-	-	-	-	-	-	-	-	
8	Pimpulnair -	-	-	-	-	-	-	-	-	-	-	-	-	
9	Nundoorhar -	-	-	-	-	-	-	-	-	-	-	-	-	
10	Sooltanpoor -	-	-	-	-	-	-	-	-	-	-	-	-	
11	Thalnair -	-	-	-	-	-	-	-	-	-	-	-	-	
12	Choprah -	-	-	-	-	-	-	-	-	-	-	-	-	
13	Yawul -	-	-	-	-	-	-	-	-	-	-	-	-	
14	Sowdah -	0 416	Average 25 rupees.	8 13 10	-	-	-	0 416	Average 25 rupees.	8 13 10	-	-	8 13 10	
15	{ Nusseerabad - Julgaum }	-	-	-	-	-	-	-	-	102 542	14 8	1,837 9 1	1,837 9 1	
16	Jamnair -	-	-	-	-	-	-	-	-	-	-	-	-	
	TOTAL -	0 416	-	8 13 10	-	-	-	0 416	-	8 13 10	324 234	-	5,649 13 8	5,649 13 8

Numbers.	TALOOKAS.	G I N S.								
		In Use.		Out of Use.		Completed.		Sold for Government during the Half-Year under Report.		Amount Expended on Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	At what Amount.	
26.	27.	28.	29.	30.	31.	32.	33.	34.		
1	Dhoolis -	-	-	-	-	-	-	-	-	Rs. a. p.
2	Amulnair -	-	-	-	-	-	-	-	-	-
3	{ Errendole - Dhurrungaum }	1 of 25 saws, 10 dimension.	-	-	-	2 gins, 1 of 12 saws and another of 19 saws.	-	-	-	434 7 5
4	Bhurgaum -	2 of 18 saws, 10 do.	-	-	-	-	-	-	-	-
5	Challeesgaum -	1 of 10 saws, 6 do.	-	-	-	-	-	-	-	-
6	Malligaum -	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-
8	Pimpulnair -	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	-	-	-	-	-	-	-	-
11	Thalnair -	-	-	-	-	-	-	-	-	-
12	Choprah -	-	-	-	-	-	-	-	-	-
13	Yawul -	-	-	-	-	-	-	-	-	-
14	Sowdah -	-	-	-	-	-	-	-	-	-
15	{ Nusseerabad - Julgaum }	2 of 18 saws, 10 dimension.	-	-	-	-	-	-	-	-
16	Jamnair -	-	-	-	-	-	-	-	-	-
	TOTAL -	6 gins	-	-	-	2 gins	-	-	-	434 7 5

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish—*continued.*

Numbers.	TALOOKAS	QUANTITY OF COTTON GINNED.								Total Amount Expended in Ginning &c. on Government Account.			
		FOREIGN.						COUNTRY.			Quantity Ginned during the Season.		
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	For Private Individuals.				
		For Government.	For Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.						
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.		
1	Dhoolah -	-	-	-	-	-	-	-	-	-	-	Rs. a. p.	
2	Amulnair -	-	-	-	-	-	-	-	-	-	-	-	
3	Errendole -	-	-	-	-	-	-	60	380	30	133	90 513	1,200 1 5
	Dhurrungaum }	-	-	-	-	-	-	-	-	-	-	-	-
4	Bhurgaum -	-	-	-	-	-	-	-	-	-	-	-	-
5	Challeesgaum -	-	-	-	-	-	-	-	-	-	-	-	-
6	Malhgaum -	-	-	-	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair -	-	-	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	-	-	-	-	-	-	-	-	-	-	-
11	Thalnair -	-	-	-	-	-	-	-	-	-	-	-	-
12	Choprah -	-	-	-	-	-	-	-	-	-	-	-	-
13	Yawul -	-	-	-	-	-	-	-	-	-	-	-	-
14	Sowdah -	100	-	-	-	100	-	-	-	-	-	0 100	0 7 2
15	Nusserabad -	-	-	-	-	-	-	29	304	20	0	49 304	854 6 9
	Julgaum }	-	-	-	-	-	-	-	-	-	-	-	-
16	Jamnair -	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL - -	100	-	-	-	100	-	89	684	50	133	140 133	2,054 15 4

Numbers.	TALOOKAS.	Other Items of Expenditure during the Half Year under Report.					Amount Expended up to the last Half-Year.	Total Expenditure up to the end of Half-Year under Report.			
		Buildings.	Contingencies.	Amount of Superintendence.	Amount of Establishment.	Total Amount, including Cotton Ginning, &c.					
		45.	46.	47.	48.	49.			50.	51.	
1	Dhoolah -	-	-	-	-	-	-	Rs. a. p.			
2	Amulnair -	-	-	-	-	-	-	-			
3	Errendole -	1,210	15 3	35	- 8	4,480	- -	1,148 5 8	12,321 3 -	25,253 8 2	37,574 11 2
	Dhurrungaum }	-	-	-	-	-	-	-	-	-	-
4	Bhurgaum -	-	-	-	-	-	-	-	-	-	-
5	Challeesgaum -	-	-	-	-	-	-	-	-	-	-
6	Malhgaum -	-	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair -	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	-	-	-	-	-	-	-	-	-
11	Thalnair -	-	-	-	-	-	-	-	-	-	-
12	Choprah -	-	-	-	-	-	-	-	-	-	-
13	Yawul -	-	-	-	-	-	-	-	-	-	-
14	Sowdah -	-	-	-	-	-	-	9 5 -	- - -	- - -	9 5 -
15	Nusserabad -	114	5 -	-	-	-	-	80 - -	2,886 4 10	15,299 - -	18,186 1 5
	Julgaum }	-	-	-	-	-	-	-	-	-	-
16	Jamnair -	-	-	-	-	-	-	-	-	-	-
	TOTAL - -	1,325	4 3	35	- 8	4,480	- -	1,228 5 8	15,216 12 10	40,553 4 9	55,770 1 7

Remarks—The two gins reported completed in this half-year were taken in hand on the eve of Mr. Simpson's (the Superintendent) retirement from the service in April last; one of these (i. e. of 12 saws) was finished by the end of April for Rs. 125. 2. 2., the other, of 19 saws, completed in May following for Rs. 176. 13. 7. During the preceding three years of the experiments, in consequence of the establishment being employed in the erection of the cotton factory, and the screw press, with a building for its reception, also in the adjustment of the American gins received from Bombay, the work of gin-making could not be progressed with; besides, the saws expected from Bombay did not arrive; however, one model gin was constructed for about 60 rupees. The screw press cost Rs. 660. 12. 7., and its building, Rs. 1,408. 12. 8., exclusive of the computed amount of the occupation of the stipendiary establishment, which for both works amounted to Rs. 557. 3. 2.

Superintendent's Office, Dhurrungaum,
27 December 1848.

(signed) *Thos. Price,*
Assistant Superintendent Cotton Experiments in charge.

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 30 November 1848.

Number.	TALOOKAS.	Stations visited by the Superintendent.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been Cleaned on Saw Gins, or will be Cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Dhoolia - -	-	-	-	-	-	-	-	-	-	-
2	Amulnair - -	-	-	-	-	-	-	-	-	-	-
3	{ Errendole Dhurrungaum }	1	-	-	-	-	-	-	-	-	5 per cent.
	Casodoo - -	1	-	-	-	-	-	-	-	-	-
4	Bhurgaum - -	-	-	-	-	-	-	-	-	-	-
5	Challeesgaum -	-	-	-	-	-	-	-	-	-	-
6	Malligaum - -	-	-	-	-	-	-	-	-	-	-
7	Baglan - -	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair - -	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar - -	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor - -	-	-	-	-	-	-	-	-	-	-
11	Thalnair - -	-	-	-	-	-	-	-	-	-	-
12	{ Chopra - -	1	-	-	-	-	-	-	-	-	-
	Arrawud - -	1	-	-	-	-	-	-	-	-	-
13	Yawull - -	1	-	-	-	-	-	-	-	-	-
14	Sowda - -	-	-	-	-	-	-	-	-	-	-
15	{ Nuseerabad Julgaum }	1	-	-	-	-	-	-	-	-	1 per cent.
	Jamnair - -	-	-	-	-	-	-	-	-	-	-
	TOTAL - -	6	-	-	-	-	-	-	-	-	1/4 of a lb. for every 100 lbs. of entire crop.

G I N S.										
Number.	TALOOKAS.	In Use.		Out of Use.		Completed during the Half-Year under Report.		Sold for Government during the Half-Year under Report.		Amount Expended on Construction of Gins.
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	At what Amount.	
		13.	14.	15.	16.	17.	18.	19.	20.	
1	Dhoolia - -	-	-	-	-	-	-	-	-	-
2	Amulnair - -	-	-	-	-	-	-	-	-	-
3	{ Errendole Dhurrungaum }	4 four	-	-	-	8 eight	-	-	-	{ 254 2 8 102 13 10
	Casodoo - -	2 two.	-	-	-	-	-	-	-	
4	Bhurgaum - -	-	-	-	-	-	-	-	-	-
5	Challeesgaum -	-	-	-	-	-	-	-	-	-
6	Malligaum - -	-	-	-	-	-	-	-	-	-
7	Baglan - -	-	-	-	-	-	-	-	-	-
8	Pimpulnair - -	-	-	-	-	-	-	-	-	-
9	Nundoorbar - -	-	-	-	-	-	-	-	-	-
10	Sooltanpoor - -	-	-	-	-	-	-	-	-	-
11	Thalnair - -	-	-	-	-	-	-	-	-	-
12	{ Chopra - -	2 two.	-	-	-	-	-	-	-	-
	Arrawud - -	2 two.	-	-	-	-	-	-	-	-
13	Yawull - -	2 two.	-	-	-	-	-	-	-	-
14	Sowda - -	-	-	-	-	-	-	-	-	-
15	{ Nuseerabad Julgaum }	2 two.	-	-	-	-	-	-	-	-
	Jamnair - -	-	-	-	-	-	-	-	-	-
	TOTAL - -	14 gins	-	-	-	8 gins	-	-	-	357 - 6

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish—*continued.*

Number.	TALOOKAS.	Other Items of Expenditure during the Half-Year under Report.						Amount Expended up to the last Half-Year.	Total Expenditure up to the end of Half-Year under Report.	Prospe of the comm Season.	
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	Temporary Establish-ment.	Amount of Superin-tendence.	Amount of Establish-ment.				Total Amount.
		22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
1	Dhoolia -	-	-	-	-	-	-	-	-	-	-
2	Anulnair -	-	-	-	-	-	-	-	-	-	-
3	Errendole -	96 8 4	101 5 5	151 13 7	-	1,500 --	1,248 --	3,554 11 10	37,574 11 2	41,129 7 --	The absence of a few reasonable showers in the latter part of the rains, which were much looked for, has prematurely ripened both the New Orleans and indigenous cotton, and which, it is expected, will result in a short crop this year.
	Dhurrungaum } Cassodoo -	-	-	-	11 13 3	-	-	11 13 3	-	11 13 3	
4	Bhurgaum -	-	-	-	-	-	-	-	-	-	-
5	Challeesgaum -	-	-	-	-	-	-	-	-	-	-
6	Malligaum -	-	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair -	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-	-	-	-
10	Sooltaupoor -	-	-	-	-	-	-	-	-	-	-
11	Thalnair -	-	-	-	-	-	-	-	-	-	-
12	Chopra -	-	-	-	11 --	-	-	11 --	-	11 --	The absence of a few reasonable showers in the latter part of the rains, which were much looked for, has prematurely ripened both the New Orleans and indigenous cotton, and which, it is expected, will result in a short crop this year.
	Arrawud -	-	-	-	11 --	-	-	11 --	-	11 --	
13	Yawull -	-	-	-	11 --	-	-	11 --	-	11 --	-
14	Sowda -	-	-	-	-	-	-	-	9 5 -	9 5 -	-
15	Nuseerabad -	-	-	-	-	-	120 --	120 --	18,186 1 5	18,306 1 5	The absence of a few reasonable showers in the latter part of the rains, which were much looked for, has prematurely ripened both the New Orleans and indigenous cotton, and which, it is expected, will result in a short crop this year.
	Julgaum -	-	-	-	-	-	-	-	-	-	
16	Jamnair -	-	-	-	-	-	-	-	-	-	-
	TOTAL -	196 8 4	101 5 5	151 13 7	44 13 3	1,500 --	1,368 --	3,719 9 1	55,770 1 7	59,489 10 8	

Remarks.—Number of Gins completed (with cost, including saws) during half-year under Report:—

	<i>Rs. a. p.</i>
1 gin completed in June of 19 saws, for	176 13 7
1 gin completed in July of 20 saws, for	184 3 9
2 gins completed in August of 20 saws, for	368 7 6
1 gin completed in September of 20 saws, for	184 3 9
1 gin completed in October of 20 saws, for	184 3 9
2 gins completed in November of 20 saws, not yet ascertained.	

8 TOTAL Gins completed.

Number of ginning stations up to end of last half-year - - - - 2 two

Number of ginning stations in present half-year - - - - 6 six

Increase of Stations - - 4 four.

Superintendent's Office, Dhurrungaum, }
27 December 1843.

(signed) Thomas Price,
Assistant Superintendent Cotton Experiment in Charge.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1329

EXTRACT of a Report, No. 44, of 1849, from Mr. *Thomas Price*, Assistant Superintendent in Charge of Cotton Experiments in Khandeish, for the month of February 1849.

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Bombay.

NEW ORLEANS COTTON.

Para. 4. THE annexed Table is prepared to show you the amount of New Orleans cotton that has been received at this factory from the districts in which the New Orleans cotton seed had been distributed, the whole of it being the produce of this season, *i. e.* 1848-49.

TABLE.

No.	NAMES OF DISTRICT.	New Orleans Cotton Seed distributed by		TOTAL.	New Orleans Seed Cotton.	
		the	this		Produce in Lbs. Avoirdupois.	Average Produce per Beegah of 32,400 Square Feet.
		Collector.	Department.			
		<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>		
1	Dhoolia - - - - -	50	- -	50	Owner not disposed to sell his produce to this Department.	
2	Amulnair - - - - -	80	- -	80	90 ½	9
3	Errondole - - - - -	- -	200	200	946	31
4	Bhurgaum - - - - -	60	- -	60	Utterly destroyed.	
5	Nundoorbar - - - - -	160	- -	160	Not yet received.	
6	Chopra - - - - -	58	- -	58	1,307	50
7	Yawull - - - - -	100	760	860	5,694	54
8	Sowdah - - - - -	- -	120	120	488	40
9	Nusseerabad - - - - -	- -	- -	- -	None sown in this district.	
10	Jambere - - - - -	36	- -	36	138	40
11	Dhurrungam Factory Compound - - - - -	- -	10	10	100	200
		TOTAL - - - - -		<i>Lbs.</i>	8,763 ½	

5. The New Orleans cotton plants throughout the cotton districts partially suffered this year from a want of a few seasonable showers of rain during the latter part of the monsoon, otherwise the average produce per beegah would have been much more favourable than that shown in the foregoing table.

6. I beg to forward the accompanying two parcels containing saw-ginned New Orleans cotton, raised from the seed received last year from Dharwar, and distributed in this collectorate. One of these has been made up into a small bale of half lbs., in order that, should it be deemed desirable, it may be transmitted to Bombay for the ascertainment of the relative value of this cotton compared with the indigenous variety, and the other put in an envelope for your own inspection.

(True extract.)
(signed) *A. Elphinston*, Collector.

(No. 522 of 1849.)

To *A. Elphinston*, Esq., Collector, Khandeish.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 302, of the 10th instant, enclosing two half-yearly progress reports, forwarded by Mr. Price, assistant superintendent in charge of the cotton experiments, and in reply, beg to state, your instructions, that the medium rate should be inserted in the return, rather than the maximum rate of the outturn of a beegah, as the estimated produce in candies of the cotton, appear to be necessary.

2. In Mr. Price's statement, dated 28th December, ending the 30th November, accompanying your letter under reply, that gentleman reports the completion of eight saw gins, and you now mention that he states, in his monthly progress return since furnished to you, he has completed five additional saw gins, which make the total number of gins manufactured

III.
Bombay.

ured by him fifteen, two of which he has sold to a native merchant for something more than the actual cost price of them to Government. As there appears a discrepancy in these statements, I beg the favour of your calling upon Mr. Price to explain how many gins he has actually completed, showing the number of them in his own hands, and those held by private individuals, and also the number remaining to be completed, specifying the time he expects them to be finished.

3. The parcels of New Orleans cotton, grown from Dharwar seed, will be transmitted to Government, but as the whole produce of this description of cotton amounts to little more than eleven candies, I am inclined to recommend it should be consigned by the Right honourable the Governor in Council to the Court of Directors, as produced in Khandeish; and should its valuation be encouraging, and it finds a ready market at a remunerating price, it will be an inducement to proceed on a larger scale with its cultivation. The sample transmitted appears to me to bear all the character of the Dharwar New Orleans cotton, and will, I anticipate, realise a good price in England; its colour is, however, inferior, which I apprehend is from want of care bestowed in its picking.

4. Alluding to the above cotton, I beg to remark, Mr. Price does not state whether the average produce per beegah is given on cleaned or seeded cotton. If it is on the latter, I consider it to be generally satisfactory to the encouragement of the New Orleans cotton in your collectorate, especially as Mr. Price instances one small patch of land, yielding at the rate of 200 lbs. of cotton per beegah, and mentions that the average produce would have been much more favourable than that shown in the foregoing table if the cotton districts had not partially suffered this year from a want of a few seasonable showers of rain during the latter part of the monsoon.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

Revenue Commissioner's Camp, Allbaugh,
19 March 1849.

V. 4485. MINUTE by the Honourable Mr. Willoughby, subscribed to by the Honourable Mr. Blane.

THE sample of cotton received with this letter may be sent to the Collector of Customs, with a request that he will submit it for the early report of the Chamber of Commerce, and inform us of the result.

26 March 1849,

(signed) J. P. Willoughby,
D. A. Blane.

V. 4486.

(No. 2259 of 1849.)

From Mr. Acting Secretary Courtney, to the Collector of Customs, Bombay.

Sir,

IN transmitting herewith extracts of the documents noted in the margin* and the sample of cotton therein alluded to, I have been directed to request you will have the goodness to submit it for the early report of the Chamber of Commerce, and inform the Right honourable the Governor in Council of the result.

Bombay Castle, 29 March 1849.

I have, &c.
(signed) W. Courtney,
Acting Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 18 April 1849.—V. 5214 to 5216.

(No. 208 of 1849.)

V. 5214.

From the Collector of Customs, Bombay, to the Acting Secretary to Government.

Sir,

IN acknowledging the receipt of your letter No. 2259, dated 29th ultimo, I have the honour to enclose, for the purpose of being laid before the Right honourable the Governor in

* Extract (para. 4) of a letter from the Collector of Khandeish, No. 302, dated 10th instant. Extract (para. 6) of a report, No. 44, of 1849, from Mr. T. Price, Assistant Superintendent of Cotton Experiments in Khandeish. Extract (para. 3) of a letter from the Revenue Commissioner, Northern Division, No. 522, dated 19th instant.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1331

III.
Bombay.

in Council, copy of a letter No. 18, of yesterday's date, from the Chamber of Commerce, to whom the sample of cotton therein alluded to was forwarded by me for examination and report.

Bombay Custom House,
10 April 1849.

I have, &c.
(signed) *H. Young*,
Collector of Customs.

(No. 18 of 1849.)

H. Young, Esq., Collector of Customs, Bombay.

V. 5215.

Sir,

I HAVE the honour, by direction of the Committee of the Chamber of Commerce, to reply to your letter numbered 178 of 1849, and dated 30th ultimo, with reference to the papers and sample of cotton accompanying the same.

In the opinion of all the members of the Chamber the sample of cotton is dull in colour, and the staple somewhat weak and irregular. It is clean, however, and free from seed. As the produce of New Orleans seed it is considered rather an inferior parcel, but much superior to the indigenous cotton. Its freeness from impurities, I am directed to add, would secure it a ready sale at say 10 to 12 rupees per candy above the ordinary Khandeish cotton.

Bombay Chamber of Commerce,
9 April 1849.

I have, &c.
(signed) *John Connon*,
Secretary.

MINUTE by the Honourable Mr. *Willoughby*, dated 14 April 1849, subscribed to by the Honourable Mr. *Blane*.

THIS should be communicated to the Revenue Commissioner, Northern Division, for the information of the Collector of Khandeish.

13 April 1849.

(signed) *J. P. Willoughby*,
D. A. Blane.

(No. 2627 of 1849.)

From Mr. Acting Secretary *Courtney* to the Revenue Commissioner, Northern Division.

V. 5216.

Sir,

I HAVE been directed by the Right honourable the Governor in Council to transmit herewith copy of a letter, No. 208, of the 10th instant, from the Collector of Customs, with enclosure, containing the opinion of the Chamber of Commerce on the samples of cotton forwarded with your letter, No. 521, dated 19th ultimo, and to request you will have the goodness to communicate the same to the Collector of Khandeish.

Bombay Castle, 17 April 1849.

I have, &c.
(signed) *W. Courtney*,
Acting Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 16 May 1849.—V. 6308 to 12.

(No. 778 of 1849.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 6308.

SUBMITTED to Government with reference to the Revenue Commissioner's letter, No. 521, of 19th ultimo.

Tannah Districts, Mahabeshar,
25 April 1849.

(signed) *A. N. Shaw*,
Revenue Commissioner, N. D.

(No. 440 of 1849.)

To *A. N. Shaw*, Esq., Revenue Commissioner, Northern Division.

V. 6309.

Sir,

WITH reference to your letter, No. 522, dated the 19th ultimo, relative to the half-yearly progress reports of the cotton experiments in this collectorate, I have the honour to submit
296—Sess. 2. 8 N 2 copy

1332 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

copy of a communication, No. 50, of the 30th idem, from Mr. Price, assistant superintendent in charge, furnishing the explanation called for by you.

I have, &c.
(signed) A. Elphinston,
Collector.

Khandeish, Collector's Office,
Camp, Suptshring, 18 April 1849.

(No. 50 of 1849.)

To A. Elphinston, Esq., Collector, Khandeish, Dhoolia.

Sir,

In reply to your endorsement, No. 336, of the 24th instant, and with reference to the second paragraph of letter to your address from the Revenue Commissioner, Northern Division, No. 522, of the 19th idem, I beg to state, that during the eleven months the establishment was employed in the construction of saw gins machinery, *i. e.*, from April 1848 to February 1849 inclusive, 15 new gins have been completed, and reported to you as follows:—

In half-yearly report, ending 31st May 1848	-	-	-	-	2
In half-yearly report, ending 30th November 1848	-	-	-	-	8
In monthly report for December, ditto	-	-	-	-	2
In monthly report for January 1849	-	-	-	-	2
In monthly report for February 1849	-	-	-	-	1
TOTAL Gins					15

Two of which, having been applied for by Girdhur Lall Marwaree, of Tulgaum, were accordingly sold and made over to him, as instructed by you in your letter, No. 167, of the 10th ultimo, for Rs. 368. 7. 6. (three hundred and sixty-eight rupees seven annas, six piccs), thus leaving a balance of 13 completed gins in hand up to the end of February 1849. But in order to explain the number of gins remaining to be completed, and the probable time of their completion, it is necessary to state that 8 of the 15 completed gins belong to one batch, the construction of which had received the sanction of Government in May 1847, and the remaining 7 to another, of 25 gins of 20 saws each, an estimate of the probable expense of constructing which was submitted to you for the sanction of Government in July last; consequently the number of gins now remaining to be completed is 18, which I will endeavour, with the increase of work which has devolved on the establishment by the increased number of gins in operation, to have ready before the arrival of the next ginning season, or by the 1st of November next.

2. Adverting to the fourth para. of same letter, I beg to state, the average produce of New Orleans cotton per beegah, as shown in the table prepared and submitted in my monthly report for February last, has been calculated on cotton with the seed, and as the results shown therein, which have been obtained under the disadvantage of an unfavourable season, seem to the Revenue Commissioner, Northern Division, to be generally satisfactory to the encouragement of the culture of New Orleans cotton in this collectorate. It is very desirable that early arrangements be entered into with the ryots for the cultivation of this species of cotton in the ensuing season.

I beg, &c.
(signed) Thomas Price, Assist. Supt.
Cotton Experiments in Charge.

Superintendent's Office, Dhurrengaum,
30 March 1849.

V. 6310.

MINUTE by the Right Honourable the Governor, concurred in by the Honourable Board.

THESE half-yearly reports should in future be submitted as soon as they are due, in order that Government may be in possession of the information they contain as early as practicable.

The calculations of the produce should properly have been made on the average rate of outturn per beega, as directed by the Collector, and approved of by the Revenue Commissioner.

It appears from these reports generally that in the early part of the season there was reason to expect a very favourable crop, but that from untoward circumstances this expectation was partially disappointed.

The extent of cotton cultivation was five beegas of New Orleans, producing 416 lbs., and of country cotton 1,73,822 beegas, 10½ pouds, yielding 69,323 candies and 476½ lbs. The small parcel of New Orleans was purchased on account of Government for Rs. 8. 13. 10., besides a portion of the country cotton, 324 candies and 234 lbs., from the

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1333

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the talookas of Erundole (Dhurumgaum) and Nusserabad (Julgaon) at Rs. 14. 8. per candy, making Rs. 5,649. 13. 8.

The number of gins in use was six, of sizes from 10 to 25 saws, at two stations in the above-mentioned talookas during the first half year, and 14 at six stations in the above and other talookas during the next half year. Two gins were made up in the first half year, and eight during the subsequent period, making in all ten. The cost of the two former is entered in column 34 of the statement at Rs. 434. 7. 5., but this is not made up by the two sums mentioned in the remarks, viz., Rs. 125. 2. 2., and Rs. 176. 13. 7. This requires explanation, as well as the similar apparent difference in the next statement. The cotton ginned bore a very small proportion to the crop. This was, perhaps, owing to the paucity of gins, and limited number of stations.

The expenditure during the first year is stated at Rs. 15,216. 12. 10., and from the commencement of the experiment at Rs. 40,553. 4. 9.; total, Rs. 55,770. 1. 7. During the next half year this was increased by Rs. 3,719. 9. 1. to Rs. 59,489. 10. 8.

At the close of the season reported on, the want of a few seasonable showers had caused the cotton, both native and American, to ripen prematurely, thus creating the apprehension of a short crop.

The produce of the New Orleans cotton, which it is believed has been raised from the seed sent from Dharwar at the beginning of last rains, has varied considerably in relative quantity per beega; this may be attributable, partly, perhaps to the seed being damaged in transit, in consequence of the late period at which it was forwarded, as well as to the unfavourable circumstances of weather reported.

Mr. Shaw recommends that the whole lot brought to the factory should be sent home to England. It was not intended, in distributing the seed, that Government should purchase the produce, and such a course is objectionable as a general rule; as, however, the quantity is small, and there is little probability of the Honourable Court's objecting to the measure, it may be as well to accede to the Revenue Commissioner's proposition in this instance; the cotton should be sent to the Presidency, if possible, before the rains, for shipment, and a report should be made of its despatch, in order that the Collector of Customs may be specially advised.

Mr. Shaw has already been apprised in Government letter No. 2627, of 17 April, of the result of the examination of the sample of cotton sent with his letter, No. 521, of 19 March.

The proposition from the Dharwar collectorate to discontinue the construction of the large gins and make up small ones for use in the villages, so as to disseminate the means of cleaning the cotton, may possibly be equally applicable to Khandeish; this may be suggested to the Collector for his consideration.

5 May 1849.

(signed) *Falkland*
J. P. Willoughby.
D. A. Blane.

(No. 3102 of 1849.)

From Mr. Acting Secretary *Courtney* to the Revenue Commissioner, Northern Division.

V. 6311.

Sir,

WITH reference to your memorandum, No. 778, dated 25th ultimo, on a letter No. 440, of 18th idem, from the Collector of Khandeish, with its enclosure, I have been directed by the Right Honourable the Governor in Council to observe that the half-yearly progress reports of the cotton experiments in that collectorate should in future be submitted as soon as they are due, in order that Government may be in possession of the information they contain as early as practicable.

2. The calculations of the produce should properly have been made on the average rate of outturn per beega, as directed by the Collector and approved of by you.

3. It appears from these reports generally, that in the early part of the season there was reason to expect a very favourable crop; but, that from untoward circumstances, this expectation was partially disappointed.

4. The extent of cotton cultivation was five beegas of New Orleans, producing 416 pounds; and of country cotton 1,73,822 beegas 10½ pauds, yielding 69,323 candies and 476½ pounds. The small parcel of New Orleans was purchased on account of Government for Rs. 8. 13. 10., besides a portion of the country cotton, 324 candies and 234 pounds, from the talookas of Erundole (Dhurumgaum) and Nusserabad (Julgaon) at Rs. 14. 8. per candy, making Rs. 5,649. 13. 8.

5. The number of gins in use was six of sizes from 10 to 25 saws at two stations in the abovementioned talookas, during the first half year, and 14 at six stations in the above and other talookas, during the next half year. Two gins were made up in the first half year, and eight during the subsequent period, making in all ten. The cost of the two former is entered in column 34 of the statement at Rs. 434. 7. 5., but this is not made up by the two sums mentioned in the remarks, viz. Rs. 125. 2. 2., and Rs. 176. 13. 7. On this point, you will be so good as furnish some explanation, as well as the similar apparent difference

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ference in the next statement. The cotton ginned bore a very small proportion to the crop. This was perhaps owing to the paucity of gins, and limited number of stations.

6. The expenditure during the first year is stated at Rs. 15,216. 12. 10., and from the commencement of the experiment, at Rs. 40,553. 4. 9., total Rs. 55,770. 1. 7.; during the next half year this was increased by Rs. 3,719. 9. 1. to Rs. 59,489. 10. 8.

7. At the close of the season reported on, the want of a few seasonable showers had caused the cotton, both native and American, to ripen prematurely; thus creating the apprehension of a short crop.

8. The produce of the New Orleans cotton, which it is believed has been raised from the seed sent from Dharwar at the beginning of last rains, has varied considerably in relative quantity per beega; this his Lordship in Council considers may be attributable, partly perhaps to the seed being damaged in transit, in consequence of the late period at which it was forwarded as well as to the unfavourable circumstances of weather reported.

9. You recommend that the whole lot brought to the factory, should be sent home to England. It was not, I have been instructed to state, intended in distributing the seed that Government should purchase the produce, and such a course is objectionable as a general rule. As, however, the quantity is small, and there is little probability of the Honourable Court's objecting to the measure, his Lordship in Council has been pleased to accede to your proposition in this instance, and as the season is so far advanced, the Collector has been requested, (direct to save time) to have the cotton transmitted without loss of time to the Presidency for shipment, so as, if possible, to arrive before the rains, and to report its despatch, in order that the Collector of Customs may be specially advised.

10. You have already been appraised in Government letter No. 2627, of 17th ultimo, of the result of the examination of the sample of cotton sent with your letter No. 521, of 19th March last.

11. A proposition lately received from the Dharwar collectorate, to discontinue the construction of the large gins and make up small ones for use in the villages, so as to disseminate the means of cleaning the cotton, may possibly, his Lordship in Council thinks, be equally applicable to Khandeish; this you are requested to suggest for the consideration of the Collector.

Bombay Castle, 10 May 1849.

I have, &c.
(signed) W. Courtney,
Acting Secretary to Government.

(No. 3103 of 1849.)

V. 6312.

From Mr. Acting Secretary *Courtney*, to the Collector of Khandeish.

Sir,

WITH reference to para. 3 of the Revenue Commissioner's letter to your address, No. 522, dated 19th March last, I have been directed by the Right Honourable the Governor in Council to transmit for your information extract paras. 8 and 9 of my letter to that officer of this date, No. 3102, and to request that, as the season is so far advanced, you will be so good as forward, without loss of time, the cotton referred to, to the Presidency for shipment, so as if possible to arrive before the rains, and report its despatch, in order that the Collector of Customs may be specially advised.

Bombay Castle, 10 May 1849.

I have, &c.
(signed) W. Courtney,
Acting Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 13 June 1849.—V. 7486 to 88.

(No. 657 of 1849).

V. 7486.

From the Collector of Khandeish to Mr. Acting Secretary *Courtney*.

Sir,

WITH reference to your letter, No. 3103, dated the 10th instant, with accompaniment, I have the honour to report, for the information of the Right Honourable the Governor in Council, that the whole of the New Orleans cotton raised last season in this collectorate from the seed received from Dharwar (with the exception of a small quantity not sold to Government by the growers), was bought up on account of Government, and cleaned with the saw gin in the cotton factory at Dhurrumgaum, and sent to Bombay. The cotton thus cleaned, weighing 2,956 lbs., was despatched to the Collector of Customs on the 2d ultimo,
as

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1335

as reported to Government in my letter to your address, No. 421, of the 5th idem. The collector of customs was also informed that this quantity of cotton was the produce of the New Orleans seed received from Dharwar last year.

III.
Bombay.

Khandeish Collector's Office,
Camp Supt Shring, 19 May 1849.

I have, &c.
(signed) *A. Elphinston*,
Collector.

MINUTE by the Honourable Mr. *Willoughby*, subscribed to by the Honourable Mr. *Blane*.

THE collector does not state why the whole of this cotton was bought up on account of Government; he should be called on to explain this; on the present occasion the measure may perhaps be sanctioned; but Mr. Elphinston should be informed that in future he should endeavour to induce the ryots and dealers to undertake the disposal of it on their own account, as it is by so doing alone that the real objects of the experiment can be furthered or their success tested.

V. 7487.

29 May 1849.

(signed) *J. P. Willoughby*.
D. A. Blane.

(No. 3676 of 1849).

From Mr. Chief Secretary *Malet* to the Collector of Khandeish.

Sir,

I acknowledge the receipt of your letter, No. 657, dated the 19th ultimo, I have been directed to observe that you do not state why the whole of the cotton therein alluded to was bought up on account of Government, and to request you will have the goodness to explain this.

V. 7488.

2. On the present occasion the Right Honourable the Governor in Council has been pleased to sanction the measure; but I have been desired to inform you that, in future, you should endeavour to induce the ryots and dealers to undertake the disposal of it on their own account, as it is by so doing alone that the real objects of the experiment can be furthered or their success tested.

Bombay Castle, 4 June 1849.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department,
Revenue, dated V. 11,582.

(No. 1158 of 1849).

From the Collector of Khandeish to Mr. Chief Secretary *Malet*.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 3676, dated the 4th ultimo, directing me to report why the whole of the New Orleans cotton produced last season in this collectorate was bought up on account of Government.

V. 11,582.

2. In reply, I beg to state that there was no compulsion used to induce the growers of the New Orleans cotton to sell the whole of their produce to Government, inasmuch as some of them retained their cotton, preferring to dispose of it themselves to the up country purchasers. In making the purchase on account of Government, regard was had to the instructions of the Honourable Court of Directors,* that "they should be supplied annually with a moderate quantity of saw-ginned cotton of both the indigenous and American descriptions, in order that they might possess the means of bringing it from time to time directly under the notice of the manufacturers in England." The quantity of New Orleans cotton raised being small, it was deemed advisable to buy up as much as the growers were voluntarily disposed to sell to Government, and send it down to the Presidency for transmission to the Court of Directors, in order that (it being, as it were, the first year of its growth to any considerable extent in Khandeish) its relative quality might be tested by the experienced spinners in England.

3. Agreeably, however, to the instructions conveyed in the 2d para. of your letter under acknowledgment, I have requested the officiating superintendent of the cotton experiment to endeavour to induce the ryots and dealers to undertake the disposal of the American cotton on their own account.

4. I would

* *Vide* Honourable Court's despatch, dated 4th July, No. 6, of 1848, accompanying Government letter, dated 31st August, No. 5114 of 1848.

III. III
Bombay.

4. I would, however, recommend that unless the prices offered to the ryots for the American cotton be too high, that it be all purchased for Government till the indent for the Court of Directors is completed, as by the sending of this cotton to the Court of Directors its real value is best ascertained; if retained on the spot the Court of Directors cannot judge whether any improvement in the cotton produce of this collectorate has been effected.

Khandeish Collector's Office, Dhoolia,
20 August 1849.

I have, &c.
(signed) A. Elphinston,
Collector.

MINUTE by the Honourable Board.

No further instructions seem necessary on this subject at present, and this may be recorded.

3 September 1849.

(signed) Falkland.
J. P. Willoughby.
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated V. 11,629 to 11,631.

(No. 1596 of 1849).

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 11,629.

SUBMITTED to Government, as containing the explanation called for in para. 5 of Mr. Acting Secretary Courtney's letter, No. 3,102, of 10th May last, and with reference to para. 11 of the same, the Revenue Commissioner begs to refer his Lordship in Council to his memorandum No. 1,533 of 27th ultimo, in which the transmission from Bombay to Khandeish of a model hand-gin was recommended.

Revenue Commissioner's Office,
Poona, 3 August 1849.

(signed) A. N. Shaw,
Revenue Commissioner, Northern Division.

(No. 978 of 1849).

To A. N. Shaw, Esquire, Revenue Commissioner, Northern Division, Poona.

Sir,

V. 11,630

WITH reference to your endorsement, No. 923, dated the 14th May last, on copy of a letter from Government, No. 3,102, dated the 16th idem, relative to the apparent difference in the cost of the saw-gins, as entered in the body of the two half-yearly statements ending respectively the 31st May and 30th November 1848, and in the columns of remarks in the same documents, I have the honour to submit copy of a letter, No. 86, of the 30th May last, from Mr. Price, assistant superintendent in charge of the cotton experiments in this zillah, from which it will appear that the entries in the body of the statements are restricted to the exhibition of those sums which were actually disbursed during the half-years embraced by them for the purchase of wood and other materials, while the memoanda given in the columns of remarks include the total cost and charges incurred in the manufacture of the gins, together with the price of the saws and the computed proportion to the pay of the stipendiary establishment employed in their construction.

2. I beg to subjoin a table showing the total cost charge of each of the gins included in the statements in question:—

	Rs.	a.	p.
1 gin of 12 saws - - - -	126	2	2
1 do. of 19 do. - - - -	176	13	7
	Rs. 301	15	9

Included in the statement for the half-year ending 31st May 1848.

	Rs.	a.	p.
1 gin of 19 saws - - - -	176	13	7
7 do. of 20 do. at the rate of Rs. 184. 3. 9. each gin	1,289	10	3
	Rs. 1,466	7	10

Included in the statement for the half year ending 30th November 1848.

3. With regard to the suggestion contained in the 11th para. of the Government letter above alluded to, I beg to refer you to my letter to your address, No. 977 of this day's date, in

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1337

in which, at the application of Mr. Price, I have recommended that one of the two model hand-gins sent from Dharwar to the Presidency may be forwarded to this collectorate.

III.111
Bombay.

Khandeish Collector's Office,
Dhoolia, 21 July 1849.

I have, &c.
(signed) *A. Elphinston*,
Collector.

(No. 86 of 1849).

To *Alex. Elphinston*, Esq., Collector, Khandeish.

Sir,

ADVERTING to your endorsement, No. 665, of the 23d instant, and with reference to the 5th paragraph of the Government letter, No. 3012, of the 14th idem, calling for an explanation of the apparent difference which exists between the sum entered in column 34 of the half-yearly report, ending 31st May 1848, as expended on the construction of saw-gins, and the total amount of the cost of the two gins which were completed during the time under notice, I beg respectfully to state that the sums of Rs. 434. 7. 5., and Rs. 254. 2. 8. in the succeeding half-year, were laid out as advantages offered in the purchase of wood and other articles for the manufacture of saw-gins as sanctioned by Government, under date the 28th May 1847; while the executed cost of each gin, as shown in the column of remarks, was ascertained after the completion of the batch, consisting of eight gins, which includes proportionably the pay of the establishment during the time it was engaged on each machine, as well as the price of the gin-saws received from Bombay. For further information on the subject I would beg to refer you to my report, No. 175, and letter No. 196 of 1848.

2. With reference to the latter part of your endorsement under reply, I regret to state that I am unable, from want of data, to form an opinion as to the advisability of the construction and use of small gins in supercession of the size now being used in this collectorate, which, as it appears to be approved of by the native merchants in their having recently applied for the purchase of three, in addition to the two gins sold in March last, I should be averse to consent to its discontinuance for a smaller kind, unless it can be clearly shown by actual trial that the latter possesses advantages which the former does not.

Superintendent's Office, Dhurrungaum,
30 May 1849.

I beg, &c.
(signed) *T. Price*,
Assistant Cotton Experiments in Charge.

MINUTE by the Honourable Board.

THIS may be recorded. I have suggested, in my separate minute on the Revenue Commissioner's memorandum of 27th ultimo, to which he refers, to authorise the collector of customs to send one of the saw-gins in question to Khandeish on the opening of the season.

V. 11,631.

13 August 1849.

(signed) *Falkland*,
J. P. Willoughby,
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 22d May 1850. V. 8123 & 8124.

(No. 567 of 1850.)

From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to transmit, for the information of the Right hon. the Governor in Council, the accompanying letter, No. 305, of 14th instant, from the collector of Khandeish, enclosing half-yearly statements for the first and second periods of the year A. D. 1848-49 respectively, ending 31 May and 30 November 1849, showing the proceedings of the cotton experiments in that province.

V. 8123.

2. The extent of New Orleans cultivation during the period embraced in these reports, was 221 beegahs 5½ pauds, producing 11 candies 422½ lbs., and of country cotton 1,49,203 beegahs 1½ pauds, which yielded 37,765 candies 76½ lbs., of which was purchased on the part of Government, New Orleans, at Amulnair, Errundole, Chopra, Yawul, Sowdah and Jamneir, to the extent of 11 candies, 349 lbs., for rupees two hundred and seventy-five, annas thirteen, and pies nine (Rs. 275. 13. 9.); the cost per candy the collector has omitted to mention, but being about twenty-four rupees, one anna, and seven pies (Rs. 24. 1. 7).

III.
Bombay.

3. Candies 707. 377¹⁹/₂₂ lbs. of indigenous cotton was in like manner purchased* at rupees nine thousand eight hundred and fifty-six, annas fourteen, and pies four (Rs. 9,856. 14. 4.), at a cost of about rupees thirteen, annas fourteen, and pies ten (Rs. 13. 14. 10.), per candy for the raw cotton.

4. The whole expenditure for the two periods under review is rupees twenty-three thousand three hundred and ninety-eight, and pies four (Rs. 23,398. 0. 4.), of which the following are the particulars:—

Purchase and ginning of cotton	-	-	-	-	Rs. 14,481	1	11
Cost of constructing gins	-	-	-	-	561	13	-
Cost of building, and contingent expenses	-	-	-	-	1,773	14	6
Permanent and temporary establishment	-	-	-	-	6,581	2	11
				TOTAL	-	-	23,398 4 -

So that 11 c. 349 lbs. of New Orleans, and 707 c. 377 lbs. of country cotton, being 718 c. 726 lbs., which I will call 719 candies of cleaned cotton, cost Government on the spot less than rupees twenty-nine, annas eleven, and pies eleven (Rs. 29. 11. 11.) per candy, which probably sold at the Presidency at eighty-five to ninety rupees (Rs. 85 to 90) per candy.

5. Thirteen gins were in use in the first half-year, of sizes 18 to 20 saws, and 26 during the second half-year; of these seven had been sold to private individuals.

6. Twenty-three gins and five gin-houses were constructed altogether in the year, but as the value of the saws and the labour, &c., &c., cannot be distinguished accurately, the details of their prices are not given; seven, as already stated, were sold at what was considered prime cost, at rupees one thousand one hundred and twenty-seven, annas nine, and pies two (Rs. 1,127. 9. 2).

7. The total expenditure in Column 30 of the statement for the second half-year is rupees eighty-two thousand eight hundred and eighty-seven, annas eleven (Rs. 82,887. 11.), which includes the previous charges exhibited in former statements already furnished; and the number of gins constructed by Mr. Price from April 1848 to the end of November 1849 being 33, of which, as above observed, seven have been sold to private individuals.

8. The hire of the gins to private parties pays for the establishment required in working them and yields a profit, which the collector calculates will, in two years, realise the cost of their construction.

9. These results are very satisfactory, and I have much pleasure in bringing the merits of Mr. Price, as recommended by Mr. Elphinston in paragraph 7 of his letter, to the special notice of Government.

Revenue Commissioner's Camp, Surat Districts,
Teethul, 28 February 1850.

I have, &c.
(signed) A. N. Shaw,
Revenue Commissioner, N. D.

(No. 305 of 1350.)

To A. N. Shaw, Esq., Revenue Commissioner, Northern Division.

V. 8124.

Sir,

I HAVE the honour to submit two half-yearly statements, as per margin,* showing the progress of the cotton experiments in this collectorate, furnished by Mr. Price, the assistant superintendent in charge.

2. The Statement, No. 1, exhibits the cultivation of the different species of cotton during the season of 1848-49 to have been as follows:—

	Extent in Beegahs.		Estimated Produce in Candies.	
	Beegahs.	Pauds.	Candies.	lbs.
New Orleans Cotton	221	5 $\frac{1}{2}$	11	422 $\frac{1}{2}$
Country Cotton	149,203	1 $\frac{1}{2}$	37,753	438
TOTAL	149,424	6 $\frac{3}{4}$	37,765	76 $\frac{1}{2}$

Giving a proportion of 15 New Orleans to 100 of the indigenous cotton cultivation.

3. The

* 1. Half-yearly Statement ending 31 May 1849. 2. Ditto, ditto, ending 30 November 1849.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1339

3. The quantity of cotton purchased on account of Government ginned and despatched to Bombay for the Honourable Court, during 1848-49, was—

III.
Bombay.

	Quantity of Seed and Cotton.		Amount Paid for it.
	Candies.	lbs.	Rs. a. p.
New Orleans Cotton in Seed - - -	11	349	275 13 9
Country Cotton - - - - -	707	377 $\frac{1}{4}$	9,856 14 4
TOTAL - - -	718	726 $\frac{1}{4}$	10,132 12 1

4. The number of gins of sizes in use during the season was - - - 13
 Out of use - - - - - 3
 Completed during the six months - - - - - 12
 Sold to private individuals for Rs. 368. 7. 6., being prime cost - - - 2

Rs. 368. 7. 6.

The amount expended in the construction of the gins was, during the half year in question, Rs. 309. 11. 7. The total expenditure in this zillah, on the part of Government, up to the end of May 1849, in the cotton experiments, will be seen from the last column of the statement to have been Rs. 77,190. 0. 3.

Rs. 309. 11. 7.

Rs. 77,190. 0. 3.

5. The Statement, No. 2, exhibits the number of gins in use as follows:—

Belonging to Government - - - - - 19
 Ditto to private individuals - - - - - 7
 — 26

Out of Use.

Belonging to Government - - - - - 6
 Completed during the half year ending 30 November 1849 for Government - - - - - 11
 Sold to private individuals for Rs. 759. 1. 8., being at the prime cost - 5

Rs. 759. 1. 8.

The amount expended in the construction of gins during the half-year ending 30 November last was Rs. 252. 1. 5. The total expenses of the establishment during the half-year amounted to Rs. 5,697. 10. 9.

Rs. 252. 1. 5.
Rs. 5,697. 10. 9.

6. From the column of remarks it will appear that the total number of gins constructed under Mr. Price's superintendence since April 1848 is 33, of which seven have been sold to private individuals, who work them on their own account. Several others have used the Government gins on hire. The five gin sheds alluded to in this column have been finished, and gins are now at work in them. The hire obtained for the Government gins not only pays the establishment attached to them, but in two years also repays to Government the price they cost in making, so as to be a highly remunerative article to Government. And some of the merchants who have purchased them say, that beside the usual profit they make in common with other cotton merchants, they have besides made about 15 or 20 per cent. additional by the use of the gins in preference to the native churkas.

7. The results exhibited in the accompanying statements are very satisfactory, and render Mr. Price worthy of the approbation of his Lordship in Council for zeal and activity. The cultivation of the American cotton has been more extended (than above shown) in the ensuing season of 1849-50, but that will be reported on in the next statement ending May 1850.

Khandaish Collector's Camp, Dhurrumgaum,
14 February 1850.

I have, &c.
(signed) Alex. Elphinston,
Collector.

No. 1.

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 31 May 1849.

Talooka.	NAMES.	Stations visited by the Superintendent.	Prospects of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.							
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.	
				Extent in Beggahs.	Estimated Produce in Candies.	Extent in Beggahs.	Estimated Produce in Candies.	Extent in Beggahs.	Estimated Produce in Candies.	Extent in Beggahs.	Estimated Produce in Candies.
				Bs. Ps.	Cs. lbs.	Bs. Ps.	Cs. lbs.	Bs. Ps.	Cs. lbs.	Bs. Ps.	Cs. lbs.
1	Dhoolia	-	-	5 15	0 73½	-	-	5 15	0 73½	8,945 17½	3,194 704
2	Amulnere	-	-	11 1½	0 90½	-	-	11 1½	0 90½	12,426 0	2,535 720
3	Erraudole	-	-	43 9½	1 369½	-	-	43 9½	1 369½	18,850 0	2,392 247
	Dhurrungaum	1	-	0 10	0 100	-	-	0 10	0 100	-	-
	Cassoda	1	-	-	0 2	-	-	-	0 2	-	-
4	Burgam	-	-	4 0	-	-	-	4 0	-	23,699 0	3,869 176
5	Challisgaum	-	-	-	-	-	-	-	-	3,340 7½	681 556
6	Mallgaum	-	-	-	-	-	-	-	-	1,725 7½	518 196
7	Baglan	-	-	-	-	-	-	-	-	300 2	20 776
8	Pimpulnere	-	-	-	-	-	-	-	-	1,384 -	283 16
9	Nundoorbar	-	-	-	-	-	-	-	-	9,107 11½	3,717 304
10	Sooltanpoor	-	-	-	-	-	-	-	-	1,371 13	280 0
11	Thalnere	-	-	-	-	-	-	-	-	1,182 10	70 387
12	Chopra	1	-	26 0	1 523	-	-	26 0	1 523	7,366 0	1,841 392
	Arrawud	1	-	-	-	-	-	-	-	-	-
13	Yawull	1	-	105 10	7 206	-	-	105 10	7 206	7,323 15	2,241 756
14	Sowda	-	-	22 9½	0 488	-	-	20 9½	0 488	5,931 15	2,594 248
15	Nusseerabad	-	-	-	-	-	-	-	-	11,495 0	2,873 400
	Julgauum	1	-	-	-	-	-	-	-	-	-
16	Jamnere	-	-	2 10	0 138	-	-	2 10	0 138	34,753 2	10,638 48
	TOTAL	6	-	221 5½	11 422½	-	-	221 5½	11 422½	1,49,203 1½	37,753 438

Talooka.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.											Total Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.		Amount.
		Cs. lbs.			Cs. lbs.			Cs. lbs.			Cs. lbs.			
1	Dhoolia	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Amulnere	0 90½	-	2 13 3	-	-	-	0 90½	-	2 13 3	-	-	-	2 13 3
3	Erraudole	1 369½	-	36 8 9	-	-	-	1 369½	-	36 8 9	310 81½	-	4,122 14 8	4,158 15 5
	Dhurrungaum	0 100	-	-	-	-	-	0 100	-	-	-	-	-	-
	Cassoda	0 2	-	1 -	-	-	-	0 2	-	1 -	-	-	-	1 -
4	Burgam	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Mallgaum	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Pimpulnere	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Thalnere	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Chopra	1 523	-	40 13 6	-	-	-	1 523	-	40 13 6	295 23¼	-	4,328 9 6	4,369 7 -
	Arrawud	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Yawull	7 206	-	176 8 3	-	-	-	7 206	-	176 8 3	-	-	-	176 8 3
14	Sowda	0 488	-	15 4 -	-	-	-	0 488	-	15 4 -	-	-	-	15 4 -
15	Nusseerabad	-	-	-	-	-	-	-	-	-	102 272	-	1,405 6 2	1,405 6 2
	Julgauum	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Jamnere	0 138	-	4 5 -	-	-	-	0 138	-	4 5 -	-	-	-	4 5 -
	TOTAL	11 349	-	275 13 9	-	-	-	11 349	-	275 13 9	707 377¼	-	9,856 14 4	10,132 12 1

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1341

No. 1.—REPORT of the Cotton Experiments in Khandeish, for the Half-Year ending 31 May 1849—continued.

Talooka.	NAMES.	G I N S.								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
1	Dhoolia	—	—	—	—	—	—	—	—	—
2	Amulnere	—	—	—	—	—	—	—	—	—
3	Errundole	2 of 18 saws	—	—	—	—	—	—	—	—
	Dhurrungaum	1 of 20 saws	For Government.	1 of 25 saws.	—	12 of 20 saws each	—	—	—	309 11 7
	Cassoda	2 of 19 saws	On hire	1 of 10 saws.	—	—	—	—	—	—
4	Burgaum	—	—	—	—	—	—	—	—	—
5	Challisgaum	—	—	—	—	—	—	—	—	—
6	Malligaum	—	—	—	—	—	—	—	—	—
7	Baglan	—	—	—	—	—	—	—	—	—
8	Pimpulnere	—	—	—	—	—	—	—	—	—
9	Nundoorbar	—	—	—	—	—	—	—	—	—
10	Sooltanpoor	—	—	—	—	—	—	—	—	—
11	Thalnere	—	—	—	—	—	—	—	—	—
12	Chopra	2 of 20 saws	For Government.	—	—	—	—	—	—	—
	Arrawud	{ 1 of 20 saws 1 of 12 saws }	- ditto	—	—	—	—	—	—	—
13	Yawull	2 of 20 saws	on hire	—	—	—	—	—	—	—
14	Sowda	—	—	—	—	—	—	—	—	—
15	Nusseerabad	—	—	—	—	—	—	—	—	—
	Julgaum	{ 1 of 18 saws 1 of 20 saws }	{ For Government and on hire.	1 of 18 saws.	—	—	—	2 gins of 20 saws.	368 7 6	—
16	Jamnere	—	—	—	—	—	—	—	—	—
	TOTAL	13 gins	—	3 gins	—	12 gins	—	2 gins	368 7 6	309 11 7

Talooka.	NAMES.	QUANTITY OF COTTON GINNED.								Quantity Ginned during the Season.	Total Amount Expended in Ginning &c., on Government Account.
		FOREIGN.						COUNTRY.			
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	For Private Individuals.		
		For Government.	For Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.		
		Cs. lbs.	Cs. lbs.	Cs. lbs.	Cs. lbs.	Cs. lbs.	Cs. lbs.	Cs. lbs.	Cs. lbs.	Cs. lbs.	
1	Dhoolia	—	—	—	—	—	—	—	—	—	—
2	Amulnere	—	—	—	—	—	—	—	—	—	—
3	Errundole	—	—	—	—	—	—	—	—	—	—
	Dhurrungaum	3 604	—	—	—	3 604	—	78 721	—	82 541	3,211 7 5
	Cassoda	—	—	—	—	—	—	—	63 360	63 360	—
4	Burgaum	—	—	—	—	—	—	—	—	—	—
5	Challisgaum	—	—	—	—	—	—	—	—	—	—
6	Malligaum	—	—	—	—	—	—	—	—	—	—
7	Baglan	—	—	—	—	—	—	—	—	—	—
8	Pimpulnere	—	—	—	—	—	—	—	—	—	—
9	Nundoorbar	—	—	—	—	—	—	—	—	—	—
10	Sooltanpoor	—	—	—	—	—	—	—	—	—	—
11	Thalnere	—	—	—	—	—	—	—	—	—	—
12	Chopra	—	—	—	—	—	—	—	—	—	—
	Arrawud	—	—	—	—	—	—	78 0	—	78 0	506 15 11
13	Yawull	—	—	—	—	—	—	—	36 730	36 730	—
14	Sowda	—	—	—	—	—	—	—	—	—	—
15	Nusseerabad	—	—	—	—	—	—	—	—	—	—
	Julgaum	—	—	—	—	—	—	26 0	50 508	76 508	152 3 6
16	Jamnere	—	—	—	—	—	—	—	—	—	—
	TOTAL	3 604	—	—	—	3 604	—	182 721	151 30	337 571	3,870 11 10

No. 1.—REPORT of the Cotton Experiments in Khandeish, for the Half-Year ending 31 May 1849—continued.

Talooka.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Total Amount, including Cotton Ginning, &c.	Amount Expended up to last Half-Year.	Total Expenditure up to end of Half-Year under Report.
		Buildings and Temporary Establishments.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
1	Dhoolha -	-	-	-	-	-	-	2 13 3
2	Amulnere -	-	-	-	-	2 13 3	-	2 13 3
3	Errundole -	-	-	-	-	-	-	-
	Dhurrungaum	20 - -	109 9 10	1,500 - -	1,363 - -	10,672 12 3	41,129 7 -	51,802 3 3
	Cassoda -	65 5 9	- - -	- - -	- - -	65 6 9	11 13 3	77 4 -
4	Burgaum -	-	-	-	-	-	-	-
5	Chalisingaum -	-	-	-	-	-	-	-
6	Malligaum -	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-
8	Pimpulnere -	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-
10	Sooltanpoor -	-	-	-	-	-	-	-
11	Thalnere -	-	-	-	-	-	-	-
12	Chopra -	-	-	-	-	-	-	-
	Arrawud -	159 12 4	- - -	- - -	- - -	5,036 3 3	22 - -	5,058 3 3
13	Yawull -	97 7 2	- - -	- - -	- - -	273 15 5	11 - -	284 15 5
14	Sowda -	- - -	- - -	- - -	- - -	15 4 -	9 5 -	24 9 -
15	Nusseerabad -	-	-	-	-	-	-	-
	Julgaum -	-	-	-	72 - -	1,629 9 8	18,306 1 5	19,935 11 1
16	Jamnere -	-	-	-	-	4 5 -	- - -	4 5 -
	TOTAL - -	342 9 3	109 9 10	1,500 - -	1,435 - -	17,700 5 7	59,489 10 8	77,190 - 3

Remarks.—During the half-year under report, 12 gins of 20 saws each have been completed; two sold to Gardhurloll Chutroobhoj, of Julgaum, for Rs. 368. 7. 6.; and applications for the purchase of three received, and submitted for the sanction of the Collector of Khandeish.

(signed) Alex. Elphinston,
Collector.

(signed) T. Price,
Assistant Supt. Cotton Expt. in charge.

No. 2.

ASSISTANT SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 30 November 1849.

Superintendent's Office, Dhurrungam, 30 November 1849.

Number.	TALOOKA.	Stations visited by the Superintendent.	Remark on the past Season, as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on hand on account of Government, of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crops which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	TOTAL.	Country.	New Orleans.	Broach.	TOTAL.	Country.
1	Dhoolha -	1	- - - -	-	-	-	-	-	-	-	-
2	Amulnere -	1	- - - -	-	-	-	-	-	-	-	-
	Betawud -	1	- - - -	-	-	-	-	-	-	-	-
3	Errundole -	-	- - - -	-	-	-	-	-	-	-	-
	Cassoda -	1	- - - -	-	-	-	-	-	-	-	-
	Dhurrungaum	1	- - - -	-	-	-	-	-	-	-	-
4	Bhurgaum -	-	- - - -	-	-	-	-	-	-	-	-
5	Chalisingaum -	-	- - - -	-	-	-	-	-	-	-	-
6	Malligaum -	-	- - - -	-	-	-	-	-	-	-	-
7	Baglan -	-	- - - -	-	-	-	-	-	-	-	-
8	Pimpulnere -	-	- - - -	-	-	-	-	-	-	-	-
9	Nundoorbar -	1	- - - -	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	- - - -	-	-	-	-	-	-	-	-
11	Thalnere -	-	- - - -	-	-	-	-	-	-	-	-
12	Chopra -	1	- - - -	-	-	-	-	-	-	-	-
	Arrawud -	1	- - - -	-	-	-	-	-	-	-	-
13	Yawull -	1	- - - -	-	-	-	-	-	-	-	-
14	Sowda -	-	- - - -	-	-	-	-	-	-	-	-
15	Nusseerabad -	-	- - - -	-	-	-	-	-	-	-	-
	Julgaum -	1	- - - -	-	-	-	-	-	-	-	-
16	Jamnere -	-	- - - -	-	-	-	-	-	-	-	-
	TOTAL - -	10	- - - -	-	-	-	-	-	-	-	1 ½ per cent. upon the whole.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1343

No 2.—REPORT of the Cotton Experiments in Khandeish, for the Half-Year ending 30 November 1849—continued.

Number.	TALOOKA.	G I N S.							Amount Expended on Construction of Gins.	
		In Use.		Out of Use.		Completed during the Half-year under Report.		Sold for Government during the Half-year under Report.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.		At what Amount.
1	Dhoolia	2	—	—	—	—	—	—	—	—
2	Amulnere	2	—	—	—	—	—	—	—	—
	Betawud	1	—	—	—	—	—	—	—	—
3	Errundole	—	—	—	—	—	—	—	—	—
	Cassoda	2	—	—	—	—	—	—	—	—
	Dhurrungaum	2	2	6	—	11	—	2	250 6 2	252 1 5
4	Bhurgaum	—	—	—	—	—	—	—	—	—
5	Challisgaum	—	—	—	—	—	—	—	—	—
6	Malligaum	—	—	—	—	—	—	—	—	—
7	Baglan	—	—	—	—	—	—	—	—	—
8	Pimpulnere	—	—	—	—	—	—	—	—	—
9	Nundoorbar	2	—	—	—	—	—	—	—	—
10	Sooltanpoor	—	—	—	—	—	—	—	—	—
11	Thalnere	—	—	—	—	—	—	—	—	—
12	Chopra	2	—	—	—	—	—	—	—	—
	Arrawud	2	—	—	—	—	—	—	—	—
13	Yawull	2	—	—	—	—	—	—	—	—
14	Sowda	—	1	—	—	—	—	1	140 4 —	—
15	Nusseerabad	—	—	—	—	—	—	—	—	—
	Julgaum	2	4	—	—	—	—	2	368 7 6	—
	Jamnere	—	—	—	—	—	—	—	—	—
TOTAL		19	7	6	—	11	—	5	759 1 8	252 1 5

Number.	TALOOKA.	Other Items of Expenditure during the Half-Year under Report.						Amount Expended up to last Half-Year.	Total Expenditure up to end of Half-year under Report.	Prospects of the coming Season.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	Temporary Establishment.	Amount of Superintendence.	Amount of Establishment.			
1	Dhoolia	—	—	—	—	—	—	—	—	The favourable setting in of the monsoon of 1849-50 gave the ryots great hopes at first of an abundant yield of cotton, in which it was feared they would subsequently be disappointed, owing to the copious and continuous falls of rain which latterly took place. On account of the late sowing of the New Orleans cotton-seed, the plants of this species had suffered comparatively more than that of the indigenous kind, though in some districts, where the rains were slight, they are said to be in a
2	Amulnere	—	—	—	—	—	—	2 13 3	2 13 3	
	Betawud	—	—	—	4	—	—	4	4	
3	Errundole	—	—	—	—	—	—	—	—	
	Cassoda	—	—	—	—	—	—	77 4 —	77 4 —	
	Dhurrungaum	477 11 —	217 8 4	1,104 3 1	—	2,387 — —	1,255 2 11	5,693 10 9	51,802 3 3	
4	Bhurgaum	—	—	—	—	—	—	—	—	
5	Challisgaum	—	—	—	—	—	—	—	—	
6	Malligaum	—	—	—	—	—	—	—	—	
7	Baglan	—	—	—	—	—	—	—	—	
8	Pimpulnere	—	—	—	—	—	—	—	—	
9	Nundoorbar	—	—	—	—	—	—	—	—	
10	Sooltanpoor	—	—	—	—	—	—	—	—	
11	Thalnere	—	—	—	—	—	—	—	—	
12	Chopra	—	—	—	—	—	—	5,058 3 3	5,058 3 3	
	Arrawud	—	—	—	—	—	—	—	—	
13	Yawull	—	—	—	—	—	—	284 15 5	284 15 5	
14	Sowda	—	—	—	—	—	—	24 9 —	24 9 —	
15	Nusseerabad	—	—	—	—	—	—	—	—	
	Julgaum	—	—	—	—	—	—	19,935 11 1	19,935 11 1	
	Jamnere	—	—	—	—	—	—	4 5 —	4 5 —	
TOTAL		477 11 —	217 8 4	1,104 3 1	4 — —	2,387 — —	1,255 2 11	5,697 10 9	77,190 — 3	82,887 11 —

Remarks—The number of new gins constructed during the half-year under report is 11, which make up with that previously finished 33 gins manufactured in this department by native artisans, of which seven are sold to private individuals, and set to work on their own account, and 19 employed in the operation of ginning cotton for eventual shipment to England on account of Government. The remaining seven new gins are kept with the view of being made over to applicants for the purchase of them.

Five district gin sheds are in course of construction, and which it is expected will be completed in time to be availed of for the present ginning season. The remaining three will be taken in hand in April or May next.

(signed) T. Price,
Assistant Superintendent Cotton Experiment in Charge.

III.
Bombay.

MINUTE by the Honourable Board.

SATISFACTORY, and very creditable to Mr. Price.
To form part of accompaniments to our letter to Honourable Court.

7 May 1850.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 12 March 1851. (V. 2549 to 2554)

(No. 3198 of 1850.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 2549. SUBMITTED to Government, the Collector's remarks, leaving nothing to be added by the Revenue Commissioner.

Revenue Commissioner's Camp,
Tannah Districts, Bandora,
14 December 1850.

(signed) *A. N. Shaw,*
Revenue Commissioner,
Northern Division.

SUPERINTENDENT'S REPORT of the Operations of the Cotton Experiments in Khandeish,
for the Half-Year ending 31 May 1850.

(No. 2266 of 1850.)

V. 2550. SUBMITTED to the Revenue Commissioner, Northern Division.

2. It will be seen from the foregoing statement, that during the past season the state of cotton cultivation in this collectorate was as follows:

Cultivation of A. D. 1849-50.	Extent of Land cultivated with Cotton.		Estimated Produce of Cotton and Seed.	
	<i>Beeghas.</i>	<i>Pauds.</i>	<i>Candies of 784 lbs.</i>	<i>Pounds Avoird.</i>
American Cotton - - -	2,569	1 ½	218	257 ½
Indigenous Cotton - - -	1,21,471	18	30,171	374
TOTAL - - -	1,24,040	19 ½	30,389	631 ½

From Returns recently furnished by the Mamludars, the following Table of the Cotton Cultivation in the current season has been framed:

Cultivation of A. D. 1850-51.	Extent of Land cultivated with Cotton.		Estimated Produce of Cotton and Seed.	
	<i>Beeghas.</i>	<i>Pauds.</i>	<i>Candies of 784 lbs.</i>	<i>Pounds Avoird.</i>
American Cotton - - -	7,827	½	1,158	774
Indigenous Cotton - - -	1,46,038	5 ½	33,281	717
TOTAL - - -	1,53,865	5 ¾	34,440	707

The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1345 47

III.
Bombay.

The above Tables give the following results :

A. D. 1849-50.

1. American Cotton with seed, 66 pounds per beegah.
2. Indigenous Cotton with seed, 194 pounds per beegah.

A. D. 1850-51.

1. American Cotton with seed, 115 pounds per beegah.
2. Indigenous Cotton with seed, 178 pounds per beegah.

Remarks.—The produce of this season is only just began to be gathered ; therefore this result is an assumed one. Till the American cotton has become perfectly acclimated, and its cultivation perfectly understood by the cultivators, the quantity of its yield cannot fairly be compared with the indigenous.

3. Only eight gins were constructed during the half-year under report, owing to want of materials, &c. Five gins were sold to private individuals for the aggregate sum of Rs. 701. 4.

Khandeish, Collector's Camp, Suptshring,
29 November 1850.

(signed) A. Elphinston,
Collector.

SUPERINTENDENT'S REPORT of Cotton Experiments in the Province of Khandeish, for the Half-Year ending 31 May 1850.

Talookas.	NAMES.	Stations.	Prospects of the Season and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.													
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.							
				Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.						
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.						
				B.	p.	C.	lbs.			B.	p.	C.	lbs.				
1	Dhoolia	1	Throughout the Province generally, the Cotton Fields (in common with others sown with Jowaree, &c.) suffered much during the last season from continual heavy showers of rain, and the yield, in consequence, has been lower than the usual average of past seasons.	47	6½	4	748	-	-	47	6½	4	748	8,938	13½	1,871	91
2	Amulnere	1		87	7½	6	52½	-	-	87	7½	6	52½	12,326	-	2,515	520
3	Errundole	-		98	3½	1	610½	-	-	98	3½	1	610½	18,850	-	2,393	247
-	Cassoda	1		1	15	-	-	-	-	1	15	-	-	16,309	-	2,662	544
4	Burgaum	-		17	12	-	386	-	-	17	12½	-	386	2,031	1½	214	494
5	Challisganm	-		10	10	-	161	-	-	10	10	-	161	1,229	17½	368	725
6	Malligaum	-		121	19½	2	392	-	-	121	19½	2	392	-	-	-	-
7	Begian	-		19	2½	1	681½	-	-	19	2½	1	681½	1,366	7½	235	699
8	Pimpulnere	-		855	12½	84	686½	-	-	855	12½	84	686½	6,798	17½	2,778	168
9	Nundoorbar	-		171	3	23	768	-	-	171	3	23	768	2,019	16	426	336
10	Sootanpoor	-		153	-	8	708	-	-	153	-	8	708	1,574	-	156	-
11	Thalnere	-		412	11	44	431½	-	-	412	11	44	431½	7,417	17½	1,885	16
12	Chopra	1		7,915	-	-	-	-	-	7,915	-	-	-	2,374	380	-	-
-	Arrawad	1		228	-	12	7	-	-	228	-	12	7	-	-	-	-
13	Yawul	1		21	34	-	577	-	-	21	3½	-	577	6,235	-	1,757	112
14	Sowda	-		184	10	15	320	-	-	184	10	15	320	9,605	-	1,193	58
15	Nusseerabad	-	139	-	10	-	-	-	139	-	10	-	29,852	-	9,138	688	
16	Jamnere	-															
	TOTAL	10		2,569	1½	218	257½	-	-	2,569	1½	218	257½	1,21,471	18	30,171	374

REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 31 May 1850—continued.

Talookas.	NAMES.	COTTON PURCHASED FOR GOVERNMENT.												TOTAL Amount of Cotton Purchased for Government.
		NEW ORLEANS.			BROACH.			TOTAL FOREIGN.			COUNTRY COTTON.			
		Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	Quantity in Candies.	Rate per Candy.	Amount.	
13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.		
		<i>C. lbs.</i>		<i>Rs. a. p.</i>	<i>C. lbs.</i>		<i>Rs. a. p.</i>	<i>C. lbs.</i>		<i>Rs. a. p.</i>	<i>C. lbs.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
1	Dhoolia	1 658		36 5 -				1 658		36 5 -	78 62		1,144 7 -	1,180 12 -
2	Amulnere										91 338		1,315 1 11	1,315 1 11
	Betawud	8 740		144 8 4				8 740		144 8 4	108 199		1,591 5 4	1,735 13 8
3	Errundole													
	Cassoda	1 10		18 9 9				1 10		18 9 9	17 652		306 2 5	324 12 2
	Dhurrungam	13 402		231 7 10				13 402		231 7 10	305 536½		5,043 2 -	5,274 9 10
4	Burgaum													
5	Challsaum													
6	Mallisaum													
7	Baglan													
8	Pimpulnere													
9	Nundoorbar	39 654		722 3 6				39 654		722 3 6	15 720		249 11 11	971 15 5
10	Sootanpoor													
11	Thalnere													
12	Chopra	42 667½		839 14 6				42 667½		839 14 6	171 376		2,586 5 2	3,426 3 8
	Arrawud	1 571		33 14 1				1 571		33 14 1	146 440		2,153 15 6	2,187 13 7
13	Yawull	12 199		230 9 9				12 199		230 9 9	155 565		2,318 9 -	2,549 2 9
14	Sowda													
15	Nusseerabad													
	Julgaum	8 126		166 13 1				8 126		166 13 1	144 324		2,622 11 9	2,789 9 8
16	Jamnere													
	TOTAL	130 107½		2,424 6 8				130 107½		2,424 6 8	1,234 292½		19,331 8 -	21,755 14 8

Talookas.	NAMES.	G I N S.								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
		26.	27.	28.	29.	30.	31.	32.	33.	34.
1	Dhoolia	2						2	280 8 -	
2	Amulnere	2						2	280 8 -	
	Betawud	1								
3	Errundole							1	140 4 -	
	Cassoda	2								
	Dhurrungam	4	2	6		8				387 13 9
4	Burgaum									
5	Challsaum									
6	Mallisaum									
7	Baglan									
8	Pimpulnere									
9	Nundoorbar	2								
10	Sootanpoor									
11	Thalnere									
12	Chopra	2								
	Arrawud	2								
13	Yawull	2								
14	Sowda		1							
15	Nusseerabad									
	Julgaum	2	4							
16	Jamnere									
	TOTAL	21	7	6		8		5	701 4 -	387 13 9

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1347

REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 31 May 1850—continued.

Talookas.	NAMES.	QUANTITY OF COTTON GINNED.									Total Amount Expended in Ginning, &c., on Government Account.
		FOREIGN.						COUNTRY.		Quantity of Cotton Ginned during the Season.	
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	By Private Individuals.		
		For Government.	By Private Individuals.	For Government.	By Private Individuals.	For Government.	By Private Individuals.				
35.	36.	37.	38.	39.	40.	41.	42.	43.	44.		
	C. lbs.	C. lbs.	C. lbs.	C. lbs.	C. lbs.	C. lbs.	C. lbs.	C. lbs.	C. lbs.	Rs. a. p.	
1	Dhoolia	- 448	- 392	-	-	- 448	- 392	20 410	6 200	27 666	230 1 10
2	Amulnere	-	-	-	-	-	-	24 690	-	24 690	170 8 6
	Batawud	2 672	-	-	-	2 672	-	29 49	6 506	38 443	170 9 8
3	Errandole	-	-	-	-	-	-	-	-	-	-
	Cassoda	- 264	-	-	-	- 264	-	4 360	22 300	27 140	32 8 -
	Dhurrungaum	4 272	-	-	-	4 272	-	73 305	39 200	116 777	5,988 8 7
4	Burgaum	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnere	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	12 690	-	-	-	12 690	-	4 -	-	16 690	177 3 8
10	Sootanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnere	-	-	-	-	-	-	-	-	-	-
12	Chopra	13 605	-	-	-	13 605	-	44 682	-	58 503	354 1 10
	Arrawud	- 451	-	-	-	- 451	-	38 500	-	39 167	251 2 6
13	Yawull	4 66	-	-	-	4 66	-	38 729	-	43 11	219 3 9
14	Sowda	-	-	-	-	-	-	-	10 -	10 -	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-
	Julgaum	2 564	8 -	-	-	2 564	8 -	38 81	81 502	130 363	227 9 6
16	Jamnere	-	-	-	-	-	-	-	-	-	-
	TOTAL	42 112	8 392	-	-	42 112	8 392	316 670	166 140	583 530	7,821 9 10

Talookas.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Total Amount including Cotton Ginning, &c.	Amount Expended up to last Half-Year.	TOTAL Expenditure up to end of Half-Year under Report.
		Building and Temporary Establishment.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
		45.	46.	47.	48.			
49.	50.	51.						
1	Dhoolia	-	-	-	-	1,410 13 10	-	1,410 13 10
2	Amulnere	-	-	-	-	1,485 10 5	2 13 3	1,488 7 8
	Batawud	-	-	-	-	1,906 7 4	4 - -	1,910 7 4
3	Errandole	-	-	-	-	-	-	-
	Cassoda	-	-	-	-	357 4 2	77 4 -	434 8 2
	Dhurrungaum	1,015 6 5	573 15 6	3,961 7 8	1,402 - -	18,603 13 9	57,495 14 -	76,099 11 9
4	Burgaum	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-
8	Pimpulnere	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	1,149 3 1	-	1,149 3 1
10	Sootanpoor	-	-	-	-	-	-	-
11	Thalnere	-	-	-	-	-	-	-
12	Chopra	-	-	-	-	3,780 5 6	5,058 3 3	8,838 8 9
	Arrawud	-	-	-	-	2,409 - 1	-	2,409 - 1
13	Yawull	-	-	-	-	2,768 6 6	284 15 5	3,053 5 11
14	Sowda	-	-	-	-	-	24 9 -	24 9 -
15	Nusseerabad	-	-	-	-	-	-	-
	Julgaum	-	-	-	-	3,017 3 2	19,935 11 1	22,952 14 3
16	Jamnere	-	-	-	-	-	4 5 -	4 5 -
	TOTAL	1,015 6 5	573 15 6	3,961 7 8	1,402 - -	36,918 3 10	82,887 11 -	1,19,805 14 10

Remarks.—Only eight gins have been constructed during the half year under report, owing to want of materials, &c. Wood, for the construction of the three gin-sheds remaining to be built, has been procured and prepared, and the erection of the houses will be commenced immediately after the rains. Five gins during the half year have been sold to private individuals, which make, in all, 12 sold on account of Government. Arrangements are being made to accommodate the agent of Messrs. Ritchie, Stewart and Co. with 40 gins and 8 gin-sheds, for his operations in the coming season.

(signed) S. Simpson,
Superintendent Cotton Experiment.

Superintendent's Office, Dhurrungam, 31 May 1850.

1348 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 28 April 1851, V. 6533 and 6534.

(No. 719 of 1851.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 6533.

It would be more useful if this return was submitted when it becomes due, the collector's attention will be called to this point.

(signed) *A. N. Shaw,*
Revenue Commissioner, N. D.

Revenue Commissioner's Camp,
Colaba District, Keehim,
17 March 1851.

REPORT of the Progress of the Cotton Experiments in Khandeish, for the Half-Year ending 30 November 1850, received with the Superintendent's Letter, No. 49, of the 7th February 1851.

V. 6534.

(No. 378 of 1851.)

SUBMITTED to the Revenue Commissioner, Northern Division, for the information of Government.

2. This report, as it professes, is restricted to the exhibition of the progress made up to the 30th November last. From the monthly reports received from the Superintendent, the Collector gathers that since the above-mentioned date, 16 gins have been manufactured, in addition to the 67 mentioned in the accompanying report. Of these, 40 have been made over on hire to the agency of Messrs. Ritchie, Stuart &c., four sent to Ahmedabad, three to Surat, and three more are to be hereafter sent down to the latter collectorate; 14 gins have been sold to private individuals, and the remaining machinery is employed on account of Government, and for hire to private dealers, who wish to use it on hire.

3. The season embraced by the accompanying report has been very favourable to the cotton culture.

(signed) *A. Elphinston,*
Collector.

Khandeish, Collector's Camp, Dhurrumgaum,
5 March 1851.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish for the Half-Year ending 30 November 1850.

Number.	TALOOKAS.	Stations visited by the Superintendent.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Kuppas in hand on account of Government, of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.				
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.	
1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1	Dhoolha - -	1	The season may be regarded as having been generally favourable, though, in some of the talookas, it has been reported the rains were rather scant, and the crop, in consequence, is likely to fall rather short in those parts of an average crop. The general average of the zilla, however, I am inclined to think will be satisfactory.	Lbs. 322	-	Lbs. 322	-	-	-	-	-	
2	Amulnair - -	1		-	-	-	-	-	-	-	-	-
3	Betawud - -	1		-	-	-	-	-	-	-	-	-
4	Errundole - -	1		-	-	-	-	-	-	-	-	-
5	Cassoda - -	1		-	-	-	-	-	-	-	-	-
6	Dhurrumgaum - -	1		-	-	-	-	-	-	-	-	-
7	Bhurgaum - -	-		-	-	-	-	-	-	-	-	-
8	Chahgaum - -	-		-	-	-	-	-	-	-	-	-
9	Malegaum - -	-		-	-	-	-	-	-	-	-	-
10	Baglan - -	-		-	-	-	-	-	-	-	-	-
11	Pimpulnair - -	-		-	-	-	-	-	-	-	-	-
12	Nundoorbar - -	1		-	-	-	-	-	-	-	-	-
13	Sooltanpoor - -	-		-	-	-	-	-	-	-	-	-
14	Tbalnar - -	-		-	-	-	-	-	-	-	-	-
15	Chopra - -	1		-	-	-	-	-	-	-	-	-
16	Arwad - -	1		-	-	-	-	-	-	-	-	-
	Yawal - -	1	-	-	-	-	-	-	-	-	-	
	Sowda - -	1	-	-	-	-	-	-	-	-	-	
	Nusseerabad - -	1	-	-	-	-	-	-	-	-	-	
	Julgaum - -	1	-	-	-	-	-	-	-	-	-	
	Jannar - -	1	-	-	-	-	-	-	-	-	-	
	TOTAL - -	14	-	322	-	322	-	-	-	-	-	

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1349

REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 30 November 1850—continued.

Number.	TALOOKAS.	G I N S.								Amount Expended on Construction of Gins.	Purchases and Ginning of Cotton.
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.		
		13.	14.	15.	16.	17.	18.	19.	20.		
1	Dhoolia	-	1	-	-	-	-	-	-	-	-
2	Amulnair	-	2	-	-	-	-	-	-	-	-
-	Betawud	2	-	-	-	-	-	-	-	-	-
3	Errundole	-	1	-	-	-	-	-	-	-	-
-	Cassoda	-	-	-	-	-	-	-	-	-	-
-	Dhurrungaum	2	2	6	-	26	-	-	-	1,577 8 11	165 8 6
4	Bhurgaum	-	-	-	-	-	-	-	-	-	-
5	Chahsagaum	-	-	-	-	-	-	-	-	-	-
6	Malegaum	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	2	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-
12	Chopra	2	-	-	-	-	-	-	-	-	-
-	Arrawud	-	-	-	-	-	-	-	-	-	-
13	Yawal	1	-	-	-	-	-	-	-	-	-
14	Sowda	-	1	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-
-	Julgaum	2	4	-	-	-	-	-	-	-	-
16	Jamnair	1	-	-	-	-	-	-	-	-	-
	TOTAL	12	11	6	-	26	-	-	-	1,577 8 11	165 8 6

Number.	TALOOKAS.	Other Items of Expenditure during the Half-Year.						Amount Expended up to last Half-Year.	TOTAL Expenditure up to end of Half-Year under Report.
		Contingen-cies.	Buildings.	Temporary Estab-lishment.	Amount of Superinten-dence and Assistant Superinten-dence.	Amount of Estab-lishment.	TOTAL Amount.		
		23.	24.	25.	26.	27.	28.		
		23.	24.	25.	26.	27.	28.		
1	Dhoolia	-	-	-	-	-	1,410 13 10	1,410 13 10	
2	Amulnair	-	-	-	-	-	1,488 7 8	1,488 7 8	
-	Betawud	-	-	20	-	-	1,910 7 4	1,930 7 4	
3	Errundole	-	-	-	-	-	-	-	
-	Cassoda	-	-	-	-	-	434 8 2	434 8 2	
-	Dhurrungaum	1,130 13 2	1,406 6 8	520 15 6	6,959 - -	1,366 1 2	13,126 5 11	76,099 11 9	
4	Bhurgaum	-	-	-	-	-	-	-	
5	Chahsagaum	-	-	-	-	-	-	-	
6	Malegaum	-	-	-	-	-	-	-	
7	Baglan	-	-	-	-	-	-	-	
8	Pimpulnair	-	-	-	-	-	-	-	
9	Nundoorbar	-	-	-	-	-	1,149 3 1	1,149 3 1	
10	Sooltanpoor	-	-	-	-	-	-	-	
11	Thalnair	-	-	-	-	-	-	-	
12	Chopra	-	-	-	-	-	8,838 8 9	8,838 8 9	
-	Arrawud	-	-	-	-	-	2,439 - 1	7,439 - 1	
13	Yawal	-	-	-	-	-	3,053 5 11	3,053 5 11	
14	Sowda	-	-	-	-	-	24 9 -	24 9 -	
15	Nusseerabad	-	-	-	-	-	22,952 14 3	22,952 14 3	
-	Julgaum	-	-	-	-	-	4 5 -	4 5 -	
16	Jamnair	-	-	-	-	-	-	-	
	TOTAL	1,130 13 2	1,406 6 8	540 15 6	6,959 - -	1,366 1 2	13,146 5 11	119,805 14 10	1,32,952 4 9

Remarks.—The number of gins completed during the half-year under report is 26, which makes, including those previously reported, a total of 67 gins manufactured in this department since its establishment in 1847-48. Of this number 40 have been made over on hire to the agency of Messrs. Ritchie, Stuart & Co., 11 have been sold to native merchants, 12 set up for Government work, and 4 remain on hand at the Dhurrungaum Factory. Three district gin-sheds have been completed, one at Nusseerabad, one at Jamnair, and one at Sowda, making in all eight sheds, the number sanctioned by Government. The workshop and office have also been completed, so as to admit of their being occupied by the servants of this establishment, leaving one door and three window-shutters to be added, 14 new gins were set up in the districts, on account of Messrs. Ritchie, Stuart & Co., seven gins on account of Government work, and three gins likewise for native merchants by this establishment.

(signed) S. Simpson,
Superintendent Government Cotton Experiment.

(signed) A. Elphinston,
Collector.

Superintendent's Office, Dhurrungaum, 30 November 1850.

EXTRACT Bombay Revenue Consultations, 31 December 1851.

III.
Bombay.
No. 20911.

(No. 1985 of 1851.)

Superintendent's Report of the Progress of the Cotton Experiments in Khandeish for the Half-year ending 31 May 1851, dated 17 September 1851.

1. SUBMITTED to the Revenue Commissioner, Northern Division, for transmission to Government.

2. This report exhibits the extent of the cultivation of the indigenous cotton in Khandeish in the season embraced by it, at 1,62,875 (A) beegahs and 2 1/2 pands, the outturn of which is estimated to have been 25,674 (B) candies and 152 1/2 lbs. of seed and cotton.

The cultivation of American cotton during the same period amounted to 7,670 beegahs and 14 1/2 pands, which yielded of cotton and seeds, 881 candies and 229 1/2 lbs.

3. The purchases made on account of Government in the season amounted to 719 candies* and 505 lbs. of cotton, with seed at a cost of Rs. 1,587. 0. 8., and the outturn of the Government experimental farm was 36 candies* and 89 lbs.; the cost thereof being Rs. 340. 5. 10.

4. The number of saw gins constructed during the half-year under report was 14, and that sold to private merchants was three.

5. The collector feels confident that the culture of American seed cotton in current season is about double what it was in the last, or about 15,000 beegahs, but as he has not got the cultivation returns from the districts (which are not prepared till near the jumna-bundy season) the number of beegahs actually cultivated with this species of cotton cannot now be precisely quoted. He is confident that there is a considerable increase in the cultivation of the indigenous cotton. The increase of the cultivation of both sorts being attributable to the impulse given by the high prices of cotton last season, and the extensive advances distributed by the agent of Messrs. Ritchie, Stewart & Co. The total cessation of rain, however, in the latter part of the monsoon just over, has, it is much to be regretted, more or less destroyed the American cotton plants, in common with other crops, but in a less degree the indigenous cotton, which better resists drought.

(signed) A. Elphinston,
Collector.

Khandeish Collector's Office, Dhoolia,
27 November 1851.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish for the Half-Year ending 31 May 1851.

Number.	NAMES.	Prospects of the Season, and State of the Crops, as regards to each sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.										
			NEW ORLEANS.			BROACH.		TOTAL.				COUNTRY COTTON.	
			Extent in Beegahs.	Estimated Produce in Candies.	lbs.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.
1	Dhoolia	1	B. 190	p. 6 1/2	C. 13 32			B. 190	p. 6 1/2	C. 13 32	B. 10,334	p. 1 1/2	C. 1,893 128
2	Amulnair	1	563	7 1/2	29 255			563	7 1/2	29 255	13,235	11 1/2	1,422 606
3	Betawud	1											
3	Errondole	1	891	2 1/2	98 426 1/2			891	2 1/2	98 426 1/2	18,850	15 1/2	4,747 180 1/2
	Cassoda	1											
	Dhurrdimgaum	1											
4	Burgaum		12	2 1/2	1 186 1/2			12	2 1/2	1 186 1/2	24,973	2 1/2	2,497 500
5	Chalsgaum		12	5	1 263			12	5	1 263	2,923	7 1/2	404 781
6	Mallgaum										1,301	5	65 49
7	Baglan		90	18 1/2	1 65			90	18 1/2	1 65	438	4 1/2	7 865
8	Pimpulnair		55	6 1/2	2 264			55	6 1/2	2 264	1,334	1 1/2	33 369
9	Nundoorbar	1	1,269	0	217 272			1,269	0	217 272	9,294	10 1/2	2,987 588
10	Sooltanpoor		1,056	19	36 60			1,056	19	36 60	2,910	16	199 461
11	Thalnair		210	0	11 69			210	0	11 69	2,665	10	367 633
12	Chopra	1	1,497	15	288 398			1,497	15	288 398	11,117	2 1/2	3,318 326
	Arrawud	1											
13	Yawul	1	439	0 1/2	51 404			439	0 1/2	51 404	8,608	2	1,210 332
14	Sowdah	1	220	10 1/2	4 499			220	10 1/2	4 499	7,717	6 1/2	827 210
15	Nusseerabad	1	485	15	39 739			485	15	39 739	12,176	0	1,241 749
	Julgaum	1											
16	Jamnere	1	676	5	85 217			676	5	85 217	34,995	5 1/2	4,448 431
	TOTAL	13	7,670	14 1/2	881 299 1/2			7,670	14 1/2	881 229 1/2	1,62,875	2 1/2	25,674 152 1/2

(A.) The square contents of a beegah are 32,400 feet; 20 pands make a beegah.
(B.) A candy is equal to 784 lbs. avoirdupoise.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1351

REPORT of the Cotton Experiments in the Province of Khandeish for the Half-Year ending 31 May 1851—continued.

Number.	NAMES.	COTTON PURCHASED AND CULTIVATED FOR GOVERNMENT, IN CANDIES OF 800 SEERS.											TOTAL Amount of Cotton Purchased for Government.	
		NEW ORLEANS.			BROACH.			TOTAL.			COUNTRY COTTON.			
		Quantities in Candies.	Rate per Candy.	Amount.	Quantities in Candies.	Rate per Candy.	Amount.	Quantities in Candies.	Rate per Candy.	Amount.	Quantities in Candies.	Rate per Candy.		Amount.
		13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.		24.
		<i>C. m. s.</i>		<i>R. a. p.</i>			<i>C. m. s.</i>		<i>R. a. p.</i>					<i>R. a. p.</i>
1	Dhoolia	5 18 2½		268 6 6			5 18 2½		268 6 6					268 6 6
2	Amulnair	10 15 25½		485 3 6			10 15 25½		485 3 6					485 3 6
	Betawud	3 9 34½		147 11 6			3 9 34½		147 11 6					147 11 6
		<i>1 12 12</i>					<i>1 12 12</i>							
3	Eroundole	17 9 36		847 6 11			17 9 36		847 6 11					847 6 11
	Cassoda													
	Dhurrungaum	17 36½		818			17 36½		818					818
		<i>1 5 16½</i>					<i>1 5 16½</i>							
4	Burgaum													
5	Chaligaum													
6	Malligaum													
7	Baglan													
8	Pimpalnair													
9	Nundoorbar	59 3 24½		2,663 15 11			59 3 24½		2,663 15 11					2,663 15 11
10	Sooltanpoor	4 17 15½		212 15 3			4 17 15½		212 15 3					212 15 3
11	Thalnere	8 18 12		380 9 8			8 18 12		380 9 8					380 9 8
12	Chopra	135 15 36		6,052 8 4			135 15 36		6,052 8 4					6,052 8 4
		<i>3 14 13</i>					<i>3 14 13</i>							
	Arrawud													
13	Yawul	22 4 33		1,063 - 3			22 4 33		1,063 - 3					1,063 - 3
		<i>2 11 2</i>					<i>4 11 2</i>							
14	Sowdah													
15	Nusseerabad	24 4 15½		1,018 2 11			24 4 15½		1,018 2 11					1,018 2 11
	Julgaum	4 7 12					4 7 12							
16	Jamnere	42 13 29½		1,919 5 -			42 13 29½		1,919 5 -					1,919 5 -
		<i>4 13 21</i>					<i>4 13 21</i>							
	TOTAL	370 6 17		15,877 - 8			370 6 17		15,877 - 8					15,877 - 8

Number.	NAMES.	GINS.								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
		26.	27.	28.	29.	30.	31.	32.	33.	
1	Dhoolia	1	3					3	580 4 -	
2	Amulnair		2							
	Betawud	2								
3	Errundole		1							
	Cassoda									
	Dhurrungaum	2	2			14				313 5 7
4	Burgaum									
5	Chaligaum									
6	Malligaum									
7	Baglan									
8	Pimpalnair									
9	Nundoorbar	2								
10	Sooltanpoor									
11	Thalnere									
12	Chopra	3								
	Arrawud									
13	Yawul	1								
14	Sowdah		1							
15	Nusseerabad		4							
	Julgaum	2								
16	Jamnere	1	13							
	TOTAL	14	26			14		3	580 4 -	313 5 7

N.B.—The quantities in italic figures are the produce of the Government experimental cultivation.

REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 31 May 1851—continued.

Number.	NAMES.	QUANTITY OF COTTON GINNED IN CANDIES OF 800 SEERS.								Total Amount Expended in Ginning, &c., on Government Account.	Amount of Experimental Cotton Cultivation.	
		FOREIGN.					For Private Individuals.	COUNTRY.				Quantity of Cotton Ginned during the Season.
		NEW OLEANS.		BROACH.		TOTAL.		For Government.	For Private Individuals.			
		For Government.	For Private Individuals.	For Government.	For Private Individuals.	For Government.						
35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.		
1	Dhoolia - - -	C. m. s. 69 7 2½	-	-	-	C. m. s. 69 7 2½	-	-	C. m. s. 13 4 0	C. m. s. 19 11 2½	56 5 9	-
2	Amulnair - - -	-	-	-	-	-	-	-	-	-	-	-
3	Betawaud - - -	30 19 35	-	-	-	30 19 35	-	-	60 19 30	91 19 25	202 - 1	6 11 4
4	Errandole - - -	-	-	-	-	-	-	-	-	-	-	-
5	Cassoda - - -	-	-	-	-	-	-	-	-	-	-	-
6	Dhurrungaum - - -	38 7 39½	-	-	-	38 7 39½	-	-	85 5 20	123 13 19½	448 4 3	278 4 9
7	Burgaum - - -	-	-	-	-	-	-	-	-	-	-	-
8	Chalsgaum - - -	-	-	-	-	-	-	-	-	-	-	-
9	Malligaum - - -	-	-	-	-	-	-	-	-	-	-	-
10	Baglan - - -	-	-	-	-	-	-	-	-	-	-	-
11	Pimpalnair - - -	-	-	-	-	-	-	-	-	-	-	-
12	Nundoorbar - - -	74 17 0	-	-	-	74 17 0	-	-	-	74 17 0	312 - 6	-
13	Sooltanpoor - - -	-	-	-	-	-	-	-	-	-	-	-
14	Thalnere - - -	-	-	-	-	-	-	-	-	-	-	-
15	Chopra - - -	148 1 20	-	-	-	148 1 20	-	-	-	148 1 20	609 14 1	22 7 4
16	Arrawud - - -	-	-	-	-	-	-	-	-	-	-	-
17	Yawul - - -	25 5 9	-	-	-	25 5 9	-	-	-	25 5 9	182 7 6	9 2 6
18	Sowdah - - -	-	-	-	-	-	-	-	-	-	-	-
19	Nusserabad - - -	-	-	-	-	-	-	-	-	-	-	-
20	Julgaum - - -	30 19 0	-	-	-	30 19 0	-	-	16 13 20	47 12 20	148 14 6	6 14 -
21	Jamnair - - -	49 0 26	-	-	-	49 0 26	-	-	-	49 0 26	325 - 11	16 13 11
	TOTAL - - -	403 18 12¼	-	-	-	403 18 12¼	-	-	176 2 30	580 1 2½	6,320 15 7	340 5 10

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Total Amount Including Cotton and Ginning, &c.	Amount Expended up to last Half-Year.	Total Expenditure up to end of the Half-Year under Report.
		Building Temporary Establishment, &c.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
50.	51.	52.						
1	Dhoolia - - -	-	8 5 -	-	-	333 1 3	1,410 13 10	1,743 15 1
2	Amulnair - - -	-	-	-	-	485 3 6	1,488 7 8	1,973 11 2
3	Betawud - - -	-	12 4 8	-	-	368 11 7	1,930 7 4	2,299 2 11
4	Errandole - - -	-	-	-	-	847 6 11	-	847 6 11
5	Cassoda - - -	-	-	-	-	-	434 8 2	434 8 2
6	Dhurrungaum - - -	572 5 1	88 9 3	2,410 - -	1,577 - -	10,541 12 11	89,226 1 8	99,767 14 7
7	Burgaum - - -	-	-	-	-	-	-	-
8	Chalsgaum - - -	-	-	-	-	-	-	-
9	Malligaum - - -	-	-	-	-	-	-	-
10	Baglan - - -	-	-	-	-	-	-	-
11	Pimpalnair - - -	-	-	-	-	-	-	-
12	Nundoorbar - - -	-	36 8 6	-	-	3,012 8 11	1,149 3 1	4,161 12 -
13	Sooltanpoor - - -	-	-	-	-	212 15 3	-	212 15 3
14	Thalnere - - -	-	-	-	-	380 9 8	-	380 9 8
15	Chopra - - -	-	16 15 2	-	-	6,701 7 10	8,838 8 9	15,540 - 7
16	Arrawud - - -	-	-	-	-	-	2,439 - 1	2,439 - 1
17	Yawul - - -	-	5 15 6	-	-	1,260 9 9	3,053 5 11	4,313 15 8
18	Sowdah - - -	-	10 15 -	-	-	10 15 -	24 9 -	35 8 -
19	Nusseerabad - - -	-	-	-	-	1,018 2 11	-	1,018 2 11
20	Julgaum - - -	-	3 14 7	-	-	159 11 1	22,952 14 3	23,112 9 4
21	Jamnair - - -	-	5 7 9	-	-	2,266 11 7	4 5 -	2,271 - 7
	TOTAL - - -	572 5 1	188 15 5	2,410 - -	1,577 - -	27,600 - 2	132,952 4 9	160,558 4 11

Remarks.—Thirteen (13) saw-gins have been sold up to the present time to native dealers, and forty (40) have been lent on hire to the Agent of Messrs. Ritchie, Stewart and Co.

(signed) Thomas Edwards,
Superintendent Cotton Experiments.

(signed) A. Elphinston,
Collector.

Superintendent's Office, Dhurungaum, 17 September 1851.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1353

EXTRACT Bombay Revenue Consultations, 24 November 1852.

III.
Bombay.

(No. 2538.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government;
2 October 1852.

Sir,

I HAVE the honour to lay the accompanying communications from the Collector of Khandeish, with their accompaniments, being half-yearly reports of the cotton experiments ending 30th November 1851, and 31st May 1852 respectively; these returns should have been submitted as they became due. Mr. Elphinston was written to on the dates quoted on the margin,* and requested to expedite their transmission; but, as they have been received together, I beg to notice their contents for the whole year 1850-51.

No. 14748.
No. 1513 of 16 September 1852; No. 1514 of 16 September 1852.
* No. 3387 of 3 December 1851; No. 1013 of 29 April 1852.

Land sown with Cotton, and its estimated Produce.

2. The land sown with cotton amounted to 2,43,966 beegas 6 ½ pands, of which 12,124 beegas 11 ½ pands were sown with New Orleans; the estimated produce of which, in candies of 800 seers, was 662 candies 13 maunds, 36 seers; and 2,31,841 beegas 14 ½ pands were sown with country cotton, the estimated produce of which was 22,833 candies 7 maunds 30 seers.

Charges incurred.

3. The total amount expended within the two half-years was as follows:

	Rs.	a.	p.
On the construction of gins - - - - -	1,375	6	9
Ginning cotton on account of Government - - -	443	12	6
Amount expended in the construction of buildings -	434	4	7
Contingencies - - - - -	254	7	9
Cost of permanent establishment, including salary of Superintendent and Assistant - - - - -	6,526	6	5
Total cost of expenditure for the season A. D. 1850-51 -	8,044	6	-
Total amount expended up to the end of May 1851 -	1,60,552	4	11
Total amount expended up to 31st May 1852 - - -	1,68,596	10	11

Gins completed, and in Use and out of Use.

4. In the half-year ending 30th November 1851 six gins, and in the succeeding half-year one gin, one prize-competing machine, and one portable single-bullock machine were completed.

5. In the half-year ending 30th November 1851, 62 Government gins were in use; 58 of this number were let out for the season A. D. 1850-51 to Messrs. Ritchie, Steuart & Co., but owing to that firm not purchasing and ginning cotton in the succeeding half-year, they gave up the gins in February 1852; eight of these however were, it appears, employed for about two months, and nine for 15 days each by native merchants.

6. In the succeeding half-year, including the above number, 63 Government gins were in use.

7. It is not explained why Messrs. Ritchie, Steuart & Co., having engaged the gins for the season, were permitted to retreat from their engagement.

8. In the two periods above-mentioned five government gins were out of use.

9. Of the gins belonging to private individuals 16 were in use for the whole period, comprising the two half years.

Vide Col 12 of Statement of November 1851, and Col. 26 of Statement of May 1852.

Buildings.

10. The collector has not specified what description of buildings were constructed for the sum of Four hundred and thirty-four rupees, four annas, and seven pies (Rs. 434. 4. 7.); he will be requested to supply this information, and in future to notice them in the body of his letter.

Gins sold on account of Government.

11. In the half-year ending 30th November 1851 two were sold, but the amount for which sold was not, it appears, ascertained; explanation on this point will be required. Subsequent to the close of the half-year ending 31st May 1852 three more gins, it would appear, were sold to native cotton dealers.

Vide Col. 19.

Cotton Ginned.

12. The quantity of native cotton ginned for private individuals in the half-year ending 31st May 1852, was 159 candies 19 maunds 2 ½ seers, at 3 ½ rupees the candy.

13. In column 44 of half-yearly statement ending 31st May 1852, Four hundred and forty-three rupees, twelve annas, and six pies (Rs. 443. 12. 6.), are said to have been expended for

III.
Bombay.

for ginning, &c. on account of Government, but the quantity of cotton ginned is not specified.

14. From the column of remarks in the two statements, it will be observed that 88 gins in all have been manufactured by the establishment from its foundation, one prize-competing machine, and one portable single-bullock machine. Of these 16 gins were sold to native merchants, 58 let out on hire, including one American gin, 4 at the factory, and 10 sent to Surat and Ahmedabad; one portable bullock machine sent to Mr. Landon, at Broach, for trial.

15. Since the date of the last statement, viz, 31st May 1852, the repairs to the screw press have been completed, as well as two portable bullock machines, and the cattle-power machine sanctioned in Government letter No. 3773, of 31 May 1852.

16. I took the opportunity of inspecting the manufactory and ginning machines at Dhurungaum during my last tour, both those of Government and of Messrs. Ritchie, Steuart & Co. The latter have gone to considerable expense in erection of sheds and bullock-power engines, which appeared to work very efficiently. A small steam-engine was then expected to be applied to this work. The result of the working of this cannot, I imagine, be judged of till next season; that it will do its work there can be no doubt, the question is whether it will prove remunerative for the outlay.

17. The single-bullock portable machine for working gins was completed, and I had it put in motion by a buffalo. I think the design does much credit to Mr. Edward's ingenuity. It seemed well adapted to save manual labour, which, I am informed, is obtained with difficulty at times, and at an exorbitant rate. I am not prepared to give a decisive opinion of the efficiency of this machine, because then it was only just finished, and the animal put to work it was of course unused to it, and the mode of proceeding was to him very unusual, so that one could scarcely tell whether the work would not be too severe for his powers. However, as native dealers have, it seems, already applied to be supplied with these machines, it seems some proof that it has turned out to be efficient and economical; I hope soon to have the opinion of Mr. Landon and others to whom the machines were ordered to be supplied.

18. In conclusion I beg to record a favourable opinion of Mr. Edwards; he appeared to be an indefatigable and zealous man, and well qualified for the office he holds.

I have, &c.

(signed) *E. G. Fawcett*,
Revenue Commissioner, N. D.

Revenue Commissioner's Office, Poona,
2 October 1852.

No. 14,749.

REPORT of the Operations of the Cotton Experimental Department in Khandeish for the Half-year ending 30 November 1851.

(No. 1513 of 1852.)

SUBMITTED to the Revenue Commissioner, Northern Division, for the information of Government.

2. The total extent of land cultivated with cotton last year (A.D. 1851-52) is stated to have been 2,43,966 beegahs, of which the yield is assumed at 23,496 candies each of 784 lbs.* The portion of this sown with American amounted to 12,124 beegahs, estimated to have yielded about 662 candies of seed and cotton. The prospects of the cotton crops were favourable till about the end of August 1851, when the rains held off, and a continued drought followed, to the great damage of the cotton and other crops. The failures of crops have been more considerable in the exotic cotton fields than in the indigenous (as it suffers more from dry weather, and cannot, like the indigenous, resist drought), a circumstance which has discouraged the ryots from extending their American cotton cultivation during this present monsoon.

3. Since the date of the accompanying return the repairs to the screw press have been completed, as has been the prize-competing machine intended to be sent to Calcutta. Of the five portable single-bullock power machines ordered by Government* to be made up, and sent for trial to the several superintendents of cotton experiments under this Presidency, one has been forwarded to Mr. Landon at Broach; of the remaining four, two have been completed, and the other two have also been reported to be drawing towards completion, and two machines of similar description, ordered by native cotton dealers, are nearly ready for delivery.

4. The Chopra cattle-power machine, sanctioned in the Government letter, No. 3773, dated 31st May last, has been completed.

Khandeish, Collector's Office, Dhoolia,
16 September 1851.

(signed) *A. Elphinston*,
Collector.

* Number 10,279, dated 29 October 1851, to the Revenue Commissioner.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 30 November 1851.

No.	TALOOKA.	Stations.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantities of Kupas in hand on account of Government of each sort, Ginned or not Ginned.				Supposed proportion of last Year's Crop which has been cleaned on Saw Gins or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1	Dhoola -	1	- - - - -	-	-	-	-	-	-	-	-
2	Amulnair -	1	- - - - -	-	-	-	-	-	-	-	-
	Betawud -	-	- - - - -	-	-	-	-	-	-	-	-
3	Errundole -	-	- - - - -	-	-	-	-	-	-	-	-
	Cassoda -	1	- - - - -	-	-	-	-	-	-	-	-
	Dhurrungaum -	1	- - - - -	1,830 lbs.	-	1,830 lbs.	-	-	-	-	-
4	Challigaum -	-	- - - - -	-	-	-	-	-	-	-	-
5	Burgaum -	-	- - - - -	-	-	-	-	-	-	-	-
6	Malligaum -	-	- - - - -	-	-	-	-	-	-	-	-
7	Baglan -	-	- - - - -	-	-	-	-	-	-	-	-
8	Pimpunair -	-	- - - - -	-	-	-	-	-	-	-	-
9	Nundoorbar -	1	- - - - -	-	-	-	-	The whole	-	The whole	One-eighth of the Crop.
10	Sooltanpoor -	-	- - - - -	-	-	-	-	-	-	-	-
11	Thalnair -	-	- - - - -	-	-	-	-	-	-	-	-
12	Chopra -	1	- - - - -	-	-	-	-	-	-	-	-
	Arrawud -	1	- - - - -	-	-	-	-	-	-	-	-
13	Yawul -	1	- - - - -	-	-	-	-	-	-	-	-
14	Sowdah -	1	- - - - -	-	-	-	-	-	-	-	-
15	Nusseerabad -	1	- - - - -	-	-	-	-	-	-	-	-
	Julgaum -	1	- - - - -	-	-	-	-	-	-	-	-
16	Jannair -	1	- - - - -	-	-	-	-	-	-	-	-
	TOTAL -	12	- - - - -	1,830 lbs.	-	1,830 lbs.	-	The whole	-	The whole	1/8

No.	TALOOKA.	G I N S.							Amount Expended on Construction of Gins.	
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.		For what Amount.
		12.	13.	14.	15.	16.	17.	18.	19.	20.
1	Dhoola -	3	4	-	-	-	-	-	-	-
2	Amulnair -	-	2	-	-	-	-	-	-	-
	Betawud -	2	-	-	-	-	-	-	-	-
3	Errundole -	-	1	-	-	-	-	-	-	-
	Cassoda -	2	-	-	-	-	-	-	-	-
	Dhurrungaum -	26	2	5	-	6	-	-	-	794 5 10
4	Challigaum -	-	-	-	-	-	-	-	-	-
5	Burgaum -	-	-	-	-	-	-	-	-	-
6	Malligaum -	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-
8	Pimpunair -	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	2	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	-	-	-	-	-	-	-	-
11	Thalnair -	-	-	-	-	-	-	-	-	-
12	Chopra -	6	-	-	-	-	-	-	-	-
	Arrawud -	3	-	-	-	-	-	-	-	-
13	Yawul -	4	-	-	-	-	-	-	-	-
14	Sowdah -	3	3	-	-	-	-	2	Not yet known.	-
15	Nusseerabad -	3	-	-	-	-	-	-	-	-
	Julgaum -	2	4	-	-	-	-	-	-	-
16	Jannair -	4	-	-	-	-	-	-	-	-
	TOTAL -	62*	16	5	-	6	-	2	-	794 5 10

* Out of the 62 Gins 58 are let on hire to Messrs. Ritchie, Stuart & Co. for the season 1851-52.

REPORT of the Cotton Experiments in the Province of Khandeish for the Half-Year ending 30 November 1851—cont^d.

No.	TALOOKA.	Other Items of Expenditure during the Half Year under Report.				Amount of Superintendent and Assistant Superintendent.	Amount of Permanent Establishment.	Total Amount.	Amount Expended up to last Half-year.	Total Expenditure up to the end of Half-year under Report.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings, &c. &c.	Temporary Establishments.					
		21.	22.	23.	24.	25.	26.	27.	28.	29.
1	Dhoolia - - -	-	-	17 - -	-	-	-	17 - -	1,743 15 1	1,760 15 1
2	Amulnair - - -	-	-	5 5 6	-	-	-	5 5 6	1,973 11 2	1,979 - 8
	Betawud - - -	-	-	-	-	-	-	-	2,299 2 11	2,299 2 11
3	Errundole - - -	-	-	-	-	-	-	-	847 6 11	847 6 11
	Cassoda - - -	-	-	4 4 6	-	-	-	4 4 6	434 8 2	438 12 8
	Dhurrungaum - - -	145 5 6	283 6 1	-	-	1,071 6 5	1,540 - -	3,834 7 10	99,767 14 7	103,602 6 5
4	Challisgaum - - -	-	-	-	-	-	-	-	-	-
5	Burgaum - - -	-	-	-	-	-	-	-	-	-
6	Malligaum - - -	-	-	-	-	-	-	-	-	-
7	Baglan - - -	-	-	-	-	-	-	-	-	-
8	Pimpulnair - - -	-	-	-	-	-	-	-	-	-
9	Nundoorbar - - -	-	-	-	-	-	-	-	4,161 12 -	4,161 12 -
10	Sooltanpoor - - -	-	-	-	-	-	-	-	212 15 3	212 15 3
11	Thalnair - - -	-	-	-	-	-	-	-	380 9 8	380 9 8
12	Chopra - - -	1 13 1	12 3 9	-	-	-	-	14 - 10	15,540 - 7	15,555 1 5
	Arrawud - - -	-	-	52 1 10	-	-	-	52 1 10	2,439 - 1	2,491 1 11
13	Yawul - - -	-	-	17 1 -	-	-	-	17 1 -	4,313 15 8	4,331 - 8
14	Sowdah - - -	-	-	-	-	-	-	-	35 8 -	35 8 -
15	Nusseerabad - - -	-	-	-	-	-	-	-	1,018 2 11	1,018 2 11
	Julgaum - - -	1 6 6	42 13 11	-	-	-	-	44 4 5	23,112 9 4	23,156 13 9
16	Jamnair - - -	-	-	-	-	-	-	-	2,271 - 7	2,271 - 7
	TOTAL - - -	-	148 9 1	434 4 7	-	1,071 6 5	1,540 - -	3,988 9 11	160,552 4 11	164,540 14 10

Remarks.—During the half-year under report, two gins have been sold to private individuals, making the total of gins sold up to this date sixteen (16.)

Fifty-eight (58) gins (of which one is an American gin) have been let on hire for the coming season to the agency of Messrs. Ritchie, Steuart & Co.

The total of gins manufactured by this establishment now amount to eighty-seven (87) . . 16 sold to native merchants + 57 let on hire + four (4) at the factory + and ten (10) sent to Surat and Ahmedabad = 87.

(signed) T. J. Edwards,
Superintendent Cotton Experiments.

Superintendent's Office, Dhurrungaum, 1 December 1851.

REPORT of the Operations of the Cotton Experimental Department in Khandeish, for the Half-year ending 31 May 1852.

(No. 1514 of 1852.)

SUBMITTED to the Revenue Commissioner, Northern Division, for the information of Government.

2. For the total extent of land cultivated last year (A. D. 1851-52) with American and indigenous cotton, the yield from both species, as well as for the prospects of the cotton crops, and other particulars connected with the cotton experimental department in the province, the Collector begs to refer to his memorandum of this date, No. 1513, submitting the Superintendent's report for the half-year ending 30th November last.

Khandeish, Collector's Office, Dhoolia,
16 September 1852.

(signed) A. Elphinston,
Collector.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 31 May 1852.

Number.	NAMES.	Stations.	Prospects of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.								Cotton purchased for								
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.										
				Extent in Beegahs.	Estimated Produce in Khandies of 800 Seers.	Extent in Beegahs.	Estimated Produce in Khandies of 800 Seers.	Extent in Beegahs.	Estimated Produce in Khandies of 800 Seers.	Extent in Beegahs.	Estimated Produce in Khandies of 800 Seers.									
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13 2.								
				B.	p.	C.	m.	s.	B.	p.	C.	m.	s.							
1	Dhoolia	1	- - -	621	18½	38	2	37½	-	-	621	18½	38	2	37½	12,498	6½	1,249	16	21
2	Amulnair	1	- - -	1,327	12½	67	6	1	-	-	1,327	12½	67	6	1	22,994	16½	2,689	8	12
3	Errundole-Cassoda	1	- - -	1,097	3½	39	4	12½	-	-	1,097	3½	39	4	12½	27,097	5	3,040	10	28
	Dhurrungaum	1	In the season under report, the extent of land sown with cotton was above the average, but for the want of rain at the end of the monsoon, the yield per beegah was rather under the average.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Burgaum	-	-	839	7½	30	17	28½	-	-	839	7½	30	17	28½	38,935	17½	3,137	5	36
5	Chaisgaum	-	-	18	15	1	5	30	-	-	18	15	1	5	30	5,003	8½	272	19	10
6	Malligaum	-	-	1	5	0	0	2½	-	-	1	5	0	0	2½	1,765	0	88	5	0
7	Baglan	-	-	54	10½	0	6	15	-	-	54	10½	0	6	15	394	14½	1	0	39A
8	Pimpulnair	-	-	180	13½	5	15	24½	-	-	180	13½	5	15	24½	1,568	19	51	9	6½
9	Nundoorbar	1	-	1,145	11½	74	16	30	-	-	1,145	11½	74	16	30	13,136	1½	1,635	6	0½
10	Sultanpoor	-	-	973	0½	56	4	35	-	-	973	0½	56	4	35	5,155	19	423	1	10
11	Thalnaar	-	-	218	10	8	12	7	-	-	218	10	8	12	7	4,164	5	508	13	5
12	Chupra	1	-	2,189	8½	177	15	9½	-	-	2,189	8½	177	15	9½	15,256	6½	2,066	6	17
	Arrawud	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Yawul	1	-	1,051	2½	65	13	36½	-	-	1,051	2½	65	13	36½	11,942	5	1,791	6	10
14	Sowda	1	-	275	12½	7	17	19½	-	-	275	12½	7	17	19½	11,248	17½	911	3	0
15	Nusseerabad	1	-	675	15	34	9	0	-	-	675	15	34	9	0	17,764	17	1,748	3	10
	Julgaum	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Jamnair	1	-	1,454	5	54	10	27½	-	-	1,454	5	54	10	27½	42,914	16	3,218	12	5
TOTAL				12,124	11½	662	18	36	-	-	12,124	11½	662	18	36	231,841	14½	22,833	7	30

Number.	NAMES.	GINS AND GINNING MACHINES.							Amount Expended on Construction of Gins.				
		In Use.		Out of Use.		Completed.		Sold for Government.					
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.		For what Amount.			
		26.	27.	28.	29.	30.	31.	32.		33.			
1	Dhoolia	-	4	-	-	-	-	-	-	-	-	-	-
2	Amulnair	-	2	-	-	-	-	-	-	-	-	-	-
3	Errundole-Cassoda	-	1	-	-	-	-	-	-	-	-	-	-
	Dhurrungaum	-	2	5	-	-	-	-	-	-	-	-	581
4	Burgaum	-	-	-	-	-	-	-	-	-	-	-	-
5	Chaisgaum	-	-	-	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-	-	-
10	Sultanpoor	-	-	-	-	-	-	-	-	-	-	-	-
11	Thalnaar	-	-	-	-	-	-	-	-	-	-	-	-
12	Chupra	-	-	-	-	-	-	-	-	-	-	-	-
	Arrawud	-	-	-	-	-	-	-	-	-	-	-	-
13	Yawul	-	-	-	-	-	-	-	-	-	-	-	-
14	Sowda	-	3	-	-	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-	-	-
	Julgaum	-	4	-	-	-	-	-	-	-	-	-	-
16	Jamnair	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		63	16	5	-	-	-	3	-	-	-	-	581

REPORT of the Cotton Experiments in the Province of Khandeish for the Half-Year, ending 31 May 1852—*continued.*

Number.	NAMES.	QUANTITY OF COTTON GINNED.								Quantity of Cotton Ginned during the Season.	Total Amount Expended in Ginning &c., on Government Account.	
		FOREIGN.						COUNTRY.				
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	For Private Individuals.			
		For Government.	For Private Individuals.	For Government.	For Private Individuals.	For Government.	For Private Individuals.					
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	
1.	Dhoola - -	-	-	-	-	-	-	-	-	-	-	-
2.	Amulnair - -	-	-	-	-	-	-	-	-	-	-	-
	Betawud - -	-	-	-	-	-	-	-	-	-	-	-
3.	Errundole - -	-	-	-	-	-	-	-	-	-	-	-
	Cassoda - -	-	-	-	-	-	-	-	-	-	-	-
	Dhurrungaum - -	-	-	-	-	-	-	-	-	-	-	-
4.	Burgaum - -	-	-	-	-	-	-	-	-	-	-	-
5.	Chahsagaum - -	-	-	-	-	-	-	-	-	-	-	-
6.	Mahsagaum - -	-	-	-	-	-	-	-	-	-	-	-
7.	Baglan - -	-	-	-	-	-	-	-	-	-	-	-
8.	Pimpulnair - -	-	-	-	-	-	-	-	-	-	-	-
9.	Nundoorbar - -	-	-	-	-	-	-	-	-	-	-	-
10.	Sultanpoor - -	-	-	-	-	-	-	-	-	-	-	-
11.	Thalnair - -	-	-	-	-	-	-	-	-	-	-	-
12.	Chupra - -	-	-	-	-	-	-	-	-	-	-	-
	Arawud - -	-	-	-	-	-	-	-	-	-	-	-
13.	Yawul - -	-	-	-	-	-	-	-	-	-	-	-
14.	Sowda - -	-	-	-	-	-	-	-	-	-	-	-
15.	Nusseerabad - -	-	-	-	-	-	-	-	-	-	-	-
	Julgaum - -	-	-	-	-	-	-	-	-	-	-	-
16.	Jamnair - -	-	-	-	-	-	-	-	-	-	-	-
	TOTAL - -	-	-	-	-	-	-	-	-	159 19 2½	159 19 2½	443 12 6

159 candas, 19 maunds, and 2½ seers of cuppas were ginned for natives at the rate of Rs. 3. 8. per candy, but the quantity that was cleaned by the gins let on hire by the month I have not the means of ascertaining.

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Total Amount, including Cotton Ginning, &c. &c.	Amount Expended up to the last Year.	Total Expenditure up to the end of the Half-Year under Report.
		Building and temporary Establishment.	Contingencies.	Amount of Superintendence.	Amount of permanent Establishment.			
		45.	46.	47.	48.			
		49.	50.	51.				
1.	Dhoola - -	-	-	-	-	-	1,760 15 1	1,760 15 1
2.	Amulnair - -	-	5 12 -	-	-	5 12 -	1,979 - 8	1,984 12 8
	Betawud - -	-	-	-	-	-	2,299 2 11	2,299 2 11
3.	Errundole - -	-	-	-	-	-	849 6 11	849 6 11
	Cassoda - -	-	-	-	-	-	438 12 8	438 12 8
	Dhurrungaum - -	-	99 8 8	1,449 - -	1,476 - -	4,049 6 1	103,602 6 5	107,651 12 6
4.	Burgaum - -	-	-	-	-	-	-	-
5.	Chahsagaum - -	-	-	-	-	-	-	-
6.	Mahsagaum - -	-	-	-	-	-	-	-
7.	Baglan - -	-	-	-	-	-	-	-
8.	Pimpulnair - -	-	-	-	-	-	-	-
9.	Nundoorbar - -	-	-	-	-	-	4,161 12 -	4,161 12 -
10.	Sultanpoor - -	-	-	-	-	-	212 15 3	212 15 3
11.	Thalnair - -	-	-	-	-	-	380 9 8	380 9 8
12.	Chupra - -	-	-	-	-	-	15,554 1 5	15,554 1 5
	Arawud - -	-	- 10 -	-	-	- 10 -	2,491 1 11	2,491 1 11
13.	Yawul - -	-	-	-	-	-	4,331 - 8	4,331 - 8
14.	Sowda - -	-	-	-	-	-	35 8 -	35 8 -
15.	Nusseerabad - -	-	-	-	-	-	1,018 2 11	1,018 2 11
	Julgaum - -	-	-	-	-	-	23,156 13 9	23,156 13 9
16.	Jamnair - -	-	-	-	-	-	2,271 - 7	2,271 - 7
	TOTAL - -	-	105 14 8	1,449 - -	1,476 - -	4,055 12 1	164,540 14 10	168,596 10 11

Remarks—Since the date of the half-year's report, ending 31st May 1851, three more gins have been sold to native cotton dealers, and several have bespoken bullock machines for driving their gins. One portable bullock machine has been sent to Mr. Landon at Broach. A permanent bullock machine is in course of erection at Chopra for driving the gins (six in number) at that station, and will, I trust, be completed by the 1st of August next.

Superintendent's Office, Dhurrungaum, 1 June 1852.

(signed) *T. J. Edwards,*
Superintendent Cotton Experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1359

EXTRACT Bombay Revenue Consultations, 23 March 1853.

Recorded the following Memorandum from the Revenue Commissioner, Northern Division, No. 228, dated 26 January 1853, with Enclosures.

III.
Bombay.
No. 3666.

SUBMITTED for the information of Government. Of the four portable cattle-power machines alluded to in the column of remarks, one has been since forwarded to Mr. Frost at Belgaum, and another to Mr. Vary at Sattara for trial.

2. The Revenue Commissioner has received the opinion of Mr. Landon at Broach, on the machine that was sent to him, which is not favourable; and the machine was not accepted by Mr. Landon. The Revenue Commissioner therefore directed the Collector of Broach to send it for trial to Mr. Daley at Surat, and requested the Collector of Khandeish to refrain from despatching any other to Mr. Daley.

3. The Revenue Commissioner is not aware what packing machine is alluded to in the column of remarks, and has therefore requested the Collector to explain.

Revenue Commissioner's Camp,
Kaira Districts, Kupperwung,
26 January 1853.

(signed) E. G. Fawcett,
Revenue Commissioner, N. D.

REPORT from the Superintendent Government Cotton Experiments for the Half-Year ending 30 November 1852.

(No. 48 of 1853.)

No. 3667.

SUBMITTED to the Revenue Commissioner, Northern Division, for the information of Government.

2. The prospects of the cotton crops were detailed in para. 6 of the report on the prospects of the season, submitted from this department, under date the 25th October last, No. 1808.

3. The total expenditure during the period embraced by the report is four thousand and ninety-nine rupees, one anna, and three pies (Rs. 4,099. 1. 3), including the amount expended on the construction of gins and machines, the pay of the superintendent and his permanent establishment, and the contingent expenses.

4. The works completed during the half-year, are enumerated in the column of remarks of the superintendent's report.

Khandeish, Collector's Camp, Saklee,
6 January 1853.

(signed) S. Mansfield,
Collector.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 30 November 1852.

Number.	TALOOKAS.	Stations.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Kuppas in hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Dhoola -	1	- - - - -	-	-	-	-	-	-	-	-
2	Amulnair -	1	- - - - -	-	-	-	-	-	-	-	-
3	Betawud -	1	- - - - -	-	-	-	-	-	-	-	-
	Errundole -	1	- - - - -	-	-	-	-	-	-	-	-
	Casoda -	1	- - - - -	-	-	-	-	-	-	-	-
	Dhurrungaum -	1	- - - - -	-	-	-	-	-	-	-	-
4	Borgaum -	-	- - - - -	-	-	-	-	-	-	-	-
5	Chalisingaum -	-	- - - - -	-	-	-	-	-	-	-	-
6	Mallgaum -	-	- - - - -	-	-	-	-	-	-	-	-
7	Baglan -	-	- - - - -	-	-	-	-	About the whole.	-	About the whole.	About one-fourth.
8	Pimpulnair -	-	- - - - -	-	-	-	-	-	-	-	-
9	Nandoorbar -	1	- - - - -	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	- - - - -	-	-	-	-	-	-	-	-
11	Thulnair -	-	- - - - -	-	-	-	-	-	-	-	-
12	Chopra -	1	- - - - -	-	-	-	-	-	-	-	-
	Arrawud -	1	- - - - -	-	-	-	-	-	-	-	-
13	Yawul -	1	- - - - -	-	-	-	-	-	-	-	-
14	Sowdah -	1	- - - - -	-	-	-	-	-	-	-	-
15	Nusserabad -	1	- - - - -	-	-	-	-	-	-	-	-
	Julgaum -	1	- - - - -	-	-	-	-	-	-	-	-
16	Jamnair -	1	- - - - -	-	-	-	-	-	-	-	-
	TOTAL -	13	- - - - -	-	-	-	-	About the whole	-	About the whole.	About one-fourth.

REPORT of the Cotton Experiments in the Province of Khandeish for the Half Year, ending 30 November 1852—continued.

Number.	TALOOKAS.	GINS AND MACHINES.								Amount expended on construction of Gins and Machines.	
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.		
		13.	14.	15.	16.	17.	18.	19.	20.		21.
1	Dhoolia -	-	-	-	-	-	-	-	-	-	-
2	Amulnair -	-	-	-	-	-	-	-	-	-	-
	Betawud -	-	-	-	-	-	-	-	-	-	-
3	Errundole -	-	-	-	-	-	-	-	-	-	-
	Cassoda -	-	-	-	-	-	-	-	-	-	-
	Dhurrungaum -	-	-	-	-	-	-	-	-	-	1,086 13 6
4	Burgaum -	-	-	-	-	-	-	-	-	-	-
5	Challsaigum -	-	-	-	-	-	-	-	-	-	-
6	Malhsaigum -	-	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair -	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor -	-	-	-	-	-	-	-	-	-	-
11	Thulnair -	-	-	-	-	-	-	-	-	-	-
12	Chopra -	-	-	-	-	-	-	-	-	-	-
	Arrawud -	-	-	-	-	-	-	-	-	-	-
13	Yawul -	-	-	-	-	-	-	-	-	-	-
14	Sowdah -	-	-	-	-	-	-	-	-	-	-
15	Nusserabad -	-	-	-	-	-	-	-	-	-	-
	Julgaum -	-	-	-	-	-	-	-	-	-	-
16	Jamnair -	-	-	-	-	-	-	-	-	-	-
	TOTAL -	-	-	The whole	The whole	7	-	-	-	-	1,086 13 6

1 gin, 4 portable cattle-power machines, 1 permanent cattle-power machine * at Chopra, and 1 packing machine, have been completed.

Number.	TALOOKAS.	Other Items of Expenditure during the Half Year under Report.						Total Amount.	Amount Expended up to the last Half-Year.	Total Expenditure up to the end of Half-Year under Report.
		Purchase and Ginning of Cotton.	Contingen- cies.	Buildings, &c.	Temporary Establishment.	Amount of Superinten- dence.	Amount of Permanent Establish- ment.			
		22.	23.	24.	25.	26.	27.			
1	Dhoolia -	-	9 4 3	-	-	-	-	9 4 3	1,760 15 1	1,770 3 4
2	Amulnair -	-	-	-	-	-	-	-	1,984 12 8	1,984 12 8
	Betawud -	-	-	-	-	-	-	-	2,299 2 11	2,299 2 11
3	Errundole -	-	-	-	-	-	-	-	849 6 11	849 6 11
	Cassoda -	-	4 1 6	-	-	-	-	4 1 6	438 12 8	442 14 2
	Dhurrungaum -	-	56 15 1	-	-	1,449 - -	1,457 5 4	4,050 1 11	107,651 12 6	111,701 14 5
4	Burgaum -	-	-	-	-	-	-	-	-	-
5	Challsaigum -	-	-	-	-	-	-	-	-	-
6	Malhsaigum -	-	-	-	-	-	-	-	-	-
7	Baglan -	-	-	-	-	-	-	-	-	-
8	Pimpulnair -	-	-	-	-	-	-	-	-	-
9	Nundoorbar -	-	-	-	-	-	-	-	4,161 12 -	4,161 12 -
10	Sooltanpoor -	-	-	-	-	-	-	-	212 15 3	212 15 3
11	Thulnair -	-	-	-	-	-	-	-	380 9 8	380 9 8
12	Chopra -	-	9 4 3	-	-	-	-	9 4 3	15,554 1 5	15,563 5 8
	Arrawud -	-	-	-	-	-	-	-	2,491 11 11	2,491 11 11
13	Yawul -	-	12 6 4	-	-	-	-	12 6 4	4,331 - 8	4,343 7 -
14	Sowdah -	-	-	-	-	-	-	-	35 8 -	35 8 -
15	Nusserabad -	-	-	-	-	-	-	-	1,018 2 11	1,018 2 11
	Julgaum -	-	4 0 0	-	-	-	-	4 - -	23,156 13 9	23,160 13 9
16	Jamnair -	-	9 15 0	-	-	-	-	9 15 -	2,271 - 7	2,280 15 7
	TOTAL -	-	105 14 5	-	-	1,449 - -	1,457 5 4	4,099 1 3	168,598 10 11	172,697 12 2

Remarks—During the half-year under report, the following works have been completed:—One gin of 20 saws; four portable cattle-power machines, for Government; one permanent cattle-power machine at Chopra; one packing-machine.

Superintendent's Office, Dhurrungaum, 1 December 1852.

(signed) *George Brenham,*
Head Carpenter,
in charge Government Cotton Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1361

III.
Bombay.

EXTRACT Bombay Revenue Consultations, 9 November 1853.

From the Revenue Commissioner, Northern Division, No. 2916, with Enclosures.

No. 14,303.

SUBMITTED for the information of the Right honourable the Governor in Council.

2. The Superintendent of cotton experiments in Khandeish having given a general summary of the contents of the half-yearly statement in his report, the Revenue Commissioner deems it unnecessary to recapitulate the same.

3. The total cost of experiments during the half-year ending 31st May 1853, was	Rs.	a.	p.
	3,981	1	11
Add amount expended up to the end of last half-year	1,72,697	12	2
Total Expenditure	Rs. 1,76,678	14	-

4. The two bullock-power machines alluded to in para. 4 of collector's letter have already been sanctioned in Government Resolution, No. 4298, dated 26th July 1853, Mr. Laidlaw, the engineer belonging to the firm of Messrs. Ritchie, Steuart & Co., has expressed an opinion that the machine constructed by Mr. Price, including the cost of two gins, was too expensive; the difference between the cost of cleaning with manual labour with two gins and the machine is but trivial in favour of the latter. The difficulty in obtaining labourers in Khandeish being obviated appears to be the principal advantage.

5. In advertence to para. 5 of collector's letter, the Revenue Commissioner considers the instructions he has given for the employment of the establishment judicious, and he sees no objection to dispose of the gins as proposed, provided the purchasers are previously made aware of the circumstance under which they are sold for less than their original cost to Government, to prevent the natives forming a mistaken idea as to the actual cost of constructing a gin.

6. The collector in a subsequent communication has intimated that the predecessor's letters, which he refers to in para. 2 of his letter, are those quoted in the margin,* to which the Revenue Commissioner has added the dates of the Revenue Commissioner's communication to Government with which they were submitted. It is much to be regretted that an opinion that the climate of the province being unsuited to the growth of New Orleans cotton should prevail, if not really well founded; general opinions have been advanced on this point, but the Revenue Commissioner has some doubt whether the best time for sowing this cotton has been properly and fairly tried, as in Coimbatore. He has therefore called for information from the collectors of the cotton districts with reference to Government Resolution, No. 5008, dated the 25th August last, in replying to which he purposes to discuss this point as well as the general question; in the meantime, consideration of the opinions of the collector expressed in present communication may be postponed.

(signed) E. G. Fawcett,
Revenue Commissioner, N.D.

Revenue Commissioner's Office, Poona,
4 October 1853.

(No. 1686 of 1853.)

To E. G. Fawcett, Esq., Revenue Commissioner, Northern Division, Poona.

No. 14,364

Sir,

I HAVE the honour to transmit in original a report, No. 74, dated 2d instant, from the Superintendent of Government Cotton Experiments in this province, accompanied by a statement showing the proceedings of the cotton experimental depôt during the half-year ending 31st May 1853.

2. The decrease in the cultivation of New Orleans cotton for the year 1852-53 compared with that of the preceding year, noticed in the 2d para. of the Superintendent's letter, is mainly attributable to the general impression prevailing in the minds of the ryots of this zillah, as has been from time to time reported to you in my predecessor's letters on the subject, that the soil and climate of the province is not suited to the growth of the species of exotic cotton. As regards Mr. Price's proposition, to establish machinery in the Nundoorbar and Sooltanpoor

* Translates of district officers' reports accompanying Mr. Elphinstone's letter, No. 1935, dated 20th November 1851, forwarded to Government with Revenue Commissioner's Memo., No. 3196, dated 16th December 1851. Para. 6 of Mr. Elphinstone's Weather Report, No. 1808, dated 25th October 1852, communicated in para. 18 of the Revenue Commissioner's letter to Government, No. 3245, dated 11th December 1852.

III.
Bombay.

Sooltanpoor Talookas for the purpose of ginning cotton belonging to the ryots, I beg to observe that the Government cotton experiments date from 1844, and during the last nine years every publicity has been given to the fact of Government having machinery for sale to the ryots; and as the inhabitants of Sooltanpoor and Nundoorbar have shown no desire to become possessed of gins, I see no likelihood of a demand being created by establishing Government gin-houses in those talookas, and therefore cannot recommend the adoption of Mr. Price's proposition.

3. Adverting to the remarks contained in the 3d and 4th paras. of the Superintendent's letter, I beg to observe that Government continue to hold out every encouragement to the cultivating ryots as well as to the cotton dealers of the province. The American cotton seed is given out gratis for sowing every year, and advances of Tuccavee are made to the ryots through the firm of Messrs. Ritchie, Steuart & Co. An expensive establishment is kept up for the construction and repairs of gins which are sold to private merchants at their prime cost, or let on moderate hire, and any further measures taken to encourage the growth of cotton of superior quality and the use of improved machinery I think unnecessary.

4. The construction of two bullock-power machines alluded to in the beginning of the 4th para. of Mr. Price's letter has been recommended in one from me to your address, No. 1489, dated 2d instant.

5. From para. 5 of the Superintendent's letter, and columns 28 and 30 of the statement accompanying it, it will be observed that fifty-nine (59) gins are at present on hand for disposal, and I have therefore, as proposed in the 10th and last para. of the Superintendent's letter, directed him to employ the establishment on the repairs of such gins as require them, and to put a stop to the further construction of new gins until those now in hand have been disposed of; and as many of these gins are likely to remain without use for an indefinite period, I beg to recommend the proposal of Mr. Price, as contained in the 6th para. of his letter, to sell them at reduced prices for the sanction of Government.

6. Paras 8 & 9 of the Superintendent's letter call for no observations.

7. The works performed by the department during the half-year under review have been enumerated under the column of Remarks of the Statement. The results of the working of the bullock-power machine constructed by Mr. Price for Luximon Sett of Dhurumgaum have been brought to your notice in my letter of the 2d instant, No. 1489.

Khandeish Collector's Office, Dhoolia,
19 July 1853.

I have, &c.
(signed) S. Mansfield,
Collector.

(No. 74 of 1853.)

To S. Mansfield, Esq., Collector of Khandeish.

Sir,

In handing up to you my report of the proceedings of this department during the half-year ending 31st May 1853, I have the honour to observe, that compared with those during the corresponding period of the year 1852, they have not been in many respects as favourable.

Cotton cultivation,
Cols. 5 to 12 of
statement.

2. The cultivation of New Orleans and indigenous cotton in 1852 amounted to 12,124 and 2,31,841 beegas, while in 1853 it was 5,363 and 2,37,529 respectively, making the proportion of New Orleans to indigenous of 1 in 19 in the former, and of 1 in 44 in the latter year, and the decrease of New Orleans cultivation considerably less than half in 1853 of what it had been in 1852; a circumstance which it would be extremely desirable to avert, if the cultivation of this exotic has hitherto been steadily on the increase yearly since the commencement of the experiments. It is observable that in Bhurgaum, Nundoorbar, Sooltanpoor, Chopra, and Yawul, the cultivation has always been carried on to a greater extent than in the other talookas, and that the firm have lately had saw-gins working at but three of them, and not at Nundoorbar and Sooltanpoor; and if it still should be their intention not to occupy those talookas, and by so doing thus to withhold exhibiting the advantageous use of superior machinery in them, the benefit in that case had better, I humbly think, be conferred on the ryots and cotton dealers by this department, as it is known that, without having the machine to clean it, the cultivation of New Orleans cotton cannot as a consequence be looked for.

3. To avoid militating against the interest of the firm, the purchase by Government of both the New Orleans and indigenous cottons for the Honourable Court of Directors has since been stopped, a measure at once evincing the intention and object of Government of fostering improvements till they are adopted by the local merchants and other cotton cleaners; but much yet remains to be done towards reclaiming the native merchant from his pernicious mode of preparing cotton for the market, and though a spirit of emulation has no doubt been created in the province, the time, I presume, has not yet arrived when
he

he could with safety be abandoned to his former mode of proceedings. Nor is it safe to diminish the fostering encouragement that had hitherto been given him, but that measures ought still to be taken to lead him to step higher if possible in the scale of improvement by prevailing on him to adopt cheap bullock machines, such as I have just constructed for Luximon Sett of Dhurrumgaum, as native merchants have now become fully sensible of the inexpediency of attempting, by the use of a few hand-gins and the common churka, to compete with the superior machinery used by the firm.

4. The complete success I have met with in my first attempt to construct an iron driving wheel after my return from Ahmedabad, has led me to propose the construction of two on the same principle, on Government account, for sale to private individuals; but if they should for a season remain on Government hands, they might still, with much advantage, be worked for cleaning cotton for the poorer class of merchants who have not the capital to invest in the purchase of machinery of this kind. The Chopra machine could also after it is altered be availed of for the same purpose, and the measure would in some degree induce them to purchase the New Orleans cotton grown in the locality where the machines would be employed, and thus give the ryots some chance of selling their crop; whereas, by the present arrangement, there are places where the endeavours of the ryot to increase his cultivation of this exotic are not met by a corresponding measure of placing gins at the disposal of their local or village merchants. It would therefore be very desirable that where the operations of the firm do not extend, that the native merchant and ryots have all the encouragement hitherto given still conceded to them, and that every mode of either selling and hiring gins to private individuals, or even ginning for them at a remunerating rate, be resorted to, as it is by the adoption of these means alone that the improvement which has been effected can be kept on the increase.

5. The construction of the present batch of 25 gins is being carried out under Government sanction, dated 23d August 1851, of which number five gins were finished up to November 1852, and two constructed during the half-year under report. There are at present 59 gins in the department belonging to Government, and 19 to private individuals in the province, of which the greater portion were at work during the last season, though it is stated that ginned cotton does not fetch a better price in the market than churkaed cotton, and only because the gins turn out the cotton expeditiously, which enables the merchant to avail himself of a rise in the price of the article; the paucity of labourers to work them at a season when employment is rife in the province would operate much against their use were it otherwise, and it is for the removal of this drawback that I have now turned my attention towards the construction of cheap bullock machines for those individuals who have been purchasers of hand-gins from this department.

6. The firm having now set up their own large cattle and steam-power machines, they have returned all the hand-gins they had on hire from this department, in consequence of which there have been a great many of the Government gins unoccupied last season; but this could not be remedied, as the native merchants having made arrangements for the season in advance, endeavours to hire out gins to them proved unsuccessful, which, taking into account the difficulty of getting day labourers, and the falling in price of cotton which had then taken place, I do not look upon as a desire on their part not to use the machines, but that not having made arrangements, they are unable to do so. The original agreement with the firm when hiring out the Government gins to them was, that if they bought the hired gins after the close of their engagement, the amount of hire, which would indicate the wear and tear of them, would be deducted from their cost price; hence I am led to exhibit the following account, by which the price of the gins that had been hired out to the firm is considerably reduced; and, in so doing, I would beg to be instructed whether I can now dispose of them at the rates shown below:

		<i>Rs.</i>	<i>a</i>	<i>p.</i>
Twenty hand-gins at <i>Rs.</i> 140. 4. each	- - - -	2,805	-	-
Amount of hire received for them:				
During engagement	- - - <i>Rs.</i> 1,374 3 4			
Deduct for gin shed	- - - 134 - -			
		1,240	3	4
Total rupees, or <i>Rs.</i> 78. 3. 10. per each gin	- -	1,564	12	8
Thirty-eight hand-gins at <i>Rs.</i> 167 each	- - - -	6,346	-	-
During engagement	- - - <i>Rs.</i> 2,611 - -			
Deduct for gin shed	- - - 259 - -			
		2,352	-	-
Total rupees, or <i>Rs.</i> 105. 1. 8. each gin	- - -	3,994	-	-

7. Of the two gins completed last half-year, one is sold to Gumbeer Rao Sir Canaga of Sowda, but as the price of it is not yet ascertained, arrangements for the deposit in this office in the meanwhile of *Rs.* 150. being entered into, a cattle power machine for Luximon Sett has also been constructed by a portion of the artificers; and as it has turned out to be a most efficient and economical one, it is hoped that it will be the means of inducing other

III.
Bombay.

merchants to follow Luximon Sett's example after it is set up and worked next season in his own premises. To the above work performed for the half-year, I have to add the repairs executed to all the gins belonging to private individuals, which being scattered far and wide in the province, the head blacksmith and a carpenter had constantly to be employed for that purpose.

8. No cotton was ginned for Government last season; the quantity cleaned by the firm and by native merchants must have been large, and approaching nearly to about one-tenth of the entire produce of the province.

9. The expenses of the half-year amount to Rs. 3,981. 1. 10., of which sum Rs. 412. 15. 5., as shown in collection, No. 34, were expended in the construction of saw gins, and Rs. 86. 5. on account of contingent charges, the remainder being for supervision and establishment.

10. Now that there are so many gins that require being put into order before the coming season, it is my object to suspend the construction of the remaining gins of the present batch to employ the artificers of the establishment on the repairs of those that have been returned by the firm up to November next. With these gins, some of which are to be driven by the bullock machines proposed to be constructed and the Chopra one to be altered, I feel sanguine that I shall be able either to dispose of them or get employment, for a great number of them on hire or ginning for private individuals through this department.

Superintendent's Office, Dhurrumgaum,
2 July 1853.

I have, &c.
(signed) T. Price,
Superintendent Cotton Experiments.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-year ending 31 May 1853.

Superintendent's Office, Dhurrumgaon, 1 June 1853.

Number.	NAMES.	Stations.	Prospect of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.								Cotton purchased for Government.	
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.			
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13 to 25.	
				<i>Beeg. p.</i>	<i>Can. lbs.</i>			<i>Beeg. p.</i>	<i>Can. lbs.</i>	<i>Beeg. p.</i>	<i>Can. lbs.</i>		
1	Dhoolia -	1	- - -	155 12½	17 632	- - -	- - -	155 12½	17 632	14,937 6¼	1,413 588	Nil.	
2	Amulnair -	1	- - -	64 6½	1 468	- - -	- - -	64 6½	1 468	20,494 17½	2,500 78	-	
3	Betawud -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	
	Errundole -	-	- - -	544 0½	12 93½	- - -	- - -	544 0½	12 93½	25,713 1¼	3,537 0	-	
	Cassoda -	1	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	
	Dhurrumgaum	1	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	
4	Bburgaum -	-	- - -	632 2½	90 55	- - -	- - -	632 2½	90 55	42,635 9¼	13,258 143	-	
5	Chaleesgaum -	-	- - -	15 17½	3 378½	- - -	- - -	15 17½	3 378½	5,168 13½	906 336½	-	
6	Mulligaum -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -	1,144 3	116 588	-	
7	Baglan -	-	- - -	1 15	0 88	- - -	- - -	1 15	0 88	437 14¼	16 12½	-	
8	Pumpalnair -	-	- - -	45 6	5 592	- - -	- - -	45 6	5 592	1,027 9¼	308 316	-	
9	Nundoorbar	1	- - -	649 7½	77 766	- - -	- - -	649 7½	77 766	13,464 11½	2,293 578	-	
10	Sooltanpoor	-	- - -	315 0	27 510	- - -	- - -	315 0	27 510	4,402 9	553 128	-	
11	Thalnsir -	-	- - -	136 5	4 405½	- - -	- - -	136 5	4 405½	3,712 0	23 290	-	
12	Chopra -	1	- - -	1,157 15	117 272	- - -	- - -	1,157 15	117 272	3,883 8½	2,968 288	-	
	Arrawud	1	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	
13	Yawul -	1	- - -	693 15	51 276	- - -	- - -	693 15	51 276	11,843 5	2,793 528	-	
14	Sowda -	1	- - -	81 11½	14 581	- - -	- - -	81 11½	14 581	11,885 3¾	2,646 758	-	
15	Nusseerabad	1	- - -	466 11¼	13 765	- - -	- - -	466 11¼	13 765	18,000 2½	1,296 11C	-	
	Julgaum	1	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	
16	Jamnair -	1	- - -	409 5	3 597	- - -	- - -	409 5	3 597	47,979 6½	8,866 236	-	
	TOTAL -	12		5,368 10¾	442 207¼	- - -	- - -	5,368 10¾	442 207¼	237,529 1	43,498 389	-	

The yield of the season has been small of both kinds of cotton, though the prospect at first was encouraging. The crops suffered alike throughout the province, which indicates an insufficient fall of rains.

REPORT of the Cotton Experiments in the Province of Khandeish, of the Half-Year ending 31 May 1853.—*continued.*

Number.	NAMES.	G I N S.							Amount Expended in Construction of Gins.	Quantity of Cotton Ginned.	
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.			For what Amount.
		26.	27.	28.	29.	30.	31.	32.	33.	34.	35 to 44.
1	Dhoolia	-	4	-	-	-	-	-	-	-	Nil.
2	Amulnair	-	2	-	-	-	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-	-
3	Errundole	-	1	-	-	-	-	-	-	-	-
	Cassoda	-	-	-	-	-	-	-	-	-	-
	Dhurrungaum	-	2	57	-	2	-	-	-	412 15 5	-
4	Bhurgaum	-	-	-	-	-	-	-	-	-	-
5	Chale-gaum	-	-	-	-	-	-	-	-	-	-
6	Mulligaum	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-
12	Chopra	-	-	-	-	-	-	-	-	-	-
	Arrawud	-	-	-	-	-	-	-	-	-	-
13	Yawul	-	-	-	-	-	-	-	-	-	-
14	Sowda	-	6	-	-	-	-	1	150 4 -	-	-
									deposit.		
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-
	Julgaum	-	4	-	-	-	-	-	-	-	-
16	Jamnair	-	2	-	-	-	-	-	-	-	-
	TOTAL	2	19	57	-	2	-	1	150 4 -	412 15 5	-

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.						Total Expenditure up to the end of the Half-Year under Report.
		Buildings and Temporary Establishments.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.	Total Amount, including Cotton and Ginning, &c.	Amount Expended up to the last Half-Year.	
		45.	46.	47.	48.	49.	50.	
			£. s. d.					
1	Dhoolia	-	-	-	-	-	1,770 3 4	1,770 3 4
2	Amulnair	-	-	-	-	-	1,984 12 8	1,984 12 8
	Betawud	-	-	-	-	-	2,299 2 11	2,299 2 11
3	Errundole	-	-	-	-	-	849 6 11	849 6 11
	Cassoda	-	-	-	-	-	442 14 2	442 14 2
	Dhurrungaum	-	86 5 -	2,010 - -	1,471 13 5	3,981 1 10	111,701 14 5	115,683 - 3
4	Bhurgaum	-	-	-	-	-	-	-
5	Chaleesgaum	-	-	-	-	-	-	-
6	Mulligaum	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	4,161 12 -	4,161 12 -
9	Nundoorbar	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	212 15 3	212 15 3
11	Thalnair	-	-	-	-	-	380 9 8	380 9 8
12	Chopra	-	-	-	-	-	15,563 5 8	15,563 5 8
	Arrawud	-	-	-	-	-	2,491 11 11	2,491 11 11
13	Yawul	-	-	-	-	-	4,343 7 -	4,343 7 -
14	Sowda	-	-	-	-	-	35 8 -	35 8 -
15	Nusseerabad	-	-	-	-	-	1,018 2 11	1,018 2 11
	Julgaum	-	-	-	-	-	23,160 13 9	23,160 13 9
16	Jamnair	-	-	-	-	-	2,280 15 7	2,280 15 7
	TOTAL	-	86 5 -	2,010 - -	1,471 13 5	3,981 1 10	172,697 12 2	176,678 14 -

Remarks.—Two saw-gins completed, one sold, for which a deposit of Rs. 150. 4. is being made. Several gins belonging to private individuals have been repaired at Dhoolia, Dhurrungaum, Sowda, and Moongra, oftener than usual to prevent delay and loss to parties. A bullock machine, composed of an iron driving wheel and pinion, has been constructed by me for Luxmon Sett, at his cost, for Rs. 301. 2. 8. It is quite efficient to work the two gins he possesses.

III.
Bombay.

RESOLUTION.

(No. 14,365.)

THE proposal noticed in para. 5 of Mr. Fawcett's memorandum to sell the gins at less than the cost price approved.

2. The consideration of the points noticed in Mr. Fawcett's concluding para. to be postponed until the receipt of the further communication promised by him.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 26th January 1854.—V. 1287 and 1288.

(No. 3945 of 1853.)

V. 1287. , From the Revenue Commissioner, Northern Division, to Mr. Secretary *Goldsmid*.

1. SUBMITTED to Government.
2. The proceedings reported by the superintendent appear to require no particular comment.

Revenue Commissioner's Office,
Khandeish District, Camp Chickulwall,
30 December 1853.

I have, &c.
(signed) *E. G. Fawcett*,
Revenue Commissioner,
Northern Division.

(No. 2757 of 1853.)

V. 1288. From *S. Mansfield*, Esq., Collector of Khandeish, to *E. G. Fawcett*, Esq. Revenue Commissioner, Northern Division.

Sir,

I HAVE the honour to transmit a report, No. 139, of the 17th instant, from Mr. Price, Superintendent Government Cotton Experiments in this province, accompanied by a statement showing the proceedings of the department for the half-year ending 30th ultimo; and as there is nothing calling for remarks further than those made by Mr. Price, I beg to forward these documents without adding any observations of my own.

Khandeish Collector's Camp, Jamneir,
20 December 1853.

I have, &c.
(signed) *S. Mansfield*,
Collector.

(No. 139 of 1853.)

From Mr. *Thomas Price*, Superintendent Cotton Experiments, to *Samuel Mansfield*, Esq. Collector of Khandeish.

Sir,

* In duplicate. I HAVE the honour to hand up my report* of the proceedings for the half-year ending 30th November 1853, and as the period it embraces is during that part of the year in which there is scarcely any work done, I beg to offer but a few observations on the several heads of which the report is composed.

Cotton, Cols. 5 to 8,
and 9 to 12.

2. There having been no cotton purchased and ginned by this department last year, on account of Government, there is consequently no balance remaining on hand; but I am informed that a large quantity of ginned cotton belonging to native merchants, as also to the firm, had remained on hand at the setting in of the last rains, in consequence of the heavy crop of cotton obtained last season and the deficiency of carriage for its conveyance to the coast.

Gins, Cols. 13 to 21.

3. No gins were in employ during the period under report, as the ginning season had just closed in May last, and no machines have been set agoing up to the 30th November, but preparations for so doing were being vigorously made. *Luximon Sett*'s application to hire the godown in the factory compound, and to set up his bullock machine contiguous to it, being complied with, he has set up his machines, and has arranged to start them in a few days hence; this will afford me an ample opportunity to test the usefulness of the bullock machine constructed by myself, and I shall take occasion to note down the daily expenses and outturn of the same. The three sheltered gins at *Casooda* are also let out on hire, and it is

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1367

is expected they will be so used during the whole of the ginning season. Four new gins have been constructed during the half-year, and several old ones put in perfect order, both belonging to Government and to private individuals, preparatory to their being set up to work for the coming season; and though there have been no applications for the purchase of new gins, two bullock machines have been applied for by parties possessing gins of their own. This would seem to indicate that a different mode to that in present use of working them is eagerly sought after; and if the plan I have adopted should succeed in lessening the expenses of cleaning cotton, there is scarcely a doubt but that it will stimulate the further purchase of gins by the natives. The sum of Rs. 204. 0. 3, shown in column 21, has been expended on the construction of new gins from the Government sanctioned amount of Rs. 4,409. 4. 10., under date the 23d August 1851.

III.
Bombay,

4. Exclusive of the amount noted in the preceding paras., there have been other items of expenditure, viz. Rs. 49. 11. 4. for the contingencies, and Rs. 176. 0. 1. for the repairs of gin sheds, sanctioned by Government under date 6th July 1853 for 210 rupees. These being the expenses, to them are added 1,626 rupees as pay to the establishment, and 2,049 rupees to that of the superintendent, making in the aggregate Rs. 4,104. 11. 8. as expended during the half-year under report.

Cols. 22 to 28.

Superintendent's Office, Dhurrungam,
17 December 1853.

I have, &c.
(signed) T. Price,
Superintendent Cotton Experiments.

SUPERINTENDENT'S REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-Year ending 30th November 1853.

Superintendent's Office, Dhurrungam, 1 December 1853.

Number.	NAMES.	Stations.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Kuppas in hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of Last Year's Crops which has been cleaned on Saw-Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Dhoolia	1									
2	Amulnair	1									
	Betawud	1									
3	Errundole										
	Cassoda	1									
	Dhurrungam	1									
4	Burgaum										
5	Challisgaum										
6	Malligaum										
7	Baglan		The rains were good last year, and so was the crop of cotton, and of all kinds of grain; the yield of each kind was unusually large, and productive of much profit to the cultivating class of the community.								
8	Pimpulnair										
9	Nundoorbar	1									
10	Sooltanpoor										
11	Thalour										
12	Chopra	1									
	Arrawud	1									
13	Yawa	1									
14	Sowdah'	1									
15	Nusseerabad	1									
	Julgaum	1									
16	Jamnair	1									
	TOTAL	13									

REPORT of the Cotton Experiments in the Province of Khandeish, for the Half-year ending 30th Nov. 1853—continued.

Number.	NAMES.	GINS.								Amount Expended on Construction of Gins.
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Doolia	-	-	4	-	-	-	-	-	-
2	Amulnair	-	-	2	-	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-
3	Errandole	-	-	1	-	-	-	-	-	-
	Cassoda	-	-	-	-	-	-	-	-	-
	Durrungaum	-	-	2	59	4	-	-	-	204 3
4	Burgaum	-	-	-	-	-	-	-	-	-
5	Challigam	-	-	-	-	-	-	-	-	-
6	Malligam	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-
12	Chopra	-	-	-	-	-	-	-	-	-
	Arrawud	-	-	-	-	-	-	-	-	-
13	Yawul	-	-	-	-	-	-	-	-	-
14	Sowdah	-	-	6	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-
	Julgaum	-	-	4	-	-	-	-	-	-
16	Jamnair	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	19	59	4	-	-	-	204 3

Number.	NAMES.	Other Item of Expenditure during the Half-Year under Report.						Total Amount.	Amount Expended up to the Last Half-Year.	Total Expenditure up to the end of Half-Year under Report.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	Temporary Establishment.	Amount of Superintendence.	Amount of Establishment.			
		22.	23.	24.	25.	26.	27.			
		28.	29.	30.						
1	Doolia	-	-	-	-	-	-	1,770 3 4	1,770 3 4	
2	Amulnair	-	-	-	-	-	-	1,984 12 8	1,984 12 8	
	Betawud	-	-	-	-	-	-	2,292 2 11	2,292 2 11	
3	Errandole	-	-	-	-	-	-	849 6 11	849 6 11	
	Cassoda	-	49 11 4	176 - 1	-	2,049 - -	1,626 - -	4,104 11 8	442 14 2	
	Durrungaum	-	-	-	-	-	-	115,683 - 3	119,787 11 11	
4	Burgaum	-	-	-	-	-	-	-	-	
5	Challigam	-	-	-	-	-	-	-	-	
6	Malligam	-	-	-	-	-	-	-	-	
7	Baglan	-	-	-	-	-	-	-	-	
8	Pimpulnair	-	-	-	-	-	-	-	-	
9	Nundoorbar	-	-	-	-	-	-	-	-	
10	Sooltanpoor	-	-	-	-	-	-	4,161 12 -	4,161 12 -	
11	Thalnair	-	-	-	-	-	-	212 15 3	212 15 3	
12	Chopra	-	-	-	-	-	-	380 9 8	380 9 8	
	Arrawud	-	-	-	-	-	-	15,563 5 8	15,563 5 8	
13	Yawul	-	-	-	-	-	-	2,491 11 11	2,491 11 11	
14	Sowdah	-	-	-	-	-	-	4,343 7 -	4,343 7 -	
15	Nusseerabad	-	-	-	-	-	-	35 8 -	35 8 -	
	Julgaum	-	-	-	-	-	-	1,018 2 11	1,018 2 11	
16	Jamnair	-	-	-	-	-	-	23,160 13 9	23,160 13 9	
	TOTAL	-	49 11 4	176 - 1	-	2,049 - -	1,626 - -	4,104 11 8	176,678 14 -	180,783 9 8

Remarks.—Two portable cattle-power machines have been constructed during the half-year under report at the cost of private individuals for their own use, which promise much advantage to those employing them; they are simple in their construction, and could be put up in an open yard with very little labour and expense; in short, they appear to be just the kind of machines that will suit the native cotton dealers of the Province. An application for another cattle machine has been received, and steps to supply the individual with one are being taken by the Department.

(signed) T. Price,
Superintendent Cotton Experiment.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1369

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 16 October 1854.—V. 9978 and 9979.

(No. 2138 of 1854.)

V. 9978.

From the Revenue Commissioner, Northern Division, to Mr. Officiating Chief Secretary
Goldsmid.

SUBMITTED for the information of Government. The proceedings reported in these papers call for no particular remark.

2. The communication referred to in para. 5 of Mr. Neave's letter is one written by this Department to the Collector of Khandeish, approving of his having complied with the request of Captain Rose, Bheel Agent at Kunhur, to be supplied with a 20-saw gin, as that officer was making a trial of the New Orleans among the Bheels of his agency, and no doubt he will notice the result in his next report on the agency.

Revenue Commissioner's Office,
Poona, 4 September 1854.

(signed) *E. G. Fawcett,*
Revenue Commissioner, N. D.

(No. 1366 of 1854.)

V. 9979.

From *E. D. Neave, Esq.,* Second Assistant Collector in Charge, Khandeish, to
E. G. Fawcett, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

IN the absence of the Collector on leave, I do myself the honour to transmit the half-yearly report from the Superintendent of Cotton Experiments in this province, ending 31st May 1854.

2. Columns 5 to 12 inclusive of the report exhibit the extent of cultivation of the different varieties of cotton and the estimated yield of each in candies of 784 lbs.

3. From columns 13 to 25 it will be observed, that no cotton of any description whatever was purchased on account of Government during the half-year under review.

4. The four (4) gins in column 26, stated to have been in use, were, it must be concluded, let out on hire to private cotton dealers, as columns 35 to 44 show that no cotton was ginned either for Government or for private individuals.

5. There were 17 gins in use in the province, belonging to private individuals (col. 27). The foot note on column 28 has reference to the correspondence ending in your letter, No. 2946, dated 6th October 1853.

6. Columns 29 to 33 call for no remark. The total expenditure during the period under review, including the pay of the Superintendent and his permanent establishment (cols. 34 and 45 to 48) amounts to three thousand seven hundred and thirty rupees ten annas and four pice (*Rs.* 3,730. 10. 4.), and the total expenditure from the commencement of the experiments up to the end of the half-year under report is one lac and eighty-four thousand five hundred and fourteen rupees and four annas. (*Rs.* 1,84,514. 4.)

7. For further information, I beg to refer you to the column of remarks in the report forwarded.

Khandeish Collector's Office,
Dhoolia, 12 August 1854.

I have, &c.
(signed) *Digby Neave,*
Second Assistant Collector
in Charge.

SUPERINTENDENT'S REPORT on the Cotton Experiments in the Province of Khandeish for the Half-year ending 31 May 1854.

Superintendent's Office, Durrungaum, 1 June 1854.

1.	2.	3.	Prospects of the Season and State of the Crops as regards each Sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.								Cotton Purchased for Government.	
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.			
				Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.		
				5.	6.	7.	8.	9.	10.	11.	12.		
				<i>Beeg. p.</i>	<i>Can. lbs.</i>	<i>Beeg. p.</i>	<i>Can. lbs.</i>	<i>Beeg. p.</i>	<i>Can. lbs.</i>	<i>Beeg. p.</i>	<i>Can. lbs.</i>		
1	Dhooha	1	The yield of the season was expected to fall short of the usual quantity, and so it turned out to be, from the latter rains being insufficient to reanimate the different crops after the long drought experienced last season.	51 1½	2 112	-	-	51 1½	2 112	17,870 17	2,173 328	Nil.	
2	Amulnair	-		-	-	-	-	-	-	-	21,930 15	5,518 416	-
3	Betawud	-		-	-	-	-	-	-	-	-	-	-
3	Errundole	-		-	74 15½	0 150	-	-	74 15½	0 150	24,520 7	1,876 431	7
3	Cassoda	1		-	-	-	-	-	-	-	-	-	-
	Dhurrungaum	1		-	-	-	-	-	-	-	-	-	-
4	Burgaum	-		-	-	-	-	-	-	-	49,336 8	3,773 453	-
5	Challisgaum	-		-	75 5	8 715	-	-	75 5	8 715	8,452 13	967 213	-
6	Malligaum	-		-	-	-	-	-	-	-	2,203 7½	224 624	-
7	Baglan	-		-	-	-	-	-	-	-	537 18½	20 460	-
8	Pimpulnair	-		-	24 5	0 656	-	-	24 5	0 656	1,947 16½	88 735	-
9	Nundoorbar	-		-	199 17½	33 594	-	-	199 17½	33 594	11,805 5½	2,796 138	-
10	Sooltanpoor	-		-	30 4	2 555	-	-	30 4	2 555	379 8½	706 414	-
11	Thalnair	-		-	-	-	-	-	-	-	3,704 12½	777 326	-
12	Chopra	1		-	53 5½	1 0	-	-	53 5½	1 0	14,044 7½	2,260 64	-
	Arawud	1		-	-	-	-	-	-	-	-	-	-
13	Yawul	1	-	896 16½	40 304½	-	-	896 16½	40 304½	12,203 5½	2,296 114	-	
14	Sowdah	-	-	-	-	-	-	-	-	10,552 7½	2,080 240	-	
15	Nusseerabad	1	-	185 2	1 0	-	-	185 2	1 0	16,106 6½	1,747 588	-	
	Julgaum	1	-	-	-	-	-	-	-	-	-	-	
16	Jamnair	-	-	258 10	5 84	-	-	258 10	5 84	52,437 5	5,466 432	-	
	TOTAL	10	-	1,349 2½	96 34½	-	-	1,349 2½	96 34½	2,48,032 18½	32,774 488	-	

Number.	NAMES.	GINS (S MACHINE).							Amount Expended on Construction of Gins.	Quantity of Cotton Ginned.	
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	Number.			For what Amount.
		26.	27.	28.	29.	30.	31.	32.			33.
1	Dhooha	-	4	-	-	-	-	-	-	-	Nil.
2	Amulnair	-	2	5	-	-	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-	-
3	Errundole	-	1	-	-	-	-	-	-	-	-
	Cassoda	-	-	3	-	-	-	-	-	-	-
	Dhurrungaum	-	2	18*	-	1	-	-	-	187 2 1†	-
4	Burgaum	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-
12	Chopra	-	-	11	-	-	-	-	-	-	-
	Arawud	-	-	3	-	-	-	-	-	-	-
13	Yawul	-	-	10	-	-	-	-	-	-	-
14	Sowdah	-	4	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	2	-	-	-	-	-	-	-
	Julgaum	-	4	-	-	-	-	-	-	-	-
16	Jamnair	4	-	14	-	-	-	-	-	-	-
	TOTAL	4	17	66	-	1	-	-	-	187 2 1	-

* One sent to Kunhur, by order of Collector.

† Gins - - - - 3 11 3
Chopra machine - - - - 123 6 10
187 2 1

REPORT on the Cotton Experiments in the Province of Khandeish, for the Half-year ending 31 May 1854—continued.

Numbers.	NAMES.	Other Items of Expenditure during the Half-year under Report.				Total Amount including Cotton and Ginning, &c.	Amount Expended up to the last Half-year.	Total Expenditure up to the End of the Half-year under Report.
		Building and Temporary Establishment.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
		45.	46.	47.	48.	49.	50.	51.
1	Dhoolia	- - -	- - -	- - -	- - -	- - -	1,770 3 4	1,770 3 4
2	Amulnair	- - -	- - -	- - -	- - -	- - -	1,984 12 8	1,984 12 8
	Betawud	- - -	- - -	- - -	- - -	- - -	2,299 2 11	2,299 2 11
3	Errundole	- - -	- - -	- - -	- - -	- - -	849 6 11	849 6 11
	Cassoda	- - -	- - -	- - -	- - -	- - -	442 14 2	442 14 2
	Dhurrungam	5 9 -	50 4 6	2,046 - -	1,441 10 9	3,730 10 4	1,19,787 11 11	1,23,518 6 3
4	Burgaum	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-
9	Nundoorbar	- - -	- - -	- - -	- - -	- - -	4,161 12 -	4,161 12 -
10	Sooltanpoor	- - -	- - -	- - -	- - -	- - -	212 15 3	212 15 3
11	Thalnair	- - -	- - -	- - -	- - -	- - -	380 9 8	380 9 8
12	Chopra	- - -	- - -	- - -	- - -	- - -	15,563 5 8	15,563 5 8
	Arawud	- - -	- - -	- - -	- - -	- - -	2,491 11 11	2,491 11 11
13	Yawul	- - -	- - -	- - -	- - -	- - -	4,343 7 -	4,343 7 -
14	Sowdah	- - -	- - -	- - -	- - -	- - -	35 8 -	35 8 -
15	Nusseerabad	- - -	- - -	- - -	- - -	- - -	1,018 2 11	1,018 2 11
	Julgaum	- - -	- - -	- - -	- - -	- - -	23,160 13 9	23,160 13 9
16	Jamnair	- - -	- - -	- - -	- - -	- - -	2,280 15 7	2,280 15 7
	TOTAL	5 9 -	50 4 6	2,016 - -	1,441 10 9	3,730 10 4	1,80,783 9 8	1,84,514 4 -

Remarks.—In addition to one bullock machine, constructed for Sham Rao Ramchunder, at his private cost, the repairs to the Chopra machine belonging to Government were being executed, and which at the close of the report were nearly completed. One new gin has been added to the stock of gins in this department, and 13 gins repaired for private individuals.
Rs. 472. 14. 6. have been realised by the hire of saw-gins and sale of gin-saws; 80 rupees of which amount were paid by Mr. Maize from the deposit made by him of 254 rupees.

Ordered, That the above documents be recorded.

(signed) T. Price,
Superintendent Cotton Experiments.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 3d March 1855.—(V. 1697 and 1698.)

(No. 185 of 1855.)

From the Revenue Commissioner, Northern Division, to the Secretary to Government.

V. 1697.

SUBMITTED to Government.

2. The Collector was requested to report, with reference to column 15 of the statement, why new gins were continued to be made when there were so many (69) out of use. He has stated in reply, that the "five gins and six flues, constructed during the half-year ending 30th November last, by the establishment of the Government factory, at Dhurrungam, are a portion of the last batch of twenty-five (25) gins sanctioned by Government in their letter, No. 8449, of 23d August 1851; and of this batch there remain five (5) gins, nineteen (19) fly wheels, and nineteen (19) frames yet to be constructed; and if their construction is discontinued, the establishment will have comparatively little or nothing to do during the greater part of the year; and I therefore request the favour of your instructions on this point."

296—Sess. 2.

8 s 2

3. The

III.
Bombay.

3. The Revenue Commissioner has called the attention of the Collector to the opinion expressed by him as to the way the establishment should be employed; and has requested his opinion whether the present establishment could not be reduced, and only such number of hands retained as can be profitably employed. The result will be laid before Government in due course.*

Revenue Commissioner's Office, Poona,
26 January 1855.

(signed) *E. G. Fawcett*,
Revenue Commissioner, N. D.

(No. 2147 of 1854.)

V. 1968.

From *S. Mansfield*, Esq., Collector of Khandeish, to *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

I do myself the honour to transmit the half-yearly Report of the Government factory of Dhurrungaum, ending 30th November 1854, forwarded by Mr. G. Brenham, in charge of the factory.

2. The work performed during the half-year by the establishment employed in this factory, has been stated in the column of remarks of the Report under review, and does not require any comment from me.

Khandeish Collector's Camp, Bodwur,
27 December 1854.

I have, &c.
(signed) *S. Mansfield*,
Collector.

HALF-YEARLY REPORT of the Government Factory at Dhurrungaum, ending 30 November 1854.

Government Factory, 1 December 1854.

Number.	NAMES.	Stations.	Remarks on the past Season, as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cuppas in hand on Account of Government, of each sort, Ginned or not Ginned.				Supposed Proportion of last Year's Crop which has been cleaned on Saw Gins, or will be cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1	Dhoolia	1	- - - - -	-	-	-	-	-	-	-	-
2	Amulnair	1	- - - - -	-	-	-	-	-	-	-	-
	Betawud	-	- - - - -	-	-	-	-	-	-	-	-
3	Errundole	-	- - - - -	-	-	-	-	-	-	-	-
	Cassoda	1	- - - - -	-	-	-	-	-	-	-	-
	Dhurrungaum	1	- - - - -	-	-	-	-	-	-	-	-
4	Burgaum	-	- - - - -	-	-	-	-	-	-	-	-
5	Challisgaum	-	- - - - -	-	-	-	-	-	-	-	-
6	Malligaum	-	- - - - -	-	-	-	-	-	-	-	-
	Baglan	-	- - - - -	-	-	-	-	-	-	-	-
8	Pimpulnair	-	- - - - -	-	-	-	-	-	-	-	-
9	Nundoorbar	1	- - - - -	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	- - - - -	-	-	-	-	-	-	-	-
11	Thalnair	-	- - - - -	-	-	-	-	-	-	-	-
12	Chopra	1	- - - - -	-	-	-	-	-	-	-	-
	Arrawud	1	- - - - -	-	-	-	-	-	-	-	-
13	Yawul	1	- - - - -	-	-	-	-	-	-	-	-
14	Sowdah	1	- - - - -	-	-	-	-	-	-	-	-
15	Nusseerabad	1	- - - - -	-	-	-	-	-	-	-	-
	Julgaum	1	- - - - -	-	-	-	-	-	-	-	-
16	Jamnair	1	- - - - -	-	-	-	-	-	-	-	-
	TOTAL	-	- - - - -	-	-	-	-	-	-	-	-

* Khandeish Collector's reply to Question No. 12, forwarded with the Revenue Commissioner's memorandum, No. 1787, of 22 July 1854.

HALF-YEARLY REPORT of the Government Factory of Dhurrungaum, ending 30 November 1854—continued.

Number.	NAMES.	G I N S.							Amount Expended on Construction of Gins.	
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.		For what Amount.
		13.	14.	15.	16.	17.	18.	19.	20.	21.
1	Dhoola	-	-	-	4	-	-	-	-	-
2	Amalnair	-	-	5	2	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-
3	Errundole	-	-	-	1	-	-	-	-	-
	Cassoda	-	-	3	-	-	-	-	-	-
	Dhurrungaum	-	-	19	2	5	-	-	-	* 99 4 3
4	Burgaum	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-
8	Pimpalnair	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-
12	Chopra -	-	-	11	-	-	-	-	-	-
	Arrawud	-	-	3	-	-	-	-	-	-
13	Yawul	-	-	10	-	-	-	-	-	-
14	Sowdah	-	-	-	4	-	-	-	-	-
15	Nuseerabad	-	-	2	-	-	-	-	-	-
	Julgaum	-	-	-	4	-	-	-	-	-
16	Jamnair	-	-	16	-	-	-	-	-	-
	TOTAL	-	-	69	17	5	-	-	-	99 4 3

Number.	NAMES.	Other Items of Expenditure during the Month under Report.						Total Amount.	Amount Expended up to the last Half-Year.	Total Expenditure up to the end of Half-Year under Report.
		Purchase and Ginning of Cotton.	Con-tingencies.	Buildings.	Temporary Establish-ment.	Amount of Super-intendence.	Amount of Establish-ment.			
		22.	23.	24.	25.	26.	27.			
1	Dhoola	-	-	-	-	-	-	1,770 3 4	1,770 3 8	
2	Amalnair	-	-	-	-	-	-	1,984 12 8	1,984 12 8	
	Betawud	-	-	-	-	-	-	2,299 2 11	2,299 2 11	
3	Errundole	-	-	-	-	-	-	849 6 11	849 6 11	
	Cassoda	-	-	-	-	-	-	442 14 2	442 14 2	
	Dhurrungaum	-	13 2	169 8 8	-	1,410 4 2	1,410 - -	3,102 3 1	1,23,518 6 3	
4	Burgaum	-	-	-	-	-	-	-	-	
5	Challisgaum	-	-	-	-	-	-	-	-	
6	Malligaum	-	-	-	-	-	-	-	-	
7	Baglan	-	-	-	-	-	-	-	-	
8	Pimpalnair	-	-	-	-	-	-	-	-	
9	Nundoorbar	-	-	-	-	-	-	4,161 12 -	4,161 12 -	
10	Sooltanpoor	-	-	-	-	-	-	212 15 3	212 15 3	
11	Thalnair	-	-	-	-	-	-	380 9 8	380 9 8	
12	Chopra -	-	-	-	-	-	-	15,563 5 8	15,563 5 8	
	Arrawud	-	-	-	-	-	-	2,491 11 11	2,491 11 11	
13	Yawul	-	-	-	-	-	-	4,343 7 -	4,343 7 -	
14	Sowdah	-	-	-	-	-	-	35 8 -	35 8 -	
15	Nuseerabad	-	-	-	-	-	-	1,018 2 11	1,018 2 11	
	Julgaum	-	-	-	-	-	-	23,160 13 9	23,160 13 9	
16	Jamnair	-	-	-	-	-	-	2,280 15 7	2,280 15 7	
	TOTAL	-	13 2	169 8 8	-	1,410 4 2	1,410 - -	3,102 3 1	1,84,514 4 -	

* Gins - - - - - 68 8 5
 Chopra machine - - - - - 30 11 10
 99 4 3

Remarks.—The Chopra cattle power machine on account of Government has been completed, and nearly fitted up; also, five new gins and six flues were completed, and one old gin thoroughly repaired during the half-year under report.

G. Brenham,
 Head Carpenter in Charge, Government Factory.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 22 August 1855.—V. 7481 and 7482.

(No. 2772 of 1855.)

V. 7481. From the Revenue Commissioner, Northern Division, to the Secretary to Government.

SUBMITTED to Government.

2. The expenditure during the period reported on, on account of the factory, is less than that for the half-year ending 30th November 1854, by Rs. 4. 6. 1; viz.—

		Rs.	a.	p.
* Cols. 21, 22, and 27.	Half-year ending 30th November 1854	-	-	-
† Cols. 34, 46, and 48.	Ditto - ditto - 31st May 1855	-	-	-
		Rs.	4	6
			1	

3. From columns 26 and 28 it will be seen that there were five Government gins in use, and 67 out of use.

4. With reference to the Collector's 5th paragraph, I beg to refer to my memorandum of this date, No. 2771.

(signed) *E. G. Fawcett,*

Revenue Commissioner, Northern Division.

Revenue Commissioner's Office, Poona,
13 August 1855.

(No. 1302 of 1855.)

V. 7482. From *S. Mansfield*, Esq., Collector of Khandeish, to *E. G. Fawcett*, Esq., Revenue Commissioner, Northern Division, Poona.

Sir,

I do myself the honour to transmit the half-yearly report of the Government factory at Dhurrumgaum, ending 31st May 1855, forwarded by Mr. G. Brenham, in charge of the factory.

2. Columns 5 to 25 call for no remark.

3. There were five gins in use belonging to Government, and 17 to private individuals in the province (columns 26 and 27).

4. The total expenditure during the period under review, including the pay of the head carpenter in charge, and his permanent establishment (columns 34-46, and 48), amounts to one thousand five hundred and eighteen rupees and two pies (Rs. 1,518. 0. 2.); and column 51 exhibits the total expenditure from the commencement of the experiments up to the end of the half-year under report, to be one lac eighty-nine thousand one hundred and thirty-four rupees seven annas and three pies. (Rs. 1,89,134. 7. 3.)

5. As there is no work to employ the establishment I have recommended it to be reduced, and beg to refer you to my letter of this day's date, No. 1301, for the particulars.

6. For further information I beg to refer you to the column of remarks in the report forwarded.

I have, &c.

(signed) *S. Mansfield,*
Collector.

Khandeish, Collector's Office, Dhoolia,
30 July 1855.

HALF-YEARLY REPORT of the Government Cotton Factory at Dhurrungaum, ending 31 May 1855.

Government Factory, Dhurrungaum, 1 June 1855.

No.	NAMES.	Stations.	Prospects of the Season, and State of the Crops, as regard to each sort of Cotton.	EXTENT IN BEEGAS OF COTTON CULTIVATION.								Cotton Purchased for Govern- ment.	
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY COTTON.			
				Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.	Extent in Beegas.	Estimated Produce in Candies.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13 to 25.	
1	Dhoolia	1	- - - -	-	-	-	-	-	-	-	-	-	Nil.
2	Amulnair Betawud	1	- - - -	-	-	-	-	-	-	-	-	-	-
3	Errundole Cassoda Dhurrungaum	1	- - - -	-	-	-	-	-	-	-	-	-	-
4	Burgaum	-	- - - -	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	- - - -	-	-	-	-	-	-	-	-	-	-
6	Malligaum	-	The yield of the season is said to be very large, but owing to the unusual fall of rain, the crop has been very much damaged, and sold at a very reduced price.	-	-	-	-	-	-	-	-	-	-
7	Baglan	-		-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-		-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-		-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-		-	-	-	-	-	-	-	-	-	-
11	Thalnair	-		-	-	-	-	-	-	-	-	-	-
12	Chopra Arrawad	1	- - - -	-	-	-	-	-	-	-	-	-	-
13	Yawul	1	- - - -	-	-	-	-	-	-	-	-	-	-
14	Sowda	1	- - - -	-	-	-	-	-	-	-	-	-	-
15	Nusseerabad Julgaum	1	- - - -	-	-	-	-	-	-	-	-	-	-
16	Jamnair	1	- - - -	-	-	-	-	-	-	-	-	-	-
	TOTAL	10	- - - -	-	-	-	-	-	-	-	-	-	-

No.	NAMES.	G I N S.								Amount Expended on Construction of Gins, &c.	Quantity of Cotton Ginned.
		In Use.		Out of Use.		Completed.		Sold for Government.			
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.		
		26.	27.	28.	29.	30.	31.	32.*	33.	34.	35 to 44.
1	Dhoolia	-	4	-	-	-	-	-	-	-	Nil.
2	Amulnair Betawud	-	2	5	-	-	-	-	-	-	-
3	Errundole Cassoda Dhurrungaum	2	1	1	-	1	-	-	-	71 10 11	-
4	Burgaum	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-
12	Chopra Arrawad	-	-	11	-	-	-	-	-	-	-
		-	-	3	-	-	-	-	-	-	-
13	Yawul	-	-	10	-	-	-	-	-	-	-
14	Sowda	-	4	-	-	-	-	-	-	-	-
15	Nusseerabad Julgaum	-	4	2	-	-	-	-	-	-	-
16	Jamnair	2	-	16	-	-	-	-	-	-	-
	TOTAL	5	17	67	-	1	-	-	-	71 10 11	-

HALF-YEARLY REPORT of the Government Cotton Factory at Dhurrungaum, ending 31 May 1855—*continued.*

No.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				Total Amount, including Cotton Ginning, &c.	Amount Expended up to the 1st Half-Year.	Total Expenditure up to the end of Half-Year under Report.
		Building and Temporary Establishment.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
		45.	46.	47.	48.			
1	Dhoolia	-	-	-	-	-	1,770 3 4	1,770 3 4
2	Amulnair	-	-	-	-	-	1,984 12 8	1,984 12 8
	Betawud	-	-	-	-	-	2,299 2 11	2,299 2 11
3	Errondole	-	-	-	-	-	849 6 11	849 6 11
	Cassoda	-	-	-	-	-	442 14 2	442 14 2
	Dhurrungaum	-	40 13 3	-	1,405 8 -	1,518 - 2	1,26,620 9 4	1,28,138 9 6
4	Burgam	-	-	-	-	-	-	-
5	Challsgaum	-	-	-	-	-	-	-
6	Malligam	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-
9	Murdoorbor	-	-	-	-	-	4,161 12 -	4,161 12 -
10	Sootanpoor	-	-	-	-	-	212 15 3	212 15 3
11	Thalnair	-	-	-	-	-	380 9 8	380 9 8
12	Chopra	-	-	-	-	-	15,563 5 8	15,563 5 8
	Arrawad	-	-	-	-	-	2,491 11 11	2,491 11 11
13	Yawul	-	-	-	-	-	4,343 7 -	4,343 7 -
14	Sowda	-	-	-	-	-	35 8 -	35 8 -
15	Nusseerabad	-	-	-	-	-	1,018 2 11	1,018 2 11
	Jalgaum	-	-	-	-	-	23,160 13 9	23,160 13 9
16	Jamnair	-	-	-	-	-	2,280 15 7	2,280 15 7
	TOTAL	-	40 13 3	-	1,405 8 -	1,518 - 2	1,87,616 7 1	1,89,134 7 3

Remarks.—In addition to the Chopra cattle power-machine being fitted up, one new gin, eight fly-wheels, and four frames were completed, seven gins were thoroughly repaired, as also a cattle power-machine belonging to Luximon Sett, of Dhurrungaum, was slightly repaired.

G. Brenham,

Head Carpenter in Charge Government Factory.

HALF YEARLY REPORT of the Government Factory at Dhurrungaum, ending 30 November 1855.

Government Factory, 1 December 1855.

No.	NAMES.	Station.	Remarks on the past Season, as to how far Anticipations regarding the Crop and its Disposal were realised.	Quantity of Cuppas on hand on Account of Government of each sort, Ginned and not Ginned.				Supposed Proportion of last Year's Crops which has been Cleaned on Saw Gins or will be Cleaned.			
				New Orleans.	Broach.	Total.	Country.	New Orleans.	Broach.	Total.	Country.
				1	Dhoolia	-	-	-	-	-	-
2	Amulnair	1	-	-	-	-	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-	-
3	Errundole	-	-	-	-	-	-	-	-	-	-
	Cassoda	1	-	-	-	-	-	-	-	-	-
	Dhurrungaum	1	-	-	-	-	-	-	-	-	-
4	Bhurgam	-	-	-	-	-	-	-	-	-	-
5	Challsgaum	-	-	-	-	-	-	-	-	-	-
6	Malligam	-	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-
10	Sootanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-
12	Chopra	1	-	-	-	-	-	-	-	-	-
	Arrawud	1	-	-	-	-	-	-	-	-	-
13	Yawul	1	-	-	-	-	-	-	-	-	-
14	Sowdah	-	-	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-
	Jalgaum	-	-	-	-	-	-	-	-	-	-
16	Jamnair	1	-	-	-	-	-	-	-	-	-
	TOTAL	*8	-	-	-	-	-	-	-	-	-

* So. o.

This department is not in possession of any document to show the quantity of cotton ginned by the firm, but it is supposed that about one-fourth of the entire produce of the province was cleaned by the saw-gins, and despatched to Bombay.

TO PROMOTE THE CULTIVATION OF COTTON IN IN

HALF YEARLY REPORT of the Government Factory at Dhurrumgaum, ending 30 November

No.	NAMES.	G I N S.							Amount Expended on Construction of Gins.	
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.		For what Amount.
1	Dhoolia	-	-	-	4	-	-	-	-	-
2	Amulnair	-	-	5	2	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-
3	Errundole	-	-	-	1	-	-	-	-	-
	Cassoda	-	-	3	-	-	-	-	-	-
	Dhurrumgaum	-	-	20	2	2	-	-	-	40 3 -
4	Bhurgaum	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-
12	Chopra	-	-	11	-	-	-	-	-	-
	Arwad	-	-	3	-	-	-	-	-	-
13	Yawul	-	-	10	-	-	-	-	-	-
14	Sowdah	-	-	-	4	-	-	-	-	-
15	Nusseerabad	-	-	2	-	-	-	-	-	-
	Julgaum	-	-	-	4	-	-	-	-	-
16	Jamnair	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	70	17	2	-	-	-	40 3 -

No.	NAMES.	Other Items of Expenditure during the Months under Report.					Total Amount.	Amount Expended up to the last Half-Year.	Total Expenditure to the end of Half-Year under Report.
		Purchase and Ginning of Cotton.	Contingencies.	Buildings.	Temporary Establish-ment.	Amount of Superinten-dence.			
1	Dhoolia	-	-	-	-	-	-	1,770 3 4	1,770 3 4
2	Amulnair	-	-	-	-	-	-	1,984 12 8	1,984 12 8
	Betawud	-	-	-	-	-	-	2,299 2 11	2,299 2 11
3	Errundole	-	-	-	-	-	-	849 6 11	849 6 11
	Cassoda	-	-	-	-	-	-	442 14 2	442 14 2
	Dhurrumgaum	-	30 13 2	-	-	-	1,044 - 11	1,115 1 1	1,28,138 9 6
4	Bhurgaum	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	4,161 12 -	4,161 12 -
10	Sooltanpoor	-	-	-	-	-	-	212 15 3	212 15 3
11	Thalnair	-	-	-	-	-	-	380 9 8	380 9 8
12	Chopra	-	-	-	-	-	-	15,563 5 8	15,563 5 8
	Arwad	-	-	-	-	-	-	2,491 11 11	2,491 11 11
13	Yawul	-	-	-	-	-	-	4,343 7 -	4,343 7 -
14	Sowdah	-	-	-	-	-	-	35 8 -	35 8 -
15	Nusseerabad	-	-	-	-	-	-	1,018 2 11	1,018 2 11
	Julgaum	-	-	-	-	-	-	23,160 13 9	23,160 13 9
16	Jamnair	-	-	-	-	-	-	2,280 15 7	2,280 15 7
	TOTAL	-	30 13 2	-	-	-	1,044 - 11	1,115 1 1	1,89,134 7 3

Remarks.—During the half-year under report two new gins have been completed, and five old Government gins thoroughly repaired. A new upright shaft of Babool wood, 11 feet long by 12 ½ inches square, has been made for the cattle-power machine belonging to Luximondass Wittuldass, cotton dealer, and the spokes, &c. fitted on, and set up in working order at a cost of Rs. 13. 10. 11. An application for the purchase of one gin received, and submitted for the sanction of the Collector of Khandeish.

Geo. Brenham,
Overseer in charge Government Factory.

HALF-YEARLY Report of the Government Cotton Factory at Dhurrungaum, ending 31 May 1856.

Government Factory, Dhurrungaum, 1 June 1856.

Number.	NAMES.	Station.	Prospects of the Season, and State of the Crops, as regards each sort of Cotton.	EXTENT IN BEEGAHS OF COTTON CULTIVATION.								Cotton purchased for Government.		
				NEW ORLEANS.		BROACH.		TOTAL.		COUNTRY.				
				Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.	Extent in Beegahs.	Estimated Produce in Candies.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13 to 25.		
1	Dhoolia	-	-	-	-	-	-	-	-	-	-	-	Nil.	
2	Amulnair	1	-	-	-	-	-	-	-	-	-	-	-	
	Betawud	-	-	-	-	-	-	-	-	-	-	-	-	
3	Errundole	-	-	-	-	-	-	-	-	-	-	-	-	
	Cassoda	1	-	-	-	-	-	-	-	-	-	-	-	
	Dhurrungaum	1	-	-	-	-	-	-	-	-	-	-	-	
4	Bhurgaum	-	The produce of the cultivation of cotton has in this year, it is said, been much smaller than the last, owing to the deficiency of rain during the monsoon, which was generally felt throughout the province.	-	-	-	-	-	-	-	-	-	-	
	Parrola	1		-	-	-	-	-	-	-	-	-	-	-
5	Challisgaum	-		-	-	-	-	-	-	-	-	-	-	-
6	Malligaum	-		-	-	-	-	-	-	-	-	-	-	-
7	Baglan	-		-	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-		-	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-		-	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-		-	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-		-	-	-	-	-	-	-	-	-	-	-
12	Chopra -	1		-	-	-	-	-	-	-	-	-	-	-
	Arrawud	1		-	-	-	-	-	-	-	-	-	-	-
13	Yawul -	1		-	-	-	-	-	-	-	-	-	-	-
14	Sowdah	-		-	-	-	-	-	-	-	-	-	-	-
15	Nusseerabad	-		-	-	-	-	-	-	-	-	-	-	-
	Julgaum	1		-	-	-	-	-	-	-	-	-	-	-
16	Jamnair	1		-	-	-	-	-	-	-	-	-	-	-
	TOTAL	9	-	-	-	-	-	-	-	-	-	-	-	

Number.	NAMES.	G I N S.								Amount Expended on Construction of Gins and Machines.
		In Use.		Out of Use.		Completed.		Sold for Government.		
		Belonging to Government.	Belonging to Private Individuals.	Belonging to Government.	Belonging to Private Individuals.	For Government.	For Private Individuals.	Number.	For what Amount.	
		26.	27.	28.	29.	30.	31.	32.	33.	34.
1	Dhoolia	-	-	-	-	-	-	-	-	-
2	Amulnair	-	-	-	-	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-
3	Errundole	-	-	-	-	-	-	-	-	-
	Cassoda	-	-	-	-	-	-	-	-	-
	Dhurrungaum	-	-	-	-	-	-	1 old gin of 20 saws.	78 3 10	-
4	Bhurgaum	-	-	-	-	-	-	2 old gins of 20 saws each.	156 7 8	-
	Parrola	-	-	-	-	-	-	-	-	-
5	Challisgaum	-	-	-	-	-	-	-	-	-
6	Malligaum	-	-	-	-	-	-	-	-	-
7	Baglan	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-
12	Chopra -	-	-	-	-	-	-	-	-	-
	Arrawud	-	-	-	-	-	-	-	-	-
13	Yawul -	-	-	-	-	-	-	-	-	-
14	Sowdah	-	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-
	Julgaum	-	-	-	-	-	-	-	-	-
16	Jamnair	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	-	-	-	-	3	234 11 6	-

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1379

HALF-YEARLY Report of the Government Cotton Factory at Dhurrungaum, ending 31 May 1856—continued.

Number.	NAMES.	QUANTITY OF COTTON GINNED.									TOTAL Amount Expended in Ginning, &c., on Account of Government.
		FOREIGN.						COUNTRY.		Quantity of Cotton Ginned during the Season.	
		NEW ORLEANS.		BROACH.		TOTAL.		For Government.	For Private Individuals.		
		For Government.	For Private Individuals.	For Government.	For Private Individuals.	For Government.	For Government.				
		35.	36.	37.	38.	39.	40.	41.	42.	43.	44.
1	Dhoolia	-	-	-	-	-	-	-	-	-	-
2	Amulnair	-	-	-	-	-	-	-	-	-	-
	Betawud	-	-	-	-	-	-	-	-	-	-
3	Errundole	-	-	-	-	-	-	-	-	-	-
	Cassoda	-	-	-	-	-	-	-	66 candies -	66	-
	Dhurrungaum	-	-	-	-	-	-	-	20 "	20	-
4	Bhurgaum	-	-	-	-	-	-	-	-	-	-
	Parrola	-	-	-	-	-	-	-	-	-	-
5	Challigalum	-	-	-	-	-	-	-	-	-	-
6	Malligalum	-	-	-	-	-	-	-	-	-	-
7	Boglan	-	-	-	-	-	-	-	-	-	-
8	Pimpulnair	-	-	-	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	-	-	-	-	-
10	Sooltanpoor	-	-	-	-	-	-	-	-	-	-
11	Thalnair	-	-	-	-	-	-	-	-	-	-
12	Chopra	-	-	-	-	-	-	-	-	-	-
	Arrawud	-	-	-	-	-	-	-	-	-	-
13	Yawul	-	-	-	-	-	-	-	-	-	-
14	Sowdah	-	-	-	-	-	-	-	-	-	-
15	Nusseerabad	-	-	-	-	-	-	-	-	-	-
	Julgaum	-	-	-	-	-	-	-	-	-	-
16	Jamnair	-	-	-	-	-	-	-	-	-	-
	TOTAL	-	-	-	-	-	-	-	66 candies -	86	-

Number.	NAMES.	Other Items of Expenditure during the Half-Year under Report.				TOTAL AMOUNT including Cotton Ginning, &c.	Amount Expended up to last Half-Year.	Total Expenditure up to the end of Half-Year under Report.
		Buildings and Temporary Establishment.	Contingencies.	Amount of Superintendence.	Amount of Permanent Establishment.			
		45.	46.	47.	48.			
1	Dhoolia	-	-	-	-	-	1,770 3 4	1,770 3 4
2	Amulnair	-	-	-	-	-	1,984 12 8	1,984 12 8
	Betawud	-	-	-	-	-	2,299 2 11	2,299 2 11
3	Errundole	-	-	-	-	-	849 6 11	849 6 11
	Cassoda	-	-	-	-	-	442 14 2	442 14 2
	Dhurrungaum	243 1 10	18 14 11	-	711 - -	973 - 9	1,29,253 10 7	1,30,226 11 4
4	Bhurgaum	-	-	-	-	-	-	-
	Parrola	-	-	-	-	-	-	-
5	Challigalum	-	-	-	-	-	-	-
6	Malligalum	-	-	-	-	-	-	-
7	Boglan	-	-	-	-	-	-	-
8	Pimpuloair	-	-	-	-	-	-	-
9	Nundoorbar	-	-	-	-	-	4,161 12 -	4,161 12 -
10	Sooltanpoor	-	-	-	-	-	212 15 3	212 15 3
11	Thalnair	-	-	-	-	-	380 9 8	380 9 8
12	Chopra	-	-	-	-	-	15,563 5 8	15,563 5 8
	Arrawud	-	-	-	-	-	2,491 11 11	2,491 11 11
13	Yawul	-	-	-	-	-	4,343 7 -	4,343 7 -
14	Sowdah	-	-	-	-	-	35 8 -	35 8 -
15	Nusseerabad	-	-	-	-	-	1,018 2 11	1,018 2 11
	Julgaum	-	-	-	-	-	23,160 13 9	23,160 13 9
16	Jamnair	-	-	-	-	-	2,280 15 7	2,280 15 7
	TOTAL	243 1 10	18 14 11	- - -	711 - -	973 - 9	1,90,249 8 4	1,91,222 9 1

Remarks.—During the half-year under report, 10 gins have been thoroughly repaired, and those hired by the native merchant at Cassoda were kept in working order, and the two gins purchased by the Parola merchant, as also one at Dhurrungaum, were set up and set to work by the department.

Applications for 12 gins on hire in the coming season have been received and sanctioned by the Collector; these will be made over to the parties immediately after the rains.

G. Brenham,
Overseer in Charge, Government Factory:

D H A R W A R.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 22 May 1850—V. 8157-8160.

(No. 2283 of 1850.)

V. 8157. From the Revenue Commissioner, Southern Division, to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to forward a letter from the Collector of Dharwar, No. 196, dated the 8th February last (with a subsequent memorandum of the 9th March, No. 348) submitting the progress report of the Superintendent of the Dharwar Cotton Experiment for the six months ending the 30th November last.

2. Mr. Blount states, in the second column of this report, that all anticipations respecting the favourableness of the cotton season had been fully realised, and that the crop of both the American and native cottons was "rather above the yield of an average year;" in some instances, it is said, that the produce of the American cotton had even exceeded that of the Indian. The return of the "Broach" cotton plantations, on the contrary, had proved very scanty.

3. The same column of the report shows that, with the exception of about 10 candies the whole of the American cotton produce had been purchased for Government, the greater portion from local dealers, and the rest from ryots direct.

4. A quantity of Indian cotton also had been purchased, but the superintendent had failed to procure the quantity he desired for Government, owing to the difficulty experienced in inducing the cultivators to gather it clean.

5. The quantity of cotton on hand on account of Government is stated as follows:—

							<i>Candies.</i>	<i>lbs.</i>
New Orleans cotton (col. 3)	-	-	-	-	-	-	334	526
Broach - ditto (col. 4)	-	-	-	-	-	-	3	566
Indigenous - ditto (col. 6)	-	-	-	-	-	-	60	294
TOTAL							-	-
							398	602

6. The proportion of cotton cleaned in gins is—

							<i>Candies.</i>	<i>lbs.</i>
New Orleans cotton (col. 7)	-	-	-	-	-	-	349	526
Broach - ditto (col. 8)	-	-	-	-	-	-	4	—
Indigenous - ditto (col. 10)	-	-	-	-	-	-	160	294

7. In regard to gins, it is said in columns 11 to 15, and column 28, that of those belonging to Government 29 were in use and 33 out of use; and of those owned by private individuals 13 were in and three out of use.

8. The number in course of construction for Government was (column 17) 25 of seven-saws, and seven of 20 saws each. The number sold during the half-year was (column 21) two, one of which had cost 180 rupees, and the other 40 rupees. Mr. Blount's report is accompanied by a statement marked B., which shows the receipts and expenditure during the period reported on, on account of the manufacture and repair of gins; the result is a loss to Government of Rs. 16. 7. 1.

9. Statement A., also accompanying, gives the disbursements of the department for the half-year at Rs. 9,708. 5. 2, and the receipts at Rs. 792. 0. 2. Deducting, however, from the former sum, the sixth item on the debit side (that item not appearing to be a legitimate charge against the experiment), and subtracting the "credits" from the remainder, there remain Rs. 8,307. 12. 4. as the net expenditure of the department for the period reported on; and this sum, added to the net expenses up to the end of the preceding half-year, viz., Rs. 1,20,452. 0. 1. (obtained in a similar manner, and given in the 11th paragraph of my letter of the 7th instant, No. 2281), the amount standing against the experiment, up to the 30th November 1849, will be found to be Rs. 1,28,759. 12. 5.

10. Of the prospects of the coming season, the Superintendent speaks very favourably in the 27th column of the report, as does also the Collector in the 7th paragraph of his letter appended.

11. In

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1381

III.
Bombay.

11. In his 4th paragraph, the Collector suggests the future omission of certain columns from the report, remarking, with reference to column 7,* that as New Orleans cotton is capable of being cleaned "by no other method than the saw-gin, it may always be assumed that the whole crop has been cleaned by that means;" and, in regard to column 10, that "it is impossible to make even the widest conjecture at the information required to be entered" in it. As regards the first of these remarks, it may be observed, that as the "whole crop" of the New Orleans cotton may not be ginned within any half-year reported on, the 7th column will be of use in indicating the quantity that has been so cleaned within that period, and its retention, therefore, seems unobjectionable. I would, however, omit the words "will be," that occur in the heading to columns 7 to 10. With respect to the second remark, the information embodied by the Superintendent in the 10th column of the present report, shows the proportion of the last year's crop of native cotton that has been cleaned for Government and for private individuals. The impossibility of ascertaining whether private "saw-gins are in constant use" or otherwise, need not, I submit, preclude the Superintendent's stating as correctly as practicable the quantity supposed to have been cleaned by those machines.

12. Adverting to the suggestions in the Collector's fifth paragraph, it would perhaps be as well to add a column to the present form of report (after column 13) to indicate the number of Government gins "out of use," and another (after column 16) to show the number of private gins "in use." Should Government approve of this amendment, I shall instruct the Collectors accordingly.

Revenue Commissioner's Office,
Nehr, 8 May 1850.

I have, &c.
(signed) *E. H. Townsend,*
Revenue Commissioner, S. D.

(No. 196 of 1850.)

To *E. H. Townsend, Esq.,* Revenue Commissioner, Southern Division.

V. 8158.

Sir,

I do myself the honour to submit the cotton planter's report for the half-year ending the 30th November last.

2. This report calls for a few observations, because it includes a season at which the operations of the department are for the most part suspended, except as regards the construction of saw gins.

3. You will observe that the whole, or nearly the whole, of the very small crop of foreign cotton grown the preceding season was purchased for Government.

4. With reference to the 7th column of this statement, I would respectfully propose its omission from future reports; because New Orleans cotton being capable of being cleaned by no other method than the saw-gin, it may always be assumed that the whole crop has been cleaned by that means. It is impossible to make even the widest conjecture at the information required to be entered in column 10; and I would suggest that the whole of these four columns, 7 to 10, may with advantage be omitted. The superintendent can tell how much cotton is cleaned by saw-gins which are the property of Government, and he also knows how much cotton the saw-gins in the possession of natives are capable of cleaning; but he has no means of ascertaining whether such saw-gins are in constant use, or for what periods they may be used.

5. It is difficult to understand the object of the arrangement of columns 11 to 16. It would, I think, be desirable to insert columns showing the number of gins belonging to Government out of use, and of those belonging to private individuals in use.

6. The profit and loss to Government required to be inserted in column 24 is not capable of being ascertained as regards the few gins which may be sold, and I do not clearly understand that this is the object of the column. The gins are sold at as nearly the cost of construction as can be ascertained, and there is in fact no profit or loss.

7. I think Mr. Blount's estimate of the prospects of the coming season is very just. There will, no doubt, be an abundant crop of cotton, and I think the American species will yield a plentiful crop in the parts of the Collectorate which are favourable to its growth.

Dharwar, Collector's Office, Camp Dewur,
Hooblee, 8 February 1850.

I have, &c.
(signed) *W. W. Bell,*
Collector.

* Quantity of New Orleans cotton cleaned in gins.

STATEMENT, No. 2.

COTTON PLANTER'S REPORT for the Half-Year from 1st June to 30th November 1849, in the Dharwar Collectorate.

TALOOKS.	Remarks on the past Season, as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on hand, on account of Government, of each sort, Ginned or not Ginned, viz.:				Supposed Proportion of the last Year's Crop which has been cleaned in Saw Gins, or will be so cleaned.			
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cotton.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Dharwar Nowgoond. Dummul. Bunkapoor. Hooblee. Hangul. Raneebednoor. Koad.	<p>-- The monsoon of 1848 was a bountiful one, and expectations were early formed of its proving a good cotton year. The expectations have been fully realised, and the crop, both native and American, may be taken as rather above the yield of an average year. The American plant has in all parts of the districts produced equally as well as the native, and in some instances, a larger produce has been realised. The Broach cotton has not answered the expectation formed of it, the plants attained a large size, but yielded a very scanty produce. The American cotton has been cleaned by the saw-gin, and the whole crop, with the exception of about 10 candies, has been purchased for Government; parts from the ryot direct, but the bulk of it from the local dealers. Some native cotton has been purchased and cleaned on the gin, but the quantity of clean picked native cotton ordered by Government could not be had; I offered a very liberal price above the market value of dirty cotton, as an inducement to the ryot to gather it free from leaf; but I found but few willing to accept my offer, most of the ryots refusing to make an effort to gather it clean.</p>	C. lbs. 334 526	C. lbs. 3 566	C. lbs. 338 308	C. lbs. 60 294	C. lbs. 349 526	Candies. 4	C. lbs. 353 526	C. lbs. 160 294
						The whole crop		The whole crop	
						C. lbs. 334 526			C. lbs. 60 294
						C. lbs. 13 0			C. lbs. 100 0
						C. lbs. 349 526			C. lbs. 160 294
						For Government -			For Government -
						For private parties -			For private parties -
						TOTAL -			TOTAL -

TALOOKS.	G I N S .													TOTAL NET EXPENSE on account of the Experiment, from the commencement to the close of the Half-year preceding that under Report.	TOTAL EXPENSE for the Half-year under Report.	Prospects of the coming Season.
	In Use.			Out of Use.			Being Made.			Sold for Government during the Half-year under Report.			Profit or Loss to Government, deducting the Cost of European superintendence.			
	Belonging to Government.			Belonging to Private Individuals.			For Government.			For Private Individuals.						
	No.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.	Number.	Number of Saws.	Number Sold.	Number of Saws each.				
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
Dharwar	3	Nowgoond	10	1	Annegherry	20	25	7	None.	1	15	180	None.	1,94,858 - 2	9,708 5 2	<p>-- The past monsoon has been a most favourable one for cotton, and the plant is looking well in all parts of the district; a large crop is confidently looked for during the month of December. I was through most parts of the district where the New Orleans is cultivated, and the plant is generally decidedly better in appearance than the native cotton, with the exception of the village of Koosighul, where neither crop is good.</p>
Nowgoond.	1	Ditto.	7	1	Ditto	18	7	20		1	7	40				
Dummul.	2	Koosighul.	18	1	Hooblee	20										
Bunkapoor.	1	Nurraghul.	10													
Hooblee.	2	Ditto.	7													
Hangul.	1	Havanoor.	14													
Hangul.	1	Ditto.	7													
Hangul.	1	Gootal.	7													
Raneebednoor.	1	Raneebednoor	18													
Raneebednoor.	2	Katnaul.	7													
Raneebednoor.	2	Davagherry.	14													
Raneebednoor.	4	Bunkapoor.	14													
Raneebednoor.	1	Ditto.	10													
Raneebednoor.	2	Hoolgoor.	14													
Raneebednoor.	1	Cumdalee.	14													
Raneebednoor.	1	Ditto.	18													
Raneebednoor.	1	Attigherry.	7													
	29															

Remarks.—Column 3, about 5 candies of this cotton was purchased in the Belgaum Collectorate. Column 10, I cannot ascertain, with any correctness, the quantity cleaned by the native dealers. The number of gins out of use, belonging to Government, is 33 of from 7 to 25 saws each. The number of gins in use belonging to private individuals, 13. Column 24. I will, as soon as I have leisure, make up and forward a statement of the expenses of the shop and value of work performed.

John M. Blount,
Superintendent of Cotton Experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1383

III.
Bombay.

No. 3664 of 1850.— Territorial Department, Revenue.

To *H. E. Goldsmid*, Esq. Secretary to Government.

Sir,

I HAVE the honour to transmit a letter from the Collector of Dharwar, dated the 8th ultimo (No. 1166), with its accompaniments, being Mr. Blount's report on the cotton experiment in that zillah for the half-year ending the 31st May last, and trust that the information therein afforded relative to the season's operations will prove satisfactory to his Lordship in Council.

2. It will be observed, from the third and ninth columns of Statement No. 1, that the extent of New Orleans cotton cultivation during the season was 15,573 acres, and that of Indian cotton 225,685 acres. The former exceeds the plantation of the year preceding (1848-49) by 12,335 acres, and the latter that of the country cotton for the same year by 24,107 acres. The yield of the 15,573 acres of New Orleans cotton is estimated in the fourth column at 1,557 khundeas (of 784 lbs. each), and that of the Indian cotton at 18,135 khundeas, as stated in the tenth column.

3. Six hundred and thirty-five khundeas of New Orleans cotton have been purchased for Government, at a charge of 50,800 rupees, being at the rate of 80 rupees per khundee; with 475 khundeas of country cotton, at 75 rupees per khundee, making the outlay for the whole of the latter sort, 35,625 rupees. The high prices that prevailed in the local markets prevented the Collector procuring the quantity he is authorised to purchase by the orders of Government, dated 20th January 1848 (No. 382), and 31st August 1848 (No. 5113).* "It is possible, however," Mr. Bell states, "that the requisite consignments will yet be completed."

11th Column.
13th Column.
26th Column.
31st Column.

4. The 32d to 37th columns show that eight Government and 62 private gins were in use during the period reported on, and the 48th column that 56 gins were sold, realizing Rs. 5,709. 12., an amount that is supposed (51st column) to have covered the cost of construction.

5. In the 60th column of his first statement, Mr. Blount shows that the charges on account of the experiment, from the commencement up to the 30th November 1849, after deducting receipts, amount to Rs. 93,018. 7. 4. According to the mode which I have adopted in exhibiting the debits and credits of the department, explained in my letters to Government quoted in the margin,† the balance against the experiment up to the end of November 1849 was Rs. 128,759. 12. 5., as shown in the 9th paragraph of my report (No. 2283) of 8th May last; and if to this sum be added the expenses of the half-year under report, viz. Rs. 8,915. 5. 9., minus the receipts, or Rs. 2,425. 5., the balance in question will be Rs. 135,249. 13. 2.

Revenue Commissioner's Office,
Poona, 30 August 1850.

I have, &c.
(signed) *E. H. Townsend*,
Revenue Commissioner Southern Division.

(No. 1166 of 1850.)

To *E. H. Townsend*, Esq., Revenue Commissioner, Southern Division.

Sir,

IN forwarding the half-yearly report of the cotton experiments in this Collectorate for the six months which expired on the 31st May last, I have the gratification of expressing my conviction that the operations of the experiment have been most satisfactory.

2. The crop of New Orleans cotton has been very abundant, and the prices have been highly remunerative; but what is most to be rejoiced in is the fact that the cultivators, by holding the staple, have obtained a large share of the profit.

3. We have succeeded in securing for Government 635 candies of the New Orleans cotton and 475 candies of the native cotton. The extravagant prices which have prevailed in the local market have prevented our completing the whole amount which we are authorised to purchase; indeed, at one time we had reason to apprehend that we should be unable to secure any of the native cotton at a price which would ensure the Government from actual loss on our transactions. It is possible that we may be yet able to complete the consignments required by Government;‡ at all events, we shall not fail to avail ourselves of any opportunity which may offer for so doing.

4. The cost of the cotton purchased is shown in columns 13 and 31, but the outlay is not included in the expenditure of the half-year embraced in the report, because the bills for these purchases have not been audited, and none but audited charges are included in these reports.

5. The operations in the saw-gin department will also be viewed with satisfaction. The considerable number of gins sold during the half-year (viz. 56) is the best indication that the machine is acquiring favour. Hitherto, I believe, the purchase of gins has not extended to

* 1,000 bales of New Orleans cotton. Ditto, country cotton.

† No. 4600, of 21st December 1849, para. 10. No. 1960, of 18th April 1850, para. 10. No. 2281, of 7th May 1850, para. 11.

‡ Government letter to the address of the Revenue Commissioner, Southern Division, No. 5113, dated 31st August 1848, with extract of Honourable Court's despatch, No. 6, dated 4th July 1848.

III.
Bombay.

to the cultivators themselves, but I look forward with a sanguine hope that they too will now see that it is very much to their advantage to clean their own crops. I have learned that many ryots are prepared to supply themselves with gins for the ensuing season.

6. I hope that the favourable sale which may be expected of the last consignment of cotton sent to England will go far to reduce the balance against the experiment, and I have little doubt that in future the department will be no cost to Government, but that all the expenses will be covered by the profit of future consignments.

Collector's Office, Dharwar,
8 July 1850.

I have, &c.
(signed) *W. W. Bell*, Collector.

(No. 122 of 1850.)

To *W. W. Bell*, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to forward you a report of the progress of the cotton experiments for the half-year ending 31 May 1850.

2. I have much pleasure in stating that the experiments are progressing favourably; a large number of saw-gins have been sold to the natives of this district, and they are beginning to use them for cleaning the indigenous as well as the exotic cotton. Three small gins have also been disposed of in the Bellary Collectorate of the Madras Presidency, and it is likely they will come into extensive use in that district, as a large portion of it along the Joonghudra river is well adapted to the growth of New Orleans cotton.

3. The New Orleans has produced well in all parts of the district where it has been planted on good soil, and properly cultivated; the two last crops having turned out a large produce, and the higher price which this cotton commands in the market is bringing it more in favour with the cultivators. In many villages the prejudice against it has quite disappeared, and I have every reason to believe that the cultivation this year will show a large increase over the past.

4. The fresh New Orleans and Georgia seed received in 1849 were distributed in various parts of the district, and have produced well. The ryots to whom I gave the seeds inform me that the old acclimated seeds produced equally as well as the fresh. The cotton produced from these seeds has been kept unmixed, except in one instance, and will be planted during the present year.

I have, &c.
(signed) *J. M. Blount*,
Superintendent of Cotton Experiments.

Koosighul, 11 June 1850.

STATEMENT, No. 1.

COTTON PLANTER'S REPORT for the Half Year commencing 1st December 1849, and ending 31st May 1850, in the Dharwar Collectorate.

TALOOKS.	Prospect of the Season, and State of the Crop as regards each sort of Cotton, showing also what Stations were Visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.							
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.	
		Extent in Acres.	Estimated Produce of 28 lbs. in Caudies of 784 lbs.	Extent in Acres.	Estimated Produce in Caudies of 784 lbs.	Extent in Acres.	Estimated Produce in Caudies of 784 lbs.	Extent in Acres.	Estimated Produce in Caudies of 784 lbs.
2.	3.	4.	5.	6.	7.	8.	9.	10.	
Dharwar - A.	There was plenty of rain in all parts of the district, both the native and New Orleans cotton promises to yield a good crop. Stations Visited: Hooblee. Katnullee. Cumdolee. Kanvullee. Hoolgoor. Gootul. Attergherry. Motabidnoor. Bunkapoor. Rancebednoor. Hangul - G. Danegherry. Havanoor. Koad - H. Kurrughee. Moroul. Kummuhullee. Nurraghul. Gudduck. Bettogherry. Annegherry. Koalwad. Koortcotah.	A. - 8 28	1,557	None	None	15,573 1	1,557	A. - 10,264 17	18,13
Nowgoond - B.		B. - 2,715 11	Estimated at 9 maunds of cuppas of 28 lbs. the maund, or 84 lbs. of clean cotton per acre.					B. - 70,798 8	Estimated at 9 maunds of cuppas of 28 lbs. the acre, or clean cotton
Dammul - C.		C. - 3,046 32						C. - 73,053 11	
Bunkapoor - D.		D. - 4,889 37						D. - 25,263 19	
Hooblee - E.		E. - 1,069 39						E. - 8,072 22	
Rancebednoor - F.		F. - 3,034 19						F. - 15,264 38	
Hangul - G.		G. - 712 10						G. - 17,045 3	
Koad - H.		H. - 80 36						H. - 5,922 13	
	15,573 1						225,685 0		

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1383

STATEMENT, No. 1.—COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1849, &c.—continued.

TALOOKS.	COTTON PURCHASED FOR GOVERNMENT.																			
	NEW ORLEANS.					BROACH.					TOTAL FOREIGN.			COUNTRY COTTON.						
	Quantity Purchased in Candies of 784 lbs. Rate per Candy of 784 lbs.	Cost of the Whole.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the Whole.	Lowest Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Quantity Purchased in Candies of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the Whole.	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the Whole.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
Dharwar - -	635	-	80	50,800	80	80	None	None	None	None	None	635	80	50,800	475	75	75	75	75	35,623
Nowgoond.																				
Dummul.																				
Bunkapoor.																				
Hooble.																				
Raneebednoor.																				
Hangul.																				
Koad.																				

The whole amount has not been paid, Rs. 40,092 has been advanced.

The whole amount has not been paid, Rs. 27,305. 12 has been advanced.

TALOOKS.	G I N S.														
	IN USE.						OUT OF USE.						BEING MADE.		
	Belonging to Government.			Belonging to Private Individuals.			Belonging to Government.			Belonging to Private Individuals.			For Government.		For Private Individuals.
	No.	Where.	Number of Saws each.	No.	Where.	Number of Saws each.	No.	Where.	Number of Saws each.	No.	Where.	Number of Saws each.	No.	Number of Saws each.	No.
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.
Dharwar - -	2	Koulwood -	18	1	Hooble -	20	2	Kossighul -	25	-	None -	-	2	13	None.
Nowgoond.				2	Ditto -	18									
				16	Ditto -	7	1	Ditto -	20				6	18	
Dummul.	2	Annegherry	18	1	Cumdolee -	14	1	Ditto -	18				3	7	
Bunkapoor.				1	Hoolgoor -	20									
				1	Bunkapoor -	20	1	Ditto -	14				11		
Hooble.	3	Gudduck -	18	1	Ditto -	18	1	Ditto -	8						
				2	Ditto -	14									
				2	Ditto -	18									
Raneebednoor.				1	Ditto -	25	8	Ditto -	7						
Hangul.	1	Ditto -	13	2	Davagherry -	14	2	Ditto -	4						
				1	Motubednoor -	7									
				1	Raneebednoor -	20	5	Ditto -	10						
Koad.	8			2	Ditto -	7									
				1	Katnal -	14	1	Ditto -	18						
				1	Ditto -	7									
				1	Kummunbullee -	18	1	Ditto -	30						
				1	Ditto -	14									
				1	Kanovallee -	14	23								
				1	Gootul -	12									
				2	Ditto -	18									
				2	Ilavanoor -	18									
				1	Ditto -	14									
				4	Ditto -	7									
				4	Nurraghul -	7									
				2	Bettegherry -	18									
				1	Ditto -	25									
				1	Koornteolah -	18									
				1	Attigherry -	7									
				1	Kurrughee -	13									
				2	Mootool -	7									
				1	Koolwad -	24									
				62											

STATEMENT, No. 1.—COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1849, &c.—continued.

TALOOKS.	GINS—continued.			COTTON GINNED FOR GOVERNMENT AND FOR PRIVATE INDIVIDUALS.								Total Net Expenses on account of the Experiments from the Commencement to the Close of the Half-Year preceding that under Report.	TOTAL Expenses for the Half-Year under Report.		
	Sold for Government during the Half-Year under Report.			Profit and Loss to Government, deducting the Cost of European Superintendance.	FOREIGN COTTON.						COUNTRY COTTON				
	No.	Number of Saws.	At what Cost each.		NEW ORLEANS.		BROACH.		TOTAL.		Quantity purchased in Candies of 784 lbs. each for Government.			Quantity purchased in Candies of 784 lbs. each for Private Individuals.	
					Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.	Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.	Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.					
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.		
Dharwar a	6	20	1,200 --	Supposed to have realised the Cost of Construction.	635	200	None.	None.	635	200	475	None.	Total Expense - - - - - Rs. 204,566 5 4 Ditto Receipts - - - - - " 11,847 14 - Balance - - - - - Rs. 93,018 7 4 Total Expense - - - - - Rs. 8,915 5 9 Ditto Receipts - - - - - " 2,425 5 - Balance - - - - - Rs. 6,490 - 9	61.	
Nowlgoond. b	7	18	1,400 --												
Dummul.	1	18	209 12 -												
Bunkapoor.	4	14	600 --												
Hooblee.	2	14	360 --												
Raneebednoor.	1	14	160 --												
Hangul.	2	13	360 --												
Koad.	1	12	140 --												
	32	7	1,280 --												
	56		5,709 12 -												

Remarks.—Columns 38 to 40.—Of the 23 gins out of use, 12 are new; 11 unserviceable; seven of which can be made serviceable with slight repairs, and four are not worth repairing.

Columns 46 and 47.—No gins have been made for any particular individual; they are constructed for Government, and sold to any persons who wish to purchase.

Columns 48 to 50.—Two have been paid in full, Rs. 240. 2. Given to a dealer at Raneebednoor; Government order, No. 5667, dated 18 September 1849. 43 sold in this district for Rs. 4,089. 12., on which payment has been made in part Rs. 1,704. 12, and the balance, 2,385 rupees, to be paid in six and twelve months; Government letter, No. 2728 of 1849, with extract from despatch of the Honourable Court of Directors, No. 4, para. 4, dated 7 March 1849. Six have been sold in the Bellary Collectorate for 1,180 rupees, and will be paid for during the next half-year. Three have been sold in the Bellary Collectorate for 120 rupees, and will be paid for during the next half-year.

Columns 52 to 59.—There is a slight difference in the heading of the column at top; it reads, "Cotton ginned," &c., and in each column, "Cotton purchased," &c; but as I suppose it is also required to show the quantity of cotton cleaned by the saw-gins, I have included here the amount supposed to have been cleaned both by the Government gins and those owned by private individuals. The quantity stated as cleaned for Government is near correct; that stated to be cleaned on private gins is an estimate based on what the gins are capable of cleaning per diem, and a supposition that they have been worked 40 days.

	Candies.	Candies.
Column 52.—2 gins, large size, work 20 days	10	
Column 53.—31 gins, large size, 30 maunds each per diem, and 15 gins, small, 10 maunds each per diem	480	
Total, American		490
Column 58.—Have been but a few days at work	15	
Column 59.—16 gins, small, average each per diem 12 maunds	69	
Total, Native		84
TOTAL, both Descriptions		574

Columns 51 and 61.—The information required in these columns I cannot this time furnish, but will do so as soon as I have an opportunity, in a separate sheet.

Koosghul, 1 June 1850.

Information required under this head has been inserted.

Dharwar, 26 June 1850.

J. M. Blount,

Superintendent of Cotton Experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1387

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 16 May 1851.—V. 7974 to 7977.

III.
Bombay.

(No. 1917 of 1851.)

From the Acting Revenue Commissioner, Southern Division, to Mr. Secretary *Goldsmid*.

V. 7974.

Sir,

I HAVE the honour to forward Mr. Blount's report of the progress of the cotton experiment under his superintendence during the half-year ending the 30th November last, and trust that the favourable mention made of the results of the season in the Acting Collector's letter, dated the 11th instant (No. 499), will be considered satisfactory by his Lordship in Council.

2. The season is represented to have been very promising, but latterly a continuance of unfavourable weather had done much mischief. The cotton, however, appears to have been "eagerly sought for," particularly the New Orleans variety. The prices varied from 10 to 14 annas per maund, and it "was generally purchased on orders from Bombay."

3. The quantity procured for Government is stated to be 600 khundeas of New Orleans and 379 of country cotton; and the proportion of the last year's crop that has been ginned is estimated at 2,086 khundeas.

4. Columns 11 to 22 show that during the period embraced by the report there were only eight gins (belonging to Government) in use at Annigherry, Kolwad, and Gudduk, and 42 Government, with 65 private gins out of use. Of the former (42) eight are shown to have been of no use, and five more to have been in want of repair. The large number of gins out of use is probably accounted for by the fact that the report "includes* the monsoon, when the business of the experiment is almost confined to the manufacture of gins."

*Acting Collect
3d para,

5. Twenty-nine gins were being made up for Government, five of 18, and 24 of seven saws each; and 15 had been sold, realising 815 rupees. Four of these latter were for Bellary, five for Cuddapa, and two for Belgaum and Broach.

6. The expenditure of the half-year is given at Rs. 42 181. 7. 6., which sum is detailed in Appendix (A.). The items 9, 10 and 11 are not, however, legitimate charges on the experiment, and should therefore be deducted with the amount of realisations. This done, the outlay of the season will stand at Rs. 7,091. 15. 10.

Revenue Commissioner's Camp,
Bombay, 24 April 1851.

I have, &c.
(signed) *E. G. Fawcett*,
Acting Revenue Commissioner, S. D.

(No. 499 of 1851.)

To the Revenue Commissioner, Southern Division.

V. 7975.

Sir,

I HAVE the honour to forward the half-yearly progress report of the Superintendent of Cotton Experiments in this collectorate, ending 30th of November 1850.

2. It is gratifying to observe that the expectation of the abundant crop anticipated in the former report has been realised; this fortunate circumstance, combined with the active demand for cotton in the market, has given a great stimulus to its cultivation; and the breadth of land sown with all varieties exhibits a considerable increase as compared with the preceding year.

3. The period embraced in this report includes the monsoon, when the business of the experiment is almost confined to the manufacture of gins; this work has been steadily prosecuted, the machines are in increasing demand, affording satisfactory proof that they are approved of.

4. Mr. Blount's anticipations of the crop are sanguine, and, indeed, up to the date included in these statements nothing could be more promising than the appearance of the plant of all varieties; since then, however, an almost unbroken succession of dry parching east winds has done much mischief to the growing plants, and I fear that the crop will prove a very scanty one in most localities.

5. I have to apologise for the delay which has occurred in the transmission of this report; the statements were received from Mr. Blount on the 17th February, but wishing to obtain an answer to a reference made to that gentleman before forwarding them, they have been retained in this office during Mr. Blount's absence on duty in Bombay.

Dharwar, Collector's Office,
11 April 1851.

I have, &c.
(signed) *W. A. Goldfinch*,
Acting Collector.

STATEMENT, No. 2.

COTTON PLANTER'S REPORT for the Half-year from 1 June to 30 November 1850, in the *Dharwar* Collectorate.

TALOOKS.	Remarks on the past Season as to how far Anticipation regarding the Crop and its Disposal were realised.	Quantity of Cotton on Hand on account of Government of each Sort, Ginned or not Ginned.				Supposed Proportion of the last Year's Crop which has been Cleaned in Saw Gins.			
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cotton.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Dharwar Nowgoond. Dummul. Bunkapoor. Raneebednoor. Hooblee Noad.	The crop, both native and New Orleans, has fully realised the expectation formed of it in the early part of the season, as stated in Report, No. 1, dated 31st May 1850, owing to the rise in prices abroad, during the period embraced in this report, the market has been an active one, and the cotton eagerly sought for, particularly the New Orleans, which was purchased of the rynts at prices varying from 10 to 14 annas the maund. The New Orleans Cotton was generally purchased on orders from Bombay, and consequently is not offered for sale in that market. Some has, however, been sold in that market which realised 135 rupees per candy.	600	None	600	379	1,557	None	1,557	529

G I N S.

TALOOKS.	In Use.		Out of Use.			In Use.		Out of Use.			Being Made.				
	Belonging to Government.		Belonging to Government.			Belonging to Private Individuals.		Belonging to Private Individuals.			For Government.		For Private Individuals.		
	Number.	Where.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws each.	Number.	Number of Saws each.
	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
Dharwar	2	Annigerry	18	a 1	Dharwar	25			1	Soodee	14	5	18	None.	—
Nowgoond.	2	Kolwad	18	b 1	Ditto	28			6	Ditto	7				
Dummul.									6	Mullapoor	7	24	7		
Bunkapoor.	3	Gudduck	18	1	Ditto	20			5	Nowgoond	7				
Bunkapoor.				6	Ditto	18			1	Ditto	18				
Raneebednoor.	1	Ditto	14	6	Ditto	18			1	Hooblee	7	29			
Hooblee Noad.	8			1	Ditto	8			1	Ditto	18				
				1	Ditto	8			1	Cumdolee	14				
				18	Ditto	7			1	Hoolgoor	20				
				c 6	Ditto	4			1	Bunkapoor	20				
				d 5	Ditto	10			2	Ditto	18				
				e 1	Ditto	18			3	Ditto	14				
				f 1	Ditto	30			2	Dovegerry	14				
				42					1	Mootabednoor	7				
									1	Raneebednoor	20				
									2	Ditto	7				
									1	Katnal	14				
									1	Ditto	7				
									1	Hunmunbullee	14				
									1	Ditto	18				
									1	Kunvlee	14				
									1	Goatul	12				
									2	Ditto	18				
									2	Havanoor	18				
									1	Ditto	14				
									4	Ditto	7				
									4	Nurrigul	7				
									2	Beltegerry	18				
									1	Ditto	25				
									1	Kurritcotta	18				
									1	Attegerry	7				
									1	Kurruggee	19				
									2	Moorool	7				
									1	Koolwad	24				
									65						

a Repaired; serviceable.
 b Ditto - ditto,
 d Need repairing.
 e Unserviceable.
 f No use; broken up.
 g Two broken up; unserviceable.

STATEMENT, No. 2.—COTTON PLANTER'S REPORT for the Half-year from 1 June to 30 November 1850, &c.—continued.

TALOOKS.	GINS—continued.			Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expenses on account of the Experiments from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expenses for the Half-year under Report.	Prospects of the Season.
	Sold for Government during the Half-Year under Report.						
	Number.	Number of Saws each.	At what Cost.				
27.	28.	29.	30.	31.	32.	33.	
Dharwar	a 7	7	350	This column cannot at present be filled up.	Total Expenses - 2,13,481 11 1	Total Expenses - 42,187 7 6	The prospect of a good crop is most flattering. The New Orleans plant is generally larger than I have seen it in corresponding periods of past years. The native plant is not on average so forward, a large portion of it having been planted later than usual, owing to want of rain in the early part of the season.
Nowlgoond.	1	7	45		Total Receipts - 1,13,973 3 -	Total Receipts - 1,562 9 4	
Dummul.	b 6	7	240		Balance - Rs. 99,508 8 1	Balance - Rs. 40,618 14 2	
Bunkapoor.	1	14	180				
Raneebednoor.							
Hooblee Noad.		15	815				
	a 4 to Bellary. 1 to Belgaum. 1 to Broach. b 5 to Cuddapah.						

Remarks.—Columns 5 and 6: The precise quantity is not yet known, but will be near that mentioned. Column 10: Some native cotton has been cleaned by the dealers and forwarded to Bombay; the precise quantity is not known; estimated at 150 candies, from the number of gins employed in cleaning the cotton.

The number of acres planted in native cotton this year	-	-	-	-	-	-	-	-	-	2,28,807	4
The number of acres planted in American cotton this year	-	-	-	-	-	-	-	-	-	31,172	11

(signed) J. M. Blount, Superintendent of Cotton Experiments.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 15 November 1851.—(No. 18,122.)

III.
Bombay.

(No. 3490 of 1851.)

From E. G. Fawcett, Esq., Revenue Commissioner, Southern Division, to H. E. Goldsmid, Esq., Secretary to Government.

Sir,

I HAVE the honour to transmit a letter from the Collector of Dharwar, dated the 29th August last, No. 1456, with its accompaniment, being Mr. Blount's report on the progress of the cotton experiment under his superintendence during the half-year ending the 31st May 1851.

2. Of the season's crops, Mr. Blount states that neither the New Orleans nor the native variety produced as well as in the previous year; the average produce per acre being set down at about eight mauns of 28 lbs.

3. In the extent of New Orleans cotton cultivation there had been an increase of 15,599 acres; the cultivation of 1849-50 having been 15,573 acres, and that of the season reported on 31,172 acres. This increase is a subject of congratulation, as it indicates increasing favour with which the ryots view the more valuable description of cotton. The success that has attended the cultivation of the plant in the Dharwar Collectorate appears, from the second paragraph of the Superintendent's letter appended, to have led to a trial of it in the adjoining districts of Bellary and Hyderabad, where it had been planted to the extent of about 1,000 acres successfully.

4. The estimated yield of the season's plantation (31,172 acres) is given in the fourth column of Mr. Blount's tabular report at 2,968 khundeas 784 lbs. each, of which 300 khundeas had been purchased for Government (column 11), at 88 rupees per khundee (26,400 rupees), besides 120 khundeas of country cotton at 75 rupees each.

III.
Bombay.

5. The information contained in the Superintendent's report regarding saw-gins is also gratifying, the number of private gins having greatly increased, and fewer Government gins being unused, as will be seen from the following :—

	GINS IN USE.		GINS OUT OF USE.	
	Government.	Private.	Government.	Private.
In 1849-50 - - -	8	62	23	None.
In 1850-51 - - -	7	111	19	None.
In 1850-51 {	More - - -	49	—	—
	Less - - -	1	4	—

6. Column 48 of the report shows that 51 saw-gins had been sold during the season, realising 4,270 rupees; and column 44, that 38 were being constructed for Government. Of the number sold, para. 4 of Mr. Blount's letter accompanying, states that 42 were for the Dharwar districts, and the rest for Bellary; and that since the closing of the report 18 more gins had been sold for the former collectorate, and four for Belgaum.

7. Statement (A.), appended, exhibits the disbursements of the season at	Rs. a. p.
And deducting from this the season's receipts - - - - -	11,498 10 11
The net expenditure against the experiment is found to be - - - Rs.	4,130 5 -
	7,368 5 11

The apparent discrepancy between the first item of credit in the above statement, and the sale proceeds exhibited in column 50 of the report, is stated in a subsequent letter from the superintendent, dated the 24th ultimo (No. 159), to be owing to the former entry, including only such portions of the latter as had been "collected and carried to account during the half-year."

Poona, Revenue Commissioner's Office,
14 October 1851.

I have, &c.
(signed) *E. G. Fawcett*,
Revenue Commissioner, S. D.

(No. 1456 of 1851.)

From *J. S. Law*, Esq., Collector of Dharwar, to *E. G. Fawcett*, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to submit the half-yearly report of the superintendent of cotton experiments in this collectorate for the period which expired on the 31st May last.

2. This report must, I think, be considered as highly satisfactory; the extent of land cultivated with New Orleans cotton having more than doubled* in one season, and the saw-gins in use belonging to private individuals exceeding by 50 the number so in use at the same period of the previous year. A few of them are now in the hands of substantial cultivators, as anticipated by my predecessor in his letter dated 8th July 1850, No. 1166.

3. The fact that the saw-gin has begun to be used by the natives spontaneously for cleaning the indigenous cotton is, I think, of much importance, for it does not seem likely that the New Orleans will ever entirely supersede the other variety, except in districts with a tolerably moist climate. It would seem especially desirable to introduce the use of this machine in Berar, from whence so much cotton is exported to Bombay, and where, I believe, there are greater capabilities of extending the cultivation than in most parts of India.

4. The establishment of European agents for the purchase of cotton in the interior of the country has always justly been considered as a great step towards the improvement of the

* In 1849-50, 15,573 acres; in 1850-51, 31,172 acres.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1391

III.
Bombay.

the trade.* There are now two such agents at Dharwar, Mr. Stranack, employed by the house of Ritchie, Steuart & Co.; and Mr. Davies, who has recently come from Belgaum, and proposes to purchase cotton on his own account.

Dharwar, Collector's Office,
29 August 1851.

I have, &c.
(signed) J. S. Law,
Collector.

(No. 133 of 1851.)

To J. S. Law, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to forward the half-yearly report of the progress of the cotton experiments for the half-year ending 31st May 1851.

2. By comparison with previous reports, it will be seen that the experiment has made rapid progress, and that the prejudice and objection which the ryuts had to the cultivation of the American cotton has apparently given way, and it may be expected that the cultivation of that species of cotton will become common over a large part of this district. The past season was not so favourable as the two previous ones, and in some instances the produce of the fields was much short of an average; but this partial failure was not experienced over the whole extent of the cultivation, and although the produce per acre has not equalled that of the two previous years, yet the ryuts generally appear satisfied, and a large increase of the cultivation may be expected this season.† The success of the cultivation here has led to a trial of this plant by the ryuts in Bellary district and the Hyderabad territory, contiguous to this district, in each of which, I am informed by the natives, the extent of cultivation amounts to about 1,000 acres, from which a good crop was produced.

3. The native cotton crop of the last season, like the American, in many instances was a short one, but generally a fair produce was secured.

4. The manufactory for the construction of the saw-gin under the management of Mr. Frost, the engineer of the establishment, has progressed very favourably, and the demand for gins up to this time has been quite equal to the means of supply. The gin has as yet been but little used for cleaning the native cotton, but it appears to be gaining favour with the dealers; and if saw-ginned native cotton should meet with favour in the Bombay market, the use of the gin for cleaning the native cotton will rapidly increase. At present these machines are mostly used for cleaning the New Orleans cotton, which can be separated from the seed by no other process with facility or economy. The number of gins sold in the last three years are specified below:

	TOTAL.
In 1847-48. Sold, Dharwar, 14; Belgaum, 1 - - -	15
In 1848-49. Sold, Dharwar, 2; Bombay, 3, and Shorapoor, 2 - - - - -	7
In 1849-50. Sold, Dharwar, 50; Belgaum, 7; Broach, 1; Bellary, 7; Khandeish, 1, and Cuddapah, 5 -	71
In 1850-51. Sold, Dharwar, 42, and Bellary, 9 - - -	51
TOTAL - - -	144

Since the closing of the Report up to date, Dharwar, 18; Belgaum, 4.

Dharwar,
29 July 1851.

I have, &c.
(signed) John M. Blount,
Superintendent of Cotton Experiments.

(True copy.)
(signed) J. S. Law, Collector.

STATEMENT,

* See especially the despatch of the Honourable Court of Directors, dated 6th November 1850, No. 9, para. 9.

† The increase over 1848-49 is 15,599 acres.

STATEMENT, No. 1.

COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1850 and ending 31 May 1851,
in the Dharwar Collectorate.

TALOOKAS.	Prospect of the Season, and State of the Crop as regards each Sort of Cotton, showing also what Stations were Visited by the Superintendent	EXTENT IN ACRES OF COTTON CULTIVATION																																													
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON																																							
		Extent in Acres	Esti- mated Produce in Candies of 784 lbs.	Extent in Acres	Esti- mated Produce in Candies of 784 lbs.	Extent in Acres.	Esti- mated Produce in Candies of 784 lbs.	Extent in Acres.	Esti- mated Produce in Candies of 784 lbs.																																						
1	2	3.	4.	5.	6	7.	8.	9.	10																																						
Dharwar - Nowlgoond Dummul. Bunkapoor Hooblee. Raneebednoor. Hangul. Koad.	<p>The quantity of rain which fell during the monsoon was sufficient for all farming purposes. During the earlier part of the period embraced in this report, the appearance generally of both varieties of the cotton plant was most promising, but owing to heavy rains in November, and a prevalence of easterly wind afterwards, the American plant, particularly, in some instances, was seriously damaged, and in but few localities was the crop as good as in the two previous years. It has, however, I think, yielded quite as good an average per acre as the native plants. I do not think either variety produced as well as the previous year, I should therefore place the average per acre for both varieties at eight maunds of 28 lbs.</p> <p>STATIONS VISITED.</p> <table border="0"> <tr> <td>Hooblee.</td> <td>Havaree.</td> </tr> <tr> <td>Annegherry.</td> <td>Motabednoor.</td> </tr> <tr> <td>Koolwad.</td> <td>Raneebednoor.</td> </tr> <tr> <td>Koortcotah.</td> <td>Dovasoar.</td> </tr> <tr> <td>Gudduck.</td> <td>Rittee.</td> </tr> <tr> <td>Bettegherry.</td> <td>Bellanaghee.</td> </tr> <tr> <td>Nurrighul.</td> <td>Kulgee.</td> </tr> <tr> <td>Soodee.</td> <td>Moorool.</td> </tr> <tr> <td>Mullapoor.</td> <td>Ittegee.</td> </tr> <tr> <td>Hoolgoon.</td> <td>Negloor.</td> </tr> <tr> <td>Bunkapoor.</td> <td>Oolul.</td> </tr> <tr> <td>Dovagherry.</td> <td>Mylar.</td> </tr> <tr> <td>Hurrughree.</td> <td>Attegherry.</td> </tr> <tr> <td>Kotnal.</td> <td>Savanoor.</td> </tr> <tr> <td>Hunmunhullee.</td> <td>Hugadee.</td> </tr> <tr> <td>Kunvullee.</td> <td>Kumdoolee.</td> </tr> <tr> <td>Gootul.</td> <td>Dummul.</td> </tr> <tr> <td>Havanoor.</td> <td>Doonseae.</td> </tr> <tr> <td>Oohkeope.</td> <td>Kullehal.</td> </tr> </table>	Hooblee.	Havaree.	Annegherry.	Motabednoor.	Koolwad.	Raneebednoor.	Koortcotah.	Dovasoar.	Gudduck.	Rittee.	Bettegherry.	Bellanaghee.	Nurrighul.	Kulgee.	Soodee.	Moorool.	Mullapoor.	Ittegee.	Hoolgoon.	Negloor.	Bunkapoor.	Oolul.	Dovagherry.	Mylar.	Hurrughree.	Attegherry.	Kotnal.	Savanoor.	Hunmunhullee.	Hugadee.	Kunvullee.	Kumdoolee.	Gootul.	Dummul.	Havanoor.	Doonseae.	Oohkeope.	Kullehal.	31,172	2,968	none -	none -	31,172	2,968	228,807	16,254
Hooblee.	Havaree.																																														
Annegherry.	Motabednoor.																																														
Koolwad.	Raneebednoor.																																														
Koortcotah.	Dovasoar.																																														
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Havanoor.	Doonseae.																																														
Oohkeope.	Kullehal.																																														

COTTON PURCHASED FOR GOVERNMENT.

TALOOKAS.	NEW ORLEANS.						BROACH.						TOTAL FOREIGN.		COUNTRY COTTON.								
	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the Whole.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the Whole	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Quantity purchased in Candies of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the Whole.	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the Whole		
	11.	12	13.	14.	15.	16.	17	18.	19	20	21.	22.	23.	24.	25.	26	27.	28.	29.	30.	31.		
Dharwar - Nowlgoond. Dummul. Bunkapoor. Hooblee Raneebednoor. Hangul. Koad.	300	88	26,400	88	88	88	-	-	-	-	-	-	-	-	300	88	26,400	120	75	75	75	75	9,000

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

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COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1850 to ending 31 May 1851—continued.

TALOOKAS.	GINS																
	In Use.										Out of Use.				Being Made.		
	Belonging to Government.		Belonging to Private Individuals.								Belonging to Government.		Belonging to Private Individuals.		For Government.	For Private Individuals.	
	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Number of Saws.
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.		
Dharwar	2	Annegherry	18	4	Hoblee	18	3	Gootul	7	1	Dharwar*	25	-	None	13	18	-
Nowlgoond	2	Koolwad	18	1	Ditto	20	1	Kunnullee	14	1	Ditto*	20	-	-	24	7	-
				2	Ditto	7	1	Ditto	7	1	Ditto	7	-	-	-	-	-
Dummul.	2	Gudduck	18	1	Cumdolee	14	1	Hunmunhulle	18	7	Ditto†	18	-	-	-	-	-
				2	Koolgoor	18	1	Ditto	14	1	Ditto	15	-	-	1	7	-
Bunkapoor.	1	Ditto	13	5	Bunkapoor-	18	1	Ditto	7	1	Ditto	12	-	-	-	-	-
				1	Ditto	25	1	Rurtee	7	5	Ditto	10	-	-	38	-	-
				2	Ditto	14	4	Angdee	7	-	-	-	-	-	-	-	-
Hooblee.	7	Ditto	13	2	Ditto	7	2	Kurrughee	18	1	Ditto	8	-	-	-	-	-
				1	Duvagherry	18	1	Ditto	14	1	Ditto	7	-	-	-	-	-
Raneebednoor.				2	Ditto	14	1	Ditto	7	1	Ditto	7	-	-	-	-	-
Hangul.				1	Davasoor	18	1	Savanoor	18	1	Ditto	18	-	-	-	-	-
				5	Havaree	7	1	Allegherry	7	-	-	-	-	-	-	-	-
Koad.				4	Motabednoor	7	1	Ooleecope	18	-	-	-	-	-	-	-	-
				1	Raneebednoor	18	2	Koolwad	18	19	* Old, serviceable, the rest old, unserviceable.	-	-	-	-	-	-
				3	Ditto	7	1	Kooroot Cotta	18	-	-	-	-	-	-	-	-
				2	Myiar	7	1	Bettegherry	25	-	-	-	-	-	-	-	-
				2	Oolul	7	2	Ditto	18	-	-	-	-	-	-	-	-
				2	Havanoor	18	4	Nurrighul	7	-	-	-	-	-	-	-	-
				1	Ditto	14	1	Soodee	14	-	-	-	-	-	-	-	-
				5	Ditto	7	5	Ditto	7	-	-	-	-	-	-	-	-
				2	Itteghée	7	6	Mullapoor	7	-	-	-	-	-	-	-	-
				1	Bellamaghee	18	4	Nowlgoond	7	-	-	-	-	-	-	-	-
				1	Hulgee	7	1	Doonsee	18	-	-	-	-	-	-	-	-
				2	Moorool	7	1	Dummul	18	-	-	-	-	-	-	-	-
				2	Negloor	7	2	Kulleehal	7	-	-	-	-	-	-	-	-
				2	Gootul	18	-	-	-	-	-	-	-	-	-	-	-

TALOOKAS.	GINS—continued.			COTTON GINNED FOR GOVERNMENT AND FOR PRIVATE INDIVIDUALS							TOTAL Net Expenses on Account of the Experiments from the Commencement to the Close of the Half-Year preceding that under Report	TOTAL Expenses for the Half Year under Report.		
	Sold for Government during the Half-Year under Report.		Profit or Loss to Government, deducting the Cost of European Superintendence.	FOREIGN COTTON.					COUNTRY					
	Number.	Number of Saws.		At what Cost	NEW ORLEANS.		BROACH.	TOTAL		Quantity Purchased in Candies of 784 lbs for Government.			Quantity Purchased in Candies of 784 lbs for Private Individuals.	
			Quantity Purchased in Candies of 784 lbs. for Government.		Quantity Purchased in Candies of 784 lbs for Private Individuals	Quantity Purchased in Candies of 784 lbs for Government	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs for Government.	Quantity Purchased in Candies of 784 lbs for Private Individuals.					
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.	
Dharwar	9	18	1,800	This column I cannot give correctly, much of the material consumed has been procured on indents, and I have not been advised of the cost, but I think I am safe in saying there has been no loss incurred	17	639	-	-	17	639	20	-	-	-
Nowlgoond.	3	18	540											
Dummul.	27	7	1,850											
Bunkapoor.	2	7	80											
Hooblee.	51		4,270											
Raneebednoor.														
Hangul.														
Koad														
												Rs. a p	Rs. a. p	
												Total Expenses - 2,55,663 2 7	Total Expenses - 1,498 10 11	
												Total Receipts - 1,14,655 13 4	Total Receipts - 4,130 5 -	
												Balance - Rs 1,41,127 5 3	Balance - Rs. 7,308 5 11	

Remarks Column 52 to 60 the actual quantity cannot be ascertained, the quantity given is on a supposition that the Gins have been worked an average of 30 days
 Column 51. The total expenditure on account of the gin factory, including fixed native establishment, for the past year, commencing 1st June 1850 to 31st May 1851, is Rs 5,339 10 a 4p.

Total of gins made is - - - - - Rs. 5,895 - -
 Total of repairing and sundries - - - - - 485 11 10

(signed) John M. Blount,
 Superintendent of Cotton Experiments.

III.

Bombay.

EXTRACT Bombay Revenue Consultations, dated 25 August 1852.

No. 10,901.

From the Revenue Commissioner, Southern Division, No. 1786, with Enclosures.

Sir,

I HAVE the honour to submit a letter from the Collector of Dharwar, dated the 19th April last, No. 529, with its accompaniments, being Mr. Blount's report on the progress of the cotton experiment in that zillah, for the half year ending the 30th November last. The delay in laying these papers before Government is owing to the superintendent's absence at Bombay having prevented the Collector's furnishing certain explanations which I had called for till the 20th instant (No. 1,042).

On 30th April last.

2. From the second column of the tabular report it appears, that although the season had not proved so favourable as the preceding year, the crops of both New Orleans and country cotton were eagerly bought up, and at high prices. Of the former variety 800 khundees had been purchased for Government, and the remainder by European and native merchants.

*Columns 17 and 20.

3. The most gratifying part of the report, however, is the increase shown in the number of saw-gins belonging to private individuals. In the previous season's report these were stated at 111; they are now given at 145; * thus showing that gins are now more extensively made use of by the natives; and from which I think it may not unfairly be inferred that the New Orleans cotton, for cleaning which they are required, is likewise getting more into favour.

†Column 11.

‡Column 14.

§Column 27.

||Column 29.

4. Of the Government gins, † six were in use at Annigerry, Kolwad, and Gudduk, and 15 ‡ out of use at Dharwar; 49 were in course of construction.

5 The number of gins sold during the period reported on was 62, § viz., 17 for the Belgaum districts, 11 for transmission to the Northern Division, and 34 for use in the Dharwar Collectorate. The price realised is stated at 8,470 || rupees.

The expenses of the half-year are detailed in the accompanying Statement (A.), at - - - - -		Rs.	a.	p.
		94,121	5	7
And the receipts, at - - - - -		3,505	2	10
Giving a net outlay of - - - - -		Rs. 90,616	2	9

If, however, items 11 and 18 to 20 of the account, be thrown out, as not legitimately chargeable to the experiment, the net expenditure will stand at only at Rs. 9,726. 7. 1.

Poona, Revenue Commissioner's Office,
30 July 1852.

I have, &c.
(signed) W. Courtney,
Revenue Commissioner, S. D.

No. 10,902.

(No. 529 of 1852.)

To W. Courtney, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to submit the half-yearly report of the Superintendent of cotton experiments in this collectorate for the period which expired on the 30th November last.

2. In the previous half-yearly statement the total number of saw-gins in the hands of private individuals was shown to amount to 111. In the present statement 145 are exhibited (including 14 not in use), being an increase of 34; 62 saw-gins were sold from the Government factory, being an increase of 11 over the previous half-year. The demand for these machines seems to be constantly increasing, and the factory is kept in full employment; but, as remarked by Mr. Blount, many more must be at work before any large portion of the crop can be cleaned in time to secure its early transit to the Presidency, a point of great importance as regards the quality of cotton, which is so liable to deterioration by long detention in this country, especially when not freed from the seeds.

3. I can add my testimony to that of Mr. Blount, as to the generally favourable appearance of this year's crop of American cotton, which also, from the samples I have seen, seems to be superior in quality to that of last year.

Dharwar Collector's Office,
19 April 1852.

I have, &c.
(signed) J. S. Law,
Collector.

P.S.—With reference to the latter part of the 4th para. of Mr. Blount's letter, I beg to state, that I have caused the items of receipts and expenditure to be verified by comparison with my accounts.

J. S. Law, Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1395

(No. 99 of 1852.)

To J. S. Law, Esq., Collector, Dharwar.

III.
Bombay.

No. 10,902.

Sir,

I HAVE the honour to forward half-yearly report of the cotton experiments in the Dharwar Collectorate, ending 30th November 1851.

2. The average produce of the American cotton was not equal to that of the two previous years, as mentioned in column 2 of the report. The shortness of the crop was not general, but confined to certain localities, particularly the villages near Daoogherry and Kuruujghee. This partial failure has not, however, deterred the ryots of those villages from planting the American cotton again during the past monsoon. I have been over a large portion of the district since October last, and I find the American cotton in every part looking well, and promises to yield a large crop. The plant generally, is, I think, as good as I have ever seen it. The cultivation of American cotton, in 1851 and 1852, as contrasted with 1850 and 1851, shows an increase of 11,475 acres 14 goontas.

3. The number of gins sold (column 27) is 62, of which 34 were for the use of dealers in the Dharwar Collectorate, 17 for use in the Belgaum Collectorate, and 11 sent to Bombay for the use of the Northern District. The number of gins at work in the district last season, for Government, was six, and by dealers, their own property, 131, showing a large increase over the previous year, but still insufficient for cleaning the crop in time for its early transit to the Presidency. At the close of this report a large quantity of cotton still remained on hand of the dealers uncleaned. It is to be hoped that the dealers will supply themselves more liberally with gins this season, so as to have the cotton ready for transit immediately after the close of the monsoon.

4. I beg to state that this report has been unavoidably delayed from the 27th last October till the 26th March. I was in the district, attending to receiving and forwarding cotton, and since my return to the station I have been so fully occupied with my accounts that I have not time to refer to your office for the receipts and disbursements, the only items required to complete the report.

I have, &c.

(signed) J. M. Blount,
Superintendent of Cotton Experiments,
S. M. Country.

Dharwar, 15 April 1852.

COTTON PLANTER'S REPORT for the Half-Year, from 1 June to 30 November 1851,
in the Dharwar Collectorate.

TALOOKS.	Remarks on the past Season, as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of the Last Year's Crop which has been Cleaned in Saw-gins.				
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cott	
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
Dharwar Nowlgoond. Hooblee. Bunkapoor. Koad. Raneebednoor. Dummul. Hangul.	As was anticipated, the crop was not so good as that of the previous season. Owing to the high prices ruling at the time the crop came to maturity, both descriptions of cotton were eagerly purchased up, and at high prices. Of the American cotton upwards of 800 candies were purchased on account of Government, 200 candies by the firm of Ritchie, Stuart & Co., of Bombay; the balance of the crop has been purchased by native dealers, part has been forwarded to market, and some remains on hand.	Cds. lbs. 812 650 clean cotton.	None	Cds. lbs. 812 650	Cds. lbs. 111 305	The whole, except about 200 candies which remained to be cleaned by the saw-gins.	None	Cds. 2,768 About 200 candies uncleaned, as stated in column 7.	The gins are but little used for cleaning. Native cotton clean for Government By native dealers	Cds lbs. 111 305 150 "

COTTON PLANTER'S REPORT for the Half Year, from 1 June to 30 November 1851, in the Dharwar Collectorate—continued.

TALOOKS.	G I N S.																			
	In Use.			Out of Use.			In Use.						Out of Use.			Being Made.				
	Belonging to Government.			Belonging to Government.			Belonging to Private Individuals.						Belonging to Private Individuals.			For Government.		For Private Individuals.		
	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.	Number.	Number of Saws.	
1.	11.	12.	13.	14.	15.	16.	17.	18.	19.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	
Dharwar	2	Anneghery	18	1	Dharwar	20	1	Doonsee	18	1	Oolecope	18	12	Nowlgoond	7	11	20			
Nowlgoond.	2	Koolwad	18	5	Ditto	10	3	Nowlgoond	18	2	Hujjee	18	2	Hooblee	7	1	8			
Hooblee.	2	Gudduck	18	1	Ditto	8	2	Ditto	7	2	Ditto	13	14		13	18				
Bunkapoor.				1	Ditto	25	1	Anneghery	7	2	Reetie	7			24	7				
Koad.				3	Dharwar (Cottage.)	4	1	Kooboad	24	2	Chermoor	7								
Raneebednoor.				1	Ditto		1	Ditto	18	1	Davagherry	18								
Dummul.				2	Churkey (made by Mr. Mahar.)		3	Gudduck	13	1	Ditto	13				49				
Hangul.				2	Cotton thrashers.		4	Bettegherry	24	5	Havaree	7								
				15			1	Ditto	18	1	Kunvallee	14								
							2	Koortkota	18	2	Ditto	7								
							3	Nurrighut	7	1	Hummuhulla	18								
							4	Kulsapoor	7	1	Ditto	14								
							1	Kuddadee	7	4	Augadee	7								
							1	Dummul	18	1	Raneebednoor	20								
							2	Gootub	18	3	Ditto	7								
							3	Ditto	7	5	Motabednoor	7								
							2	Havanoor	18	5	Hooblee	18								
							1	Ditto	14	1	Ditto	20								
							5	Ditto	7	4	Ditto	7								
							1	Belawagee	18	1	Ditto	14								
							1	Hulgee	7	1	Cumdolee	14								
							2	Moral	7	2	Mular	7								
							2	Negloor	7	2	Oolul	7								
							1	Katual	14	2	Oolulbednoor	7								
							3	Ditto	7	1	Jettagee	18								
							1	Davasoor	18	1	Savanoor	18								
							1	Bunkapoor	25	1	Attegherry	7								
							7	Ditto	18	3	Nurgoond	7								
							2	Ditto	14	2	Ditto	18								
							1	Ditto	20	1	Heallehal	7								
							2	Hoolgoor	18	1	Mahoor	7								
							1	Ditto	8	1	Masoor	7								
							1	Ditto	7	2	Sasavallee	7								
							1	Oolecope	14											
									131											

TALOOKS	G I N S—continued.			Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on account of the Experiment from the Commencement of the Close of the Half-Year preceding that under Report.	Total Expense for the Half-Year under Report.	Prospect of the Coming Season.		
	Sold for Government during the Half-Year under Report.								
	Number Sold.	Number of Saws each.	At what Cost.						
1.	27.	28.	29.	30.	31.	32.	33.		
Dharwar	24	7	1,200	This column I cannot give correctly; much of the materials consumed has been procured on indents, and I have not been advised of the cost, but I think I am safe in saying there has been no loss incurred.	Total Expenses	Rs. 2,67,161 13 6	Total Expenses -	Rs. 94,121 5 7	The prospect of a large crop being realised is flattering.
Nowlgoond.	1	7	40		Total Receipts	1,48,666 2 4	Total Receipts -	3,505 2 10	
Hooblee.	18	18	3,600		Balance - Rs.	1,18,495 11 2	Balance - Rs.	90,616 2 9	
Bunkapoor.	3	18	540						
Koad.	10	20	2,100						
Raneebednoor.	1	23	200						
Dummul.	1	15	180						
Hangul.	1	13	160						
	62		8,470						

(signed) J. M. Blount,
Superintendent of Cotton Experiments, S. M. C.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1397

EXTRACT Bombay Revenue Consultations, 15 December 1852.

(No. 2757.)

From the Revenue Commissioner, Southern Division, to the Secretary to Government.

III.
Bombay.

No. 15,629.

Sir,

I HAVE the honour to transmit the progress report of the Superintendent of the cotton experiments in the Dharwar zillah for the half-year ending 31st May last, received from the Collector with the accompanying letter of 28th September, No. 1444, and to express a hope that the information therein contained will prove satisfactory to his Lordship in Council.

2. I respectfully solicit the instructions of Government on the suggestions contained in Mr. Law's 2d and 4th paras., to none of which I see any objection.

3. Adverting to the date of the 40th to 42d items of debit in the appended statement of receipts and disbursements, the Collector explains in a subsequent memo. of 25th ultimo, No. 1594, that they "were brought to account in his books in the month of December 1851, in accordance with instructions received from the Accountant-general in October of the same year, when the value of the articles and charges on account of their package, &c. was communicated to the Collector, but, through an oversight, not to the Superintendent, to enable him to bring them on his accounts, until during the half-year embraced in this statement. He also explains that the articles alluded to in these items are 'files, saws, and other tools, as well as iron, zinc, &c.' supplied for the use of the saw-gin manufactory."

I have, &c.

Poona District, Camp, Oorhie,
6 November 1852.

(signed) W. Courtney,
Revenue Commissioner, S. D.

(No. 1444 of 1852.)

From the Collector of Dharwar to Revenue Commissioner, Southern Division.

No. 15,630.

Sir,

I HAVE the honour to submit the half-yearly report of the Superintendent of cotton experiments for the period which elapsed on the 31st May last.

2. The increase in the cultivation of American cotton has already been reported in the statement dated 12th November 1851, No. 1926. With reference to Mr. Blount's observation regarding enam villages, I beg to explain that the land planted with cotton in all such villages as are under the Regulations, and form part of the Dharwar Collectorate, is included in the statement. The villages alluded to by Mr. Blount are those belonging to the Nuwab of Savanoor and the chiefs of Nurgoonah, Sanglee, Jumkhundee, and Meeruj, intermixed with those of this collectorate, but not forming part of it, and therefore not coming within the scope of the statement. Should information be desired regarding the extent of cotton cultivation in the villages in question, it might be obtained from the chiefs, though owing to the old native measures of moes, &c., which vary in different places, being there prevalent, it could not be very exact; but still by means of local inquiries an estimate of the number of acres might be prepared.

3. I quite agree with Mr. Blount in opinion that it will be desirable, from next year, to reduce the Government purchases to the quantity that may be necessary for the purpose of commencing the important experiment of screwing the cotton at Hooblee, before sending it to Bombay. I may add to the reasons for this measure alleged by the Superintendent that the agents of Bombay mercantile houses stationed here have complained to me of the extensive purchases of American cotton on account of Government interfering with their transactions.

4. I would beg to suggest that in future the name of the talookas should be substituted for those of villages in column 36 of this statement. As observed by Mr. Blount in the column of remarks, the saw-gins are frequently moved about from village to village, and I think it would be more useful to show in what districts the use of the machine is chiefly progressing; column 37 might then be omitted,* and the number of saw-gins of the different sizes might be entered in column 35, opposite the name of each talooka in column 36.

5. I have been unable to hand up this report sooner owing to the necessity of verifying the account of receipts and expenses by a detailed comparison with my hoozoor accounts, which has been delayed by the illness of Mr. Blount's writer.

I have, &c.

Dharwar, Collector's Office,
28 September 1852.

(signed) J. S. Law, Collector.

* Also columns 40, 43, 45, 47, and 49, as proposed in Collector's memo. of 25th October 1850, No. 1594.

(No. 128 of 1852.)

From the Superintendent of Cotton Experiments to the Collector, Dharwar.

Sir,

I HAVE the honour to forward you the half-yearly report, ending 31st May 1852, of the cotton experiments in this district. This report has been unavoidably delayed owing to my absence from the district, and consequent accumulation of other work which had first to be disposed of before I could take it in hand.

2. The cotton cultivation of each variety, native and exotic, has generally produced a good crop, particularly the American plant, which, I think, has equalled in produce that of any previous year. The total number of acres planted in cotton, as by the returns made to your office, is 2,63,323 acres and 25 goomtas, estimated to have yielded a crop of 20,403 candies and 264 lbs. of clean cotton, of which 42,647 acres and 25 goomtas is American cotton, estimated to have produced 4,569 candies and 252 lbs. of clean cotton, showing a decrease in the cultivation of native cotton of 7,131 acres, and an increase in the American cotton cultivation of 11,475 acres, and a total increase in the cultivation of cotton over the preceding year of 3,353 acres. The total quantity of cotton cultivation within the Dharwar Collectorate is, however, greater than the quantity stated above, as a larger quantity of land is planted with cotton in the enam villages of which no return is made, and which, if it could be arrived at, would, no doubt, make the actual quantity of cotton produced in the collectorate one or two thousand candies more.

3. The workshop in charge of Mr. Frost has been kept in constant employment, and the gins sold as fast as they could be made up. At the date of my last report, the number of gins sold in this district, in and out of use, was 145 of all sizes; since then, up to the close of this report, 34 have been sold, making the whole number of these machines owned by native dealers to be 179, and 5 moved from Belgaum into this district, which makes the whole number of gins at work during the half-year, 184.

4. The press-house now building at Hooblee is progressing favourably, and provided the presses which are to be made up at the gun carriage department, Bombay, are furnished, so as to admit of their being forwarded in November next, I expect to get this establishment ready for screwing cotton early in 1853, so as to have it available for the next crop of cotton which will be planted this year (1852).

5. Heretofore I have considered it necessary that Government should purchase largely of the American crop as a means of securing or encouraging a more extended growth of that variety of cotton, and consequently a more extended use of the saw gin for cleaning the cotton. The necessity for Government to continue these large purchases is greatly diminished within the last two years. On my taking charge of the experiments in 1848, there were 25 gins, all the property of Government, which were lent out to several native dealers, and kept in repair at Government expense; I was satisfied that to continue the system of lending the machinery kept many dealers from trading in this cotton; and as there was a general impression amongst the people that none but those to whom the gins were lent were privileged to buy up this cotton. Those men had in fact a monopoly to the extent of the American cotton produced. I, that year (1848), ordered all the machines to be returned, and informed the dealers that any who chose could purchase the cotton, and be supplied with gins at the Government gin manufactory. Consequent on the heavy falling off in cultivation in 1848, but few gins were disposed of in that season, but since then the demand has been steadily increasing; and for some five or six dealers then engaged in the purchase of the cotton, we have now perhaps one hundred dealers who trade in the American cotton. The cultivation of this cotton has extended from 3,237 acres in 1848 to 42,647 $\frac{2}{3}$ acres in 1851, and the number of gins at work in the district for the same period has increased from 14 to 184.

6. These results, I think, show that the experiments in this district have reached that degree of stability that further progress may be relied on from the encouragement afforded by native enterprise, as there is a keen and active competition amongst the native dealers for this cotton. I therefore think that if Government wish to withdraw from the market the present is a most favourable period for making the trial, and I would suggest that of the next crop (now being planted) only some 200 or 300 candies* should be purchased (unless circumstances hereafter should render it advisable to purchase a larger quantity) for the purpose of commencing the experiments of screwing the cotton before forwarding it to the Presidency.

Dharwar, 23 August 1852.

I have, &c.
(signed) J. M. Blount,
Superintendent of Cotton Experiments, S. M. C.

* Since writing the above, I have advanced to various ryots in the Bunkapore Talook the New Orleans cotton seeds lately received from America, which will plant about 1,000 acres of land, and produce probably 100 candies, leaving one to two hundred candies to be purchased.

(signed) J. M. Blount.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1399

STATEMENT No. 1.

COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1851 and ending 31 May 1852, in Dharwar Collectorate.

1.	2.	EXTENT ACRES OF COTTON CULTIVATION.																																				
		NEW ORLEANS.		BROACH.	TOTAL FOREIGN.		COUNTRY COTTON.																															
		Extent in Acres.	Estimated Produce in Candies of 784 lbs.		Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.																														
3.	4.	5.	6.	7.	8.	9.	10.																															
1. Dharwar	<p>There was plenty of rain for all farming purposes, and the cotton crop (both the native and American crops), looks most flattering, and a fair average yield is expected.</p> <p>The stations visited by the Superintendent:—</p> <table border="0"> <tr> <td>Hooblee.</td> <td>Hursmumulhee.</td> </tr> <tr> <td>Anegherry.</td> <td>Gootul.</td> </tr> <tr> <td>Koatwud.</td> <td>Havanoor.</td> </tr> <tr> <td>Kootcottee.</td> <td>Negloor.</td> </tr> <tr> <td>Gudduck.</td> <td>Belanaghee.</td> </tr> <tr> <td>Battagherry.</td> <td>Ittighee.</td> </tr> <tr> <td>Dummul.</td> <td>Raneebednoor.</td> </tr> <tr> <td>Nurrihul.</td> <td>Oolecape.</td> </tr> <tr> <td>Kudadee.</td> <td>Hulghee.</td> </tr> <tr> <td>Kolasapoor.</td> <td>Mooroal.</td> </tr> <tr> <td>Saswoullea.</td> <td>Mootabednoor.</td> </tr> <tr> <td>Hoolgoor.</td> <td>Havaree.</td> </tr> <tr> <td>Bunkapoor.</td> <td>Angodee.</td> </tr> <tr> <td>Katnahallee.</td> <td>Donagherry.</td> </tr> <tr> <td>Kunnallee.</td> <td></td> </tr> </table>	Hooblee.	Hursmumulhee.	Anegherry.	Gootul.	Koatwud.	Havanoor.	Kootcottee.	Negloor.	Gudduck.	Belanaghee.	Battagherry.	Ittighee.	Dummul.	Raneebednoor.	Nurrihul.	Oolecape.	Kudadee.	Hulghee.	Kolasapoor.	Mooroal.	Saswoullea.	Mootabednoor.	Hoolgoor.	Havaree.	Bunkapoor.	Angodee.	Katnahallee.	Donagherry.	Kunnallee.		42,647 25	<p>The produce having been a good one, I have estimated the crops at 9 maunds of cuppas the acre, equal to 4,569 candies and 252 lbs. of clean cotton.</p>	None	Acres. gta. 42,647 25	4,569 candies and 252 lbs.	2,21,676 9	<p>Estimated at 8 maunds of cuppas, the acre equal to 15,834 candies and 12½ lbs. of clean cotton.</p>
Hooblee.		Hursmumulhee.																																				
Anegherry.		Gootul.																																				
Koatwud.		Havanoor.																																				
Kootcottee.		Negloor.																																				
Gudduck.		Belanaghee.																																				
Battagherry.		Ittighee.																																				
Dummul.		Raneebednoor.																																				
Nurrihul.		Oolecape.																																				
Kudadee.	Hulghee.																																					
Kolasapoor.	Mooroal.																																					
Saswoullea.	Mootabednoor.																																					
Hoolgoor.	Havaree.																																					
Bunkapoor.	Angodee.																																					
Katnahallee.	Donagherry.																																					
Kunnallee.																																						
2. Nowlgoond.																																						
3. Dummul.																																						
4. Bunkapoor.	1,025 0																																					
5. Hangul.	23,773 27																																					
6. Hooblee.	37,349 33																																					
7. Raneebednoor.	4,16,601 19																																					
8. Koad.	53,851 36																																					
	61,698 19																																					
	78,034 25																																					
	81,930 39																																					
	42,647 23																																					

COTTON PURCHASED FOR GOVERNMENT.

TALOOKAS.	NEW ORLEANS.						BROACH.						TOTAL FOREIGN.			COUNTRY COTTON.								
	Quantities purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the whole.	Highest rate per Candy of 784 lbs.	Lowest rate per Candy of 784 lbs.	Average rate per Candy of 784 lbs.	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the whole.	Highest Rate per Candy of 784 lbs.	Lowest rate per Candy of 784 lbs.	Average rate per Candy of 784 lbs.	Quantity purchased in Candies of 784 lbs.	Average rate per Candy of 784 lbs.	Cost of the whole.	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest rate per Candy of 784 lbs.	Lowest rate per Candy of 784 lbs.	Average rate per Candy of 784 lbs.	Cost of the whole.			
	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.			
1. Dharwar	Ces. 610	Rs. 72	43,920	72	72	72	-	-	-	None	-	-	-	-	Ces. 610	Rs. 72	43,920	100	63	63	63	63	63	
2. Nowlgoond.																								
3. Dummul.																								
4. Bunkapoor.																								
5. Hangul.																								
6. Hooblee.																								
7. Raneebednoor.																								
8. Koad.																								

STATEMENT No. 1.—Cotton Planter's Report for Half-year commencing 1 December 1851 to 31 May 1852—continued.

TALOOKAS.	G I N S.																	
	In Use.										Out of Use.				Being Made.			
	Belonging to Government.			Belonging to Private Individuals.							Belonging to Government.		Belonging to Private Individuals.		For Government.		For Private Individuals.	
	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Number of Saws.	Number.
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.			
1. Dharwar	-	The whole of the cotton required for Government purchased from dealers.	1	Doossee	18	1	Mahoor	7	1	-	20	-	None	7	20			
2. Nowigoond.			3	Nowigoond	18	1	Masoor	7	1	Made in	25			14	18			
3. Dummul.			1	Annaghery	7	2	Sasanulle	7		Madras.				24	7			
4. Bunkapoor.			1	Koalwad	24	2	Koorouttee	7	3	Made in	4							
5. Hangul.			4	Ditto	18	1	'Andoor	7		Broach.					45			
6. Hooblee.			1	Gudduck	13	1	Tundoor	9		Made in	18							
7. Raneebednoor.			3	Betteghery	24	1	Munsurga	18	15	Dharwar.								
8. Koad.			1	Ditto	18	2	Hebbal	7		Ditto	8							
			4	Koortcotah	18	1	Ingulhee	18	1	Made in	4							
			4	Nurrighul	7	1	Luxmaswar	16	1	Dharwar of								
			1	Kulsapoor	7	2	Angaslee	7		no use.								
			1	Kadadee	7	4	Ditto	7		Cotton thrashers								
			2	Dummul	18	1	Raneebednoor	20	2	Churkey								
			2	Gootul	18	3	Ditto	7	2	Made in Cal-								
			6	Ditto	7	1	Kurcode	7		cutta.								
			2	Havanoor	18	1	Badaghee	7		Churkey,								
			1	Ditto	14	1	Kalzal	14		Egyptian.								
			5	Ditto	7	4	Ditto	7										
			1	Belaghee	18	1	Davesoor	18	1									
			1	Hulghie	7	6	Bunkapoor	18										
			2	Norval	7	1	Ditto	25										
			2	Negloor	7	2	Ditto	14										
			1	Soordgarry	18	1	Ditto	20										
			2	Elegreh	10	1	Ditto	10										
			6	Motobednoor	7	3	Hoolgooz	18										
			5	Hooblee	18	1	Ditto	8										
			1	Ditto	24	1	Ditto	7										
			21	Ditto	7	1	Oolecops	18										
		1	Ditto	14	1	Ditto	14											
		1	Kumdolu	14	2	Khurrughee	18											
		1	Ditto	18	2	Ditto	13											
		2	Mylur	7	2	Reelee	7											
		2	Oolul	7	2	Chenwoor	17											
		2	Oolul Budnoor	7	1	Danagherry	18											
		2	Ditto	18	1	Ditto	18											
		1	Ittaghee	7	5	Havaree	7											
		3	Savanoor	7	1	Kunnulle	14											
		1	Ditto	18	4	Otto	7											
		1	Attaghery	7	1	Hummumall	14											
		4	Nurgoond	7	1	Ditto	18											
		4	Ditto	18														
		1	Kullehall	7	184													

TALOOKAS.	G I N S—continued.										COTTON GINNED FOR GOVERNMENT, AND FOR PRIVATE INDIVIDUALS.										Total Net Expenses on Account of the Experiments, from the Commencement to the close of the Half-year preceding that under Report.	Total Expenses for the Half-year under Report.
	Sold for Government during the Half-year under Report.			Profit and Loss to Government, deducting the Cost of European Superintendence.	FOREIGN COTTON.						COUNTRY COTTON.											
	Number	Number of Saws	At what Cost each.		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.											
					Quantity purchased in Candies of 784 lbs. for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.	Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.	Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.												
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.									
1. Dharwar	7	20	1,540	Supposed to have realized the cost of construction.	There are at work in this district 191 gins, all of which belonging to private dealers, I have no means of ascertaining the time they have been worked or the quantity of capps cleaned on them. Some of the machines were put to work as early as the middle of February, and the greater number from the end of April. Up to the close of this report, the quantity cleaned, both for Government and private parties, is about 1,000 candies.	-	-	-	None	-	None	About 30 candies ginned.	None									
2. Nowigoond.	5	18	1,000																			
3. Dummul.	5	10	500																			
4. Bunkapoor.	24	7	1,200																			
5. Hangul.			4,240																			
6. Hooblee.																						
7. Raneebednoor.																						
8. Koad.	41																					

Remarks.—Column 35 to 37, the villages named are those to which the gins were originally sent, but as they are frequently moved by the owners to other places, the actual number of villages in which gins have been during the half-year is greater than stated, but the number of gins worked remains the same.

Cols. 60 and 61. The balance against the experiments, including both columns, is Rs. 31,595. 11. 5., of which Rs. 14,961. 0. 1. is for cotton purchased and forwarded to Bombay, 1848;

Ditto	-	-	-	ditto	-	-	1849	-	-	38,526	14	4
Ditto	-	-	-	ditto	-	-	1850	-	-	80,876	4	8
Ditto	-	-	-	ditto	-	-	1851	-	-	81,927	11	1

Leaving an actual balance of Rs. 94,903. 4. 3. against dead stock, and superintendence and fixed establishment.

(signed) J. M. Blount,
Superintendent Cotton Experiments, S. M. C.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1401

III.
Bombay.

RESOLUTION.

(No. 15,631.)

THE suggestions in paras. 2 and 4 of Mr. Law's letter to be acted on.

2. Government do not wish to make purchases if traders will go into the market to purchase New Orleans cotton at fair rates, and guard against its being tampered with before reaching Bombay.

3. The suggestion in para. 3 of Mr. Law's letter, therefore, to be acted on, provided Mr. Blount can be trusted with the commission, and provided the purchasers of New Orleans cotton will not have it pressed at the Government screws; as regards the former proviso, Mr. Courtney to be reminded that a reply to Government reference of 23d August 1852, No. 5553, is still due.

(signed) *Falkland.*
D. Blane.
A. Bell.

EXTRACT Bombay Revenue Consultations, 27th April 1853.

From the Revenue Commissioner, Southern Division, No. 864, with Enclosures.

No. 4997.

FORWARDED for the information of Government. The Revenue Commissioner is happy to find the Collector is able to report so favourably of the state of the present season's cotton plantations.

Paras. 3 and 4

(signed) *W. Courtney,*
Rev. Commissioner, S. D.
Rev. Commissioner's Camp, "Nehr,"
5 April 1853.

(No. 151 of 1853.)

To *W. Courtney*, Esq., Revenue Commissioner, Southern Division.

No. 4998.

Sir,

I HAVE the honour to submit the report of the Superintendent Cotton experiments for the half-year ending on the 30th November last, with its accompanying account current, showing the receipts and disbursements of the department during the above period.

2. Referring to the column of remarks wherein Mr. Blount states, that the gin is not used for the natives for cleaning native cotton, whereas column 10 shows that about 50 candies had been so cleaned, I beg to explain that this was on Government account.

3. Owing to the beneficial effect of the rain, which fell during the first 10 days of December, and again on the 20th and 21st ult., the cotton of the present season has not only a healthy and vigorous appearance, but is much more forward than could have been expected from the unusually late period at which the greater part of it was sown. It is therefore to be regretted that the ryots, from apprehensions of failure, were induced to plant a smaller extent of land with the American variety than in the previous year.

4. The freedom of the American cotton crop of the present season from mixture in the fields with the indigenous variety, which has been such a serious evil for the last three or four years, will, I hope, be viewed with satisfaction.

5. The transmission of this report has been unavoidably delayed, owing to its having been found necessary to return the Statement No. 2 to the Superintendent for correction.

Dharwar, Collector's Office,
9 February 1853.

I have, &c.
(signed) *J. S. Law*, Collector.

STATEMENT No. 2.

COTTON PLANTER'S REPORT for the Half-Year from 1 June to 30 November 1852, in the Dharwar Collectorate.

TALOOKAS.	Remarks on the past Season, as to how far anticipations regarding the Crop, and its disposal, were realised.	Quantity of Cotton on Hand on account of Government, of each Sort, Ginned or not Ginned, viz.				Supposed Proportions of the last Year's Crop which has been Cleaned in the Saw Gins, or will be so Cleaned.			
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cotton.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Dharwar Hooblee. Nowgoond. Dumbul. Raneebednor. Hangul. Koad. Bunkapoor.	The cotton cultivation, both native and New Orleans, yielded a fair average, and quite equal to the anticipation formed of it. There has been no lack of purchasers for either description of cotton, but the New Orleans has not generally realised to the ryot as high a price as during the previous season. This cotton was bought up by advances, in a great measure, early in the season, and at a time when prices were low, and owing to this circumstance, the ryots were not benefited by the subsequent rise in the cotton market. The native cotton was not advanced on to near so great a proportion of the whole crop, and owing to this, it has in many instances, brought the ryots in as much per maund as the American cotton.	C. lbs 407 142 $\frac{3}{4}$	None -	C. lbs. 407 142 $\frac{3}{4}$	The ryots would not agree to give clean picked cotton, and therefore none was purchased.	The whole crop was cleaned by the saw-gin at the date on which the report was submitted, 3d February 1853.	None -	Nine-tenths at the close of the report, but the whole has since been cleaned, as stated in col. 7.	About 50 candies have been cleaned by the gins.

G I N S.

TALOOKAS.	In Use.		Out of Use.		In Use.		Out of Use.	
	Belonging to Government.		Belonging to Government.		Belonging to Private Individuals.		Belonging to Private Individuals.	
	Number and Size of Gins.	TALOOKAS.	Number and Size of Gins.	TALOOKAS.	Number and Size of Gins.	TALOOKAS.	Number and Size of Gins.	TALOOKAS.
11.	12.	13.	14.	15.	16.	17.	18.	
Dharwar Hooblee. Nowgoond. Dumbul. Raneebednor. Hangul. Koad. Bunkapoor.	None -	None -	28 of 18 saws.	In the factory at Dharwar.	1 of 20 saws - 11 of 18 " 2 of 14 " 25 of 7 "	Hooblee. Nowgoond. Dumbul. Raneebednor. Hangul. Koad. Bunkapoor.	None -	None.
			3 of 7 "		8 of 18 saws - 1 of 25 " 6 of 7 "			
			8 of 7 "		5 of 18 saws - 8 of 7 "			
			1 of 20 "		1 of 20 saws - 7 of 18 " 2 of 14 " 51 of 7 "			
			1 of 20 "		1 of 18 saws - 1 of 7 "			
			1 of 18 "		1 of 7 saws -			
			3 of 4 "		1 of 20 saws - 1 of 25 " 15 of 18 " 4 of 14 " 3 of 10 " 1 of 8 " 15 of 7 " 3 of 13 "			
			1 of 4 "		5 of 18 saws - 5 of 7 "			
			2 cotton thrashers.		4 of 7 saws - 4 of 10 " 3 of 18 "			
					1 of 14 saws - 1 of 7 "			
					197 TOTAL.			

No. 2.—Cotton Planter's Report for the Half-Year from 1 June to 30 November 1852, in the Dharwar Collectorate—continued.

TALOOKAS.	G I N S—continued.					Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on Account of Experiments from the Commencement to the Close of Half-Year preceding that under Report.	Total Expenses for the Half-Year under Report.	Prospects of the coming Season.
	Being Made.			Number and Size of Gins.	At what Cost.				
	For Government.	For Private Individuals.							
	Number and Size of Gins. 19.	No. Sold. 20.	Size of Gin. 21.	22.	23.				
Dharwar	17 of 18 saws.	None	None	9 of 7 saws	Rs. 450	Sold at the cost of construction.	Rs. a. p. 4,70,990 10 3 1,27,569 10 3 3,43,421 - 1	Rs. a. p. 11,055 3 5 5,841 1 2 5,214 2 8	The season has been an extremely wet one, and owing to the excess of moisture, the planting of cotton was not completed until an unusual late time in the season. The native crop owing to this circumstance is, in many instances, small and not looking well, but the majority of the crop is fine. The New Orleans plant is generally looking extremely well, and I think from the appearance (I have seen a great deal of it) will produce as large an average as has been obtained in the most favourable years, and will be the best crop, as regards quantity, which has been produced since 1845, as it is, with but few exceptions, entirely free of mixture with the native plant.
Hooblee.	4 of 7 "			1 of 7 "	60				
Nowlgoond.	17 of 7 "			1 of 18 "	180				
Dumbul.	38 TOTAL.			2 of 18 "	400				
Raneebednoor.				13 TOTAL.	1,090 Rs.				
Hangul.									
Koad.									
Bunkapoor.									

Remarks—Col. 3. A larger quantity of cotton was engaged and paid for, but owing to its not being of good quality had been refused. Col. 5. 100 candies were engaged, and in part paid for, about 50 of which were offered to me and refused on account of its bad quality. Col. 10. The gin is not used by the natives for cleaning native cotton. Col. 13. Most of these gins are new machines, constructed at Dharwar.

(signed) T. M. Blount,
Superintendent Cotton Experiments, S. M. Country.

EXTRACT Bombay Revenue Consultations, 20 July 1853.

(No. 1664, with Enclosures.)

No. 8920.

From the Revenue Commissioner, Southern Division, to Secretary to Government, Bombay.

Sir,

I HAVE the honour to transmit a letter, dated the 17th instant, No. 843, from the Collector of Dharwar, with a report on the progress of the cotton experiment in that district for the half-year ending the 30th April last, and to observe that the information contained in the latter document is, on the whole, I think satisfactory.

2. The third and ninth columns of the Tabular Report show that the area planted with "New Orleans" and "country" cotton was as follows:

	Acres.	Goontas.
New Orleans cotton	- - - - -	28,010 30
Country - ditto	- - - - -	2,51,113 25

The former area is less than that planted with New Orleans cotton in the year 1851-52 by about 14,636 acres. This difference is said, in a letter from the Collector, dated the 22d November last, No. 1747, to be "entirely owing to the unfavourable circumstances of the season. The heavy and continuous rain of August and part of September, just at the proper period for sowing cotton, rendered it necessary to defer the operation till very late in a large portion of the land intended for that crop. * * *

Another reason is that from the excessive wetness of the season, the black soil became very much overgrown by the two kinds of creeping grass, which are such troublesome weeds, and so difficult to eradicate when once established; and the ryuts, being under the impression that the American cotton has less chance of yielding a good crop than the native under such circumstances, preferred sowing the latter."

3. There were 212* private gins in use during the half-year, and none "out of use;" 17† were sold on account of Government, and 11‡ more were in course of construction; of the former, two were, it is said, purchased by the Collector of Bellary.

* Col. 34.
† Col. 33.
‡ Col. 43.

4. In letter, No. 677, of 20th ultimo, quoted in Mr. Law's second paragraph, is that officer's reply to the reference from this department (relative to the progress, &c. of the cotton experiment) alluded to in the concluding part of the fifth paragraph of my letter, dated 18 March last, No. 691. Its transmission to Government is deferred till receipt of the reply of the Collector of Belgaon.

Poona, Revenue Commissioner's Office,
27 June 1853.

I have, &c.
(signed) W. Courtney,
Revenue Commissioner, Southern Division.

(No. 843 of 1853.)

No. 8921.

To W. Courtney, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to submit the report of the cotton experiments for the half-year ending on the 30th April last, according to the usual form.

2. As the balance exhibited against the experiments is less than that stated in my reply to your fourth query, transmitted with my letter No. 677, dated 20th ultimo, by Rs. 30,866. 0. 1., a memorandum is annexed, explanatory of this difference, which is chiefly owing to the amount expended on the cotton consignment of the past season having been excluded, as the bills not having been audited, it remains to be adjusted.

3. The amount of freight and interest recovered under these agreements from parties whose cotton was rejected, has now been omitted, as it will more properly come under the head of "Profit and Loss."

I have, &c.

(signed) J. S. Law, Collector.

Dharwar, Collector's Office,
17 June 1853.

STATEMENT No. 1.

COTTON PLANTER'S REPORT for the Half-Year commencing 1st December 1852, ending 30th April 1853, Dharwar Collectorate.

TALOOKS.	Prospects of the Season, and State of the Crops as regards each Sort of Cotton, showing also what Stations were visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.													
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.							
		Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.						
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.						
		A. g.	C. lbs.			A. g.	C. lbs.	A. g.	C. lbs.						
Dharwar Nowgoond. Bunkapoor. Dummul. Hangul. Hoollee. Raneebednoor. Koad.	A great part of the crops of both kinds were sown much later than usual, owing to the heavy and continued rain at the proper season for sowing. The rain which fell in December and January, however, brought forward the plants so rapidly that the pods were generally ripe for gathering much about the same time as usual, and there was a fair average yield. The stations visited by the Superintendent are— Hoollee. Kunoollee. Ingulgee. Gootul. Hoolgoor. Negloor. Bunkapoor. Goodegherry. Davagherry. Cumdoolee. Angdee.	28,010	30	3,001	119	None	None	28,010	30	3,001	119	201,113	25	17,936	539
			Estimated at 9 maunds of 28 lbs. of cuppas per acre.											Estimated at 8 maunds of 28 lbs. of cuppas per acre.	

TALOOKS.	COTTON PURCHASED BY GOVERNMENT.																				
	NEW ORLEANS.					BROACH.					TOTAL FOREIGN.			COUNTRY COTTON.							
	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.	Quantity purchased in Candies of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	
Dharwar Nowgoond. Bunkapoor. Dummul. Hangul. Hoollee. Raneebednoor. Koad.	-	-	-	None	-	-	-	-	None	-	-	-	-	None	-	-	-	None	-	-	-

No. 1.—Cotton Planter's Report for the Half-Year commencing 1st December 1852, and ending 30th April 1853—continued.

TALOOKS.	G I N S.											
	In use.				Out of Use.				Being Made.		Sold for Government during the Half-Year under Report.	
	Belonging to Government.		Belonging to Private Individuals.		Belonging to Government.		Belonging to Private Individuals.		For Government.	For Private Individuals.	Number and Size of Gins.	At what Cost.
	32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.
Dharwar	None	1 of 20 saws	Hooblee	24 of 18 saws	In factory at Dharwar.	None		4 of 18 saws	None		3 of 18 saws	Rs. 600
Nowlgoond.		12 of 18 "		4 of 7 "				4 of 7 "			7 of 7 "	420
Bunkapoor.		2 of 14 "	Nowlgoond.	1 of 25 "			3 of 7 "				7 of 17 "	350
Dummul.		20 of 7 "		1 of 20 "								
Hangul.		8 of 18 "	Dummull.	1 of 8 "			11				17	1,370
Hooblee.		1 of 24 "		3 of 4 "								
Raneebednoor.		6 of 7 "	Raneebednoor.	3 of 4 "								
Koad.		5 of 18 "		1 of 4 "								
		8 of 7 "	Hangul.	2 roller churkeys.								
		7 of 18 "		1 Egyptian churkey.								
		2 of 14 "	Koad.	2 cotton thrashers.								
		54 of 7 "		40								
		1 of 18 "	Bunkapoor.									
		1 of 7 "										
		1 of 20 "	Savanoor State.									
		1 of 25 "										
		15 of 18 "	Nurgoond State.									
		4 of 14 "										
		1 of 8 "	Putwardun Jageerdars.									
		20 of 7 "										
		3 of 10 "										
		3 of 13 "										
		5 of 18 "										
		5 of 7 "										
		4 of 7 "										
		5 of 18 "										
		5 of 7 "										
		3 of 18 "										
		1 of 14 "										
		212										

TALOOKS.	Cotton Ginned for Government and for Private Individuals.										Total Net Expenses on account of the Experiment from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expenses for the Half-Year under Report.
	Profit or Loss to Government, deducting the Cost of European Superintendent.	FOREIGN COTTON.					COUNTRY COTTON.					
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.						
		Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.			
45.	46.	47.	48.	49.	50.	51.	52.	53.	54.	55.		
Dharwar	None	400	None	None	None	None	None	None	Total Expenses, Rs. 4,82,045 13 8	Total Expenses - Rs. 8,386 10 7		
Nowlgoond.	There are at work 212 gins, all of which belonging to private dealers. I have no means of ascertaining the time they have been worked, or the quantity of cuppas cleaned on them; some of the machines were put to work as early as the middle of February, and the greater number from the end of March up to the close of the report. The quantity cleaned for private parties may have been about 400 candies of New Orleans cotton.									" Receipts, Rs. 1,33,410 11 4	" Receipts - Rs. 5,829 11 1	
Bunkapoor.										Balance Rs. 3,48,635 2 4	Balance - Rs. 2,556 15 6	
Dummul.												
Hangul.												
Hooblee.												
Raneebednoor.												
Koad.												

The balance against the experiments shown in Column 54 is not the real one, as it includes the cost of all the consignments of cotton since 1848-49 inclusive, of the sale of which in England no account has as yet been received.

(signed) J. S. Law, Collector.

Dharwar, 15 June 1853.

1406 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

(No. 1349 of 1854.)

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 10 June 1854.—V. 5548 to 5551.

From the Acting Revenue Commissioner, Southern Division, to Mr. Acting Chief Secretary *Goldsmid*, dated 25 April 1854.

V. 5548. FORWARDED for the information of Government. The tabular report, accompanying, suggests no particular remark.

2. The Acting Revenue Commissioner, Southern Division, respectfully recommends that the gins and churka referred to in the appended memorandum of the 7th instant, No. 539, be disposed of in the manner proposed by Mr. Frost and the Collector.

(signed) *H. W. Reeves*,
Acting Revenue Commissioner, S. D.

(No. 295 of 1854.)

From *J. S. Law*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Acting Revenue Commissioner, Southern Division.

Sir,

V. 5549. I HAVE the honour to submit the report of the cotton experiments in the usual form, drawn up to comprise the transactions of the department for seven months, viz., from the 1st May to the 30th November 1853, the preceding one having been closed at the date of Mr. Blount's delivering over charge of the experiments previous to his proceeding on leave, granted to him in the Government resolution, No. 1406, dated 5th March 1853.

2. The information contained in cols. 11 to 26 of the report was obtained from Mr. Frost, the Engineer of the experiments, a copy of whose explanatory letter is herewith annexed.

Dharwar, Collector's Office,
27 February 1854.

I have, &c.
(signed) *J. S. Law*, Collector.

STATEMENT No 2.

COTTON PLANTER'S REPORT, from 1st May to 30th November 1853, in the Dharwar Collectorate.

TALOOKS.	Remarks on the past Season, as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on hand on account of Government, of each Sort, Ginned or not Ginned, viz.				Supposed Proportion of the last Year's Crop which has been Cleaned in the Saw Gins, or will be so Cleaned.				
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cotton.	
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
1. Dharwar - 2. Nowlgoond. 3. Dumbul. 4. Bunkapoor. 5. Hangul. 6. Hooblee. 7. Raneebdnore. 8. Koad.	The crop was far better than was anticipated from the late period at which much of it was sown. Owing to the frequent showers which fell during the cold season, it turned out above the average, especially the New Orleans cotton, both in quantity and quality.	-	-	-	-	The whole	-	-	-	Cannot be exactly ascertained; may have been from 50 to 100 candies.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1407

No. 2.—Cotton Planter's Report, from 1st May to 30th November 1853, in the Dharwar Collectorate—continued.

TALOOKS.	G I N S.										
	In Use.		Out of Use.		In Use.		Out of Use.		Being made.		
	Belonging to Government.		Belonging to Government.		Belonging to Private Individuals.		Belonging to Private Individuals.		For Government.	For Private Individuals.	
	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Number Sold.	Size of Gins.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	
1. Dharwar -	None	42 of 18 saws	In the factory at Dharwar.	1 of 25 saws	I am unable to state; the gins being constantly moved from one talooka to another, and often into the adjacent Madras district and enam villages.	I believe none.	None	7 of 18 saws	None.		
2. Nowlgoond.		9 of 7 "		1 of 24 "				2 of 7 "			
3. Dumbul.		1 of 25 "		3 of 20 "				1 cotton cleaning machine.			
4. Bunkapoor.		1 of 25 "		61 of 18 "				26 roller churkas.			
5. Hangul.		1 of 20 "		9 of 14 "							
6. Hooblee.		1 of 8 "		3 of 13 "							
7. Raneebednore.		1 of 8 "		3 of 10 "							
8. Koad.		3 of 4 "		1 of 8 "							
		1 of 4 "		135 of 7 "							
		2 roller churkas.		217							
		1 Egyptian ditto.									
		2 cotton thrashers.									
		63									

TALOOKS.	G I N S—continued.		Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on account of Experiment from the Commencement to the Close of the Half-Year Preceding that under Report.	Total Expense for the Half-Year under Report.	Prospects of the coming Season.
	Sold for Government during the Half-Year under Report.					
	Number and Size of Gins.	At what Cost.				
	22.	23.	24.	25.	26.	27.
1. Dharwar -	5 of 7 saws	Rs. 300	Sold at the cost of construction.	Total Expenses - 4,90,432 8 3	Total Expenses - 41,290 11 -	At the date of this report the prospects of the season were good, but have since not been so favourable, as the crop does not seem to be more than an average one.
2. Nowlgoond.	3 of 7 "	150		Ditto Receipts - 1,99,240 6 5	Ditto Receipts - 1,974 6 10	
3. Dumbul.	8 *	Rs. 450		Balance Rs. 3,51,192 1 10	Balance Rs. 99,316 4 2	
4. Bunkapoor.						
5. Hangul.						
6. Hooblee.						
7. Raneebednore.						
8. Koad.						

Dharwar, Collector's Office, 27 February 1854.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 20 December 1854.—V. 10,185 and 10,186.

(No. 2850 of 1854.)

From the Acting Revenue Commissioner, Southern Division, to the Secretary to Government.

V. 10,185.

FORWARDED for the information of Government. The Acting Revenue Commissioner considers the report very satisfactory, particularly as regards the construction of, and growing demand for saw gins.

2. With regard to the apparent discrepancy between the amount of 3,590 rupees (quoted in the Collector's 5th para.), and Rs. 3,682. 4. 9. given in Mr. Frost's "account," and in the 55th column of the tabular report, Mr. Rose offers the following explanation in a memorandum of the 30th ultimo, No. 1554, " * * * the former amount is the aggregate value of the gins sold during the half-year; not the sums realised by their sales * * * * of the sum of 3,590 rupees, 3,075 rupees have been collected on account of gins sold during the half-year, 8 rupees on account of those sold during the previous half-year, and of the sum of Rs. 660. 0. 5. pertaining to repairs of gins during the same period (see col. 44), Rs. 474. 10. 8. have been collected, besides Rs. 22. 10. 1. for repairs made in the previous half-year, making a total of Rs. 3,580. 4. 9., realised by the sale and repair of gins; 72 rupees by the sale of two model carts, and 30 rupees by an advance received by Mr. Frost for a gin not supplied up to the close of the period under report, the total of which, amounting to Rs. 3,682. 4. 9., agrees with the amount of receipts in the account current, and in col. 55 of the tabular report."

3. The Acting Revenue Commissioner concurs in the remark in the concluding para. of the collector's letter regarding the model carts, and instructions will accordingly be issued for the results of the cart experiment to be in future noticed in a separate report.

(signed) H. W. Reeves,

Poona, Revenue Commissioner's Office,
7 September 1854.

Acting Revenue Commissioner, S. D.

(No. 1396 of 1854.)

From J. N. Rose, Esq., Acting Collector of Dharwar, to H. W. Reeves, Esq., Acting Revenue Commissioner, Southern Division.

Sir,

V. 10,186.

I HAVE the honour to submit the usual half-yearly report, which ended on the 31st May 1854, showing the operations of the cotton gin manufactory during that period.

2. Mr. Frost's letter, No. 59, dated the 23d June, handing up his report with the usual account current, showing the receipts and disbursements on account of his department for the half-year under report, is herewith annexed in original. The general list of dead stock alluded to by Mr. Frost has been furnished in accordance with a practice which obtained during the time Mr. Blount, the Superintendent of Cotton Experiments was in office, and, being unconnected with the subject of the report, is not forwarded with it.

3. The number of gins actually completed during the period now under report is 38. The different sizes of these gins is not shown in the statement, but I have obtained from Mr. Frost the following details:

		Rs.	
8	Gins of 18 saws each at 200 rupees each -	1,600	one thousand and six hundred.
17	Ditto 8 - ditto - 70 - ditto -	1,190	{ one thousand one hundred and ninety.
6	Ditto 7 - ditto - 60 - ditto -	360	
	with friction rollers - }		three hundred and sixty.
7	Ditto 7 - ditto - 50 - ditto -	350	} three hundred and fifty.
	without friction rollers - }		
<u>38 TOTAL.</u>		<u>Rs. 3,500</u>	<u>three thousand and five hundred.</u>

4. From the above it will be seen that the value of gins completed amounts to three thousand and five hundred rupees (3,500 rupees); the amount of cost of repair of gins (vide cols. 36, 43 and 44), is six hundred and sixty rupees and five pies (Rs. 660. 0. 5.), and the cost of construction of three model carts one hundred and eight rupees (Rs. 108.), making the total value of work performed during the half-year, four thousand two hundred and sixty-eight rupees, and five pies (Rs. 4,268. 0. 5.)

5. The number of gins sold during the same period is 45, and their aggregate value three thousand five hundred and ninety rupees (Rs. 3,590), and when to this amount is added the value of repairs to gins belonging to private individuals, and of the two model cart

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1409

carts which have been sold to ryots, the total value of work disposed of amounts to rupees four thousand three hundred and twenty-two, and five pies (*Rs.* 4,322. 0. 5.), (*vide* cols. 43 and 44 of the statement).

6. It will be seen from Mr. Frost's 2d para. that he has received applications for 33 gins; 11 of these are for Messrs. Brice & Co., who, it would appear, intend to purchase cotton in this collectorate during the present year; three are to be of 40 saws each, to be worked by bullock power; and eight of eight saws each. The number of gins applied for by native cotton dealers and ryots is 22, 19 of which are to be of eight saws each, and three of 18 saws each.

7. You will observe that in cols. 43 and 44 of the cotton planter's statement, 12 gins of seven saws each are entered as having been sold for rupees six hundred (*Rs.* 600), while ten gins of the same number of saws are entered as having realised the same price; in explanation of this, Mr. Frost states that the latter gins being of superior construction, and having friction rollers, are priced at rupees sixty (*Rs.* 60) each, and the former being on an old model are sold for rupees fifty (*Rs.* 50) each; he adds that the latter are now so much preferred by the native dealers, that he does not intend to construct any more of the former.

8. Mr. Frost attributes the great demand of gins to the high price which ryots obtain from European and native merchants for ginned cotton, and partly, no doubt, to the evident superiority of the gin as a cheap and speedy mode of cleaning cotton over the foot-roller.

9. The model carts entered in the statement were constructed under Mr. Frost's superintendence, under the authority conveyed in the Government resolution No. 4597, dated 8th August 1853, for distribution among the ryots of this collectorate at their cost price, and as Mr. Frost has included them in his statement, I have not omitted them, but this entry does not appear to form an appropriate portion of a half-yearly report of the cotton experiments, and might be separately reported.

Dharwar, Collector's Office,
5 August 1854.

I have, &c.
(signed) *J. N. Rose,*
Acting Collector.

(No. 59 of 1854.)

To *J. N. Rose*, Esq., Acting Collector, Dharwar.

Sir,

I HAVE the honour to forward you the cotton planter's half-yearly report for the half-year ending 31st May last; the columns from 32 to 45, and those of 54 and 55 as regards the manufacture and disposal of saw gins with the attendant expenses filled in to the best of my knowledge, also a detailed account of the receipts and disbursements, and a general list of dead stock of the department, in the usual form.

2. The number of gins constructed during the period this report embraces is 38, and that sold 45, and the demand for others since is large. I have already received orders from Messrs. A. C. Brice & Co. of Cochin for three gins of 40 saws each, and for eight of eight saws each to be used in this collectorate; besides these, I have orders for 19 gins of eight saws, and three of 18 saws each, from native dealers and ryots, and I have no doubt that a great number will be called for next season.

3. Gins pronounced to be totally useless from their defective construction, and recommended by me to be broken up, and the materials used for the construction of others, are included with those in hand (*vide* col. 36 of the report), which will be after their destruction more clearly stated in my next.

4. The cause of the great demand for gins arises from the high price which ryots obtain for their kuppas from native and European merchants, the former giving as much as 12 annas per maund of 26 lbs., and Messrs. Ritchie, Steuart & Co. are giving as much as 12½ annas; it is evident that the ryots begin to see the advantage of cultivating the New Orleans seed, so that in course of time it will be cultivated in every field in which it will grow, and that the native cotton will have to make room for it.

Dharwar, Cotton Experiments,
23 June 1854.

I have, &c.
(signed) *H. Frost,*
Engineer, Cotton Experiments,
S. M. C.

III.
Bombay.

month
year

Government, deducting the
superintendence.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1411

No. 1.—Cotton Planter's Report for the Half-Year commencing 1 December 1853 and ending 31 May 1854—continued.

TALOOKAS.	G I N S.													Profit or Loss to Government, deducting the Cost of European Superintendence.
	In Use.				Out of Use.				Being Made.			Sold for Government during the Half-Year under Report.		
	Belonging to Government.		Belonging to Private Individuals.		Belonging to Government.		Belonging to Private Individuals.		For Government.		For Private Individuals.			
	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Number Sold.	Size of Gins.	Number and Size of Gins.	At what Cost.	
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	
1. Dharwar	- None		1 of 25 saws	-	1 of 25 saws	In the factory at Dharwar	I believe none.	-	5 of 18 saws	- None		6 of 18 saws	Rs. a p.	
2. Nowlgoond.			1 of 24 "		1 of 20 "				5 of 8 "			17 of 8 "	1,200 - -	
3. Dumbul.			3 of 20 "		44 of 18 "				1 cotton cleaning machine.			10 of 7 "	1,190 - -	
4. Bunkapoor.			66 of 18 "		1 of 8 "							12 of 7 "	600 - -	
5. Hangul.			9 of 14 "		3 of 4 "				26 roller churkas.			45	600 - -	
6. Hooblee.			3 of 13 "		1 of 4 "							Value of repairing gins -	3,590 - -	
7. Raneebednoor.			3 of 10 "		2 roller churkas.				37 TOTAL.				660 - 5	
8. Koad.			18 of 8 "		1 Egyptian churka.				1 model cart.			2 model carts	4,250 - 5	
			157 of 7 "		2 cotton thrashers.								72 - -	
			261 TOTAL.		56 TOTAL.								Rs. 4,322 - 5	
					3 model carts.									

TALOOKAS.	Cotton Ginned for Government and for Private Individuals.								Total Net Expenses on account of the Experiments from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expenses for the Half-Year under Report.
	FOREIGN COTTON.				COUNTRY COTTON.					
	NEW ORLEANS.		BROACH.		TOTAL FOREIGN.					
	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.		
46.	47.	48.	49.	50.	51.	52.	53.	54.	55.	
1. Dharwar	- None	- None	- None	- None	- None	- None	- None	Total Expenses -	Rs. a p.	
2. Nowlgoond.								5,31,723 3 3	Total Expenses -	
3. Dumbul.								1,41,214 13 3	19,923 3 -	
4. Bunkapoor.									3,682 4 -	
5. Hangul.								Balance Rs. 3,90,508 6 -	Balance Rs. 16,240 14 -	
6. Hooblee.										
7. Raneebednoor.										
8. Koad.										

Remarks.—About half of the produce of the New Orleans cotton and 263 candies of the Country cotton of the crop of 1853-54 have been cleaned by saw gins.

(Errors excepted.)

(signed) J. N. Rose, Acting Collector.

1412. PAPERS RELATING TO MEASURES TAKEN SINCE 1847 OF

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25 July 1855.—V. 6399 to 402.

(No. 1685 of 1855.)

V. 6399. From the Revenue Commissioner, Southern Division, to the Secretary to Government.

FORWARDED for the information of Government. The Revenue Commissioner, Southern Division, agrees with the Collector in his remarks in para. 8, of letter No. 480, dated 27th March last, and considers that the information therein referred to should find place in the Tabular Report. He would accordingly recommend that the alterations suggested be permitted by Government.

2. In reply to a reference which was made for the purpose of ascertaining whether the orders of Government, dated 5th June last, No. 2656, directing the retention of one copy of every machine have been attended to, the Collector has handed * a communication from the Assistant Magistrate in charge of the gin factory, in which it is stated that the gins, as per margin,† have been retained at the factory as models for the purpose indicated by Government, but that all other gins in store previously had been converted or otherwise disposed of by Mr. Frost before his departure. This information is not decisive, but it appears useless to apply again now that Mr. Frost has left.

(signed) Henry W. Reeves,
Revenue Commissioner, S. D.

Poona, Revenue Commissioner's Office,
19 June 1855.

(No. 480 of 1855.)

V. 6400. From T. Ogilvy, Esq., Collector of Dharwar, to H. W. Reeves, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to submit the usual half-yearly report, showing the operations of the cotton gin manufactory during that period, which ended on the 30th November 1854.

2. Mr Frost, the late Engineer's letter, No. 130, dated the 20th December 1854, handing up his report with the usual account current, showing the receipts and disbursements of the department for the half-year under report, are herewith annexed in original.

3. A subsequent reply to a reference from this department by Mr. Frost, No. 133, dated 26th December 1854, detailing the number, size and names of the various description of machinery broken up on account of their defective construction, and the materials used in the construction of new gins, was authorised by Government in resolution No. 2656, dated 5th June 1854, a copy of which was received under your indorsement, No. 1812, dated 8th idem. Two statements, also furnished by that officer, explanatory of the tabular report and account current, are herewith annexed in original.

4. Thirty new gins were completed during the period under report, and their size and value is as follow:

	Rs.
4 gins of 40 saws, each at 330 rupees - - - - -	1,320
26 gins of 8 saws, each at 70 rupees - - - - -	1,820
TOTAL - - -	Rs. 3,140

5. From the above, it will be seen that the value of gins completed amounts to 3,140 rupees, and that of the work performed in the repair of gins, the property of ryots and cotton dealers, was (*vide* cols. 22 and 23 of the tabular report) Rs. 315. 3. 6., or a total value of work completed, Rs. 3,455. 3. 6.

6. The number of gins sold during the same period was 37, and one cotton thrasher, and their aggregate value 4,690 rupees; and if to this amount is added the value of the repairs of gins, the total amount of work disposed of, is Rs. 5,005. 3. 6.

7. Of this amount, Rs. 1,765. 2. 7., has been collected, 1,502 rupees being on account of gins sold, and Rs. 263. 2. 7. on account of repairs to gins. Besides these sums, 515 rupees have been collected on account of gins sold, and Rs. 164. 1. 6. for repairs made to the same, previous to the present half-year. The total collections being Rs. 2,444. 4. 1., to which must be added an advance of 10 rupees, received from a party for a gin, which had not been made over to him at the date of the report, which will make the total sum tally with the receipts shown in the account current.

8. Government

* Under date 9th ultimo, No. 718.

† One gin of four saws of Mr. Laidlaw's manufacture, from Khandeish. Two roller churkas of Mr. Mather's manufacture, received from Calcutta. One Egyptian ditto, received from Bombay. One cotton thrasher, purchased by Mr. Mercer, when superintendent of the experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA 1413

8. Government having abandoned the purchase of cotton, columns 3 to 6 of the tabular report might be omitted, as well as columns 11 and 12, and the heading of column 13 altered to "Gins belonging to Government for Sale in the Factory," whilst a column might be inserted to show the "Actual Number, Size and Value of the Gins completed during the Half-year," no such information being at present obtained from the tabular report, unless expressly called for.

9. The delay in handing on these papers was caused from my having waited for the reports of the district officers, specifying the quantity of cotton cleaned by the saw gin, which was not received until very lately.

I have, &c.
(signed) T. Ogilvy, Collector.
Dharwar, Collector's Office, Camp Aloor,
27 March 1855.

III.
Bombay.

(No. 130 of 1854.)

To T. Ogilvy, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to forward you the cotton planter's half-yearly report for the half-year ending 30th November last; in which the columns from 11 to 26, relating to the manufacture and disposal of saw gins and the expenses on account of experiments are filled in to the best of my knowledge; also a detailed account of receipts and disbursements.

2. The number of gins constructed during the period this report embraces is 30, and that sold 37. The current half-year is nearly as promising as the last, as regards the demand for gins.

3. The gins pronounced to be useless, from their defective construction, have been broken up, and the materials used in the construction of new gins, as recommended by me and sanctioned by Government.

I have, &c.
(signed) H. Frost,
Engineer, Cotton Experiments, S. M. C.
Dharwar, Cotton Experiments,
20 December 1854.

STATEMENT No. 2.

COTTON PLANTERS' REPORTS from 1 June to 30 November 1854, in the Dharwar Collectorate.

TALOOKAS	Remarks on the past Season as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on Hand on account of Government, of each Sort, Ginned or not Ginned.				Supposed Proportion of the last Year's Crop which has been Cleaned in the Saw Gins, or will be so Cleaned.			
		NEW ORLEANS	BROACH	TOTAL FOREIGN.	COUNTRY COTTON.	NEW ORLEANS.	BROACH.	TOTAL FOREIGN.	COUNTRY COTTON.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Nowlgoond Dumbul. Bunkapoor. Hangul. Raneebednoor. Hooblee. Koad.	The crop, as stated by Mr. Law in his report, dated 1st December 1853, was not so favourable as it seemed from the out-turn in the early part of the season. A great portion of it suffered from the dry east winds, and the portions of the crop that were planted on low lands sheltered from the east winds, which prevailed up to the latter end of February, produced a fair crop, but in other places where there was no such shelter, the crop greatly suffered. Upon the whole, the produce may be said to have been an average one. Prices of both descriptions of cotton were much lower than in the five preceding years.	-	-	-	The whole produce about 4,195 candies and 607 lbs	-	-	-	About two candies and 122 lbs.

No. 2.—COTTON PLANTERS' REPORTS from 1 June to 30 November 1854, in the Dharwar Collectorate—*continued.*

TALOOKAS.	G I N S.									
	In Use.		Out of Use.		In Use.		Out of Use.		Being Made.	
	Belonging to Government.		Belonging to Government.		Belonging to Private Individuals.		Belonging to Private Individuals.		For Private Individuals.	
	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins.	Number Sold. Size of Gins.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.
Nowlgoond	- None -		37 of 18 saws	- In the factory at Dharwar.	4 of 40 saws	Unable to state, as the gins are constantly moved about from one talooka to another, and often into the adjacent Madras districts and enam villages, as the dealers may require them.	- I believe none -		5 of 18 Saws	- None.
Dumbul.		1 of 4 "			1 of 25 "			11 of 8 "		
Bunkapoor.		2 roller churkas.			1 of 24 "			1 cotton cleaning machine.		
Hangul.		1 Egyptian ditto.			3 of 20 "			26 roller churkas.		
Raneebednoor.		1 cotton thrasher.			79 of 18 "			43		
Hooblee.		42 TOTAL			9 of 14 "					
Koad.					3 of 13 "					
					3 of 10 "					
					44 of 8 "					
					157 of 7 "					
					298					

TALOOKAS.	G I N S.		Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expenses on account of Experiment from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expenses for the Half-Year under Report.	Prospects of the coming Season.	
	Sold for Government during the Half-Year under Report.						
	Number and Size of Gins.	At what Cost.					
	22.	23.	24.	25.	26.	27.	
Nowlgoond	4 of 40 saws	Rs. a. p. 1,320 - -	Sold at the cost of construction.	Total Expenses	Rs. a. p. 5,51,646 6 3	Total Expenses - 13,565 3 8	The crop of the coming season does not promise to yield more than half the average return.
Dumbul.	7 of 18 "	1,400 - -		" Receipts	1,44,897 2 -	" Receipts - 2,562 4 1	
Bunkapoor.	26 of 8 "	1,820 - -		Balance	4,06,749 4 3	Balance - 11,002 15 7	
Hangul.	37	4,540 - -					
Raneebednoor.							
Hooblee.	Value of repairing gins -	315 3 6					
Koad.	Rs.	4,855 3 6					
	One cotton thrasher -	150 - -					
	TOTAL Rs.	5,005 3 6					

Dharwar, Collector's Office, Camp Aloor,
27 March 1855.

(Errors excepted.)

(signed) T. Ogilvy, Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1415

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 12 December 1855.—V. 10,362 to 67.

(No. 2749 of 1855).

From the Revenue Commissioner, Southern Division, to the Officiating Chief Secretary
to Government.

Sir,

I HAVE the honour to forward a letter from the Collector of Dharwar, No. 1357, dated 18th ultimo, and accompaniments, being the progress report of the cotton gin factory for the half-year ending 31st May 1855.

2. Mr. Ogilvy has entered into a full detail of the operations which were carried on during the entire period (with the exception of the month of December) under the superintendence of Dr. Forbes, and consisted chiefly in the construction and repair of saw gins for ryots and cotton dealers.

3. The account given by Dr. Forbes and Mr. Ogilvy of the defective and careless construction of the saw gin by Mr. Frost's establishment, is very unsatisfactory. It is shown by Mr. Ogilvy that gins so constructed have now, in some instances, to be entirely re-made to render them in any way serviceable, while, in others, their alteration subjects Government to a heavy expenditure which, with care, might have been avoided. From this it is inferable that Mr. Frost must latterly have neglected his duty. It further appears that Mr. Frost neglected to keep an account of the daily or monthly amount of work completed by the Government establishment under his charge.

4. The damage to the staple of the New Orleans cotton, stated in paragraph 7 of Mr. Ogilvy's report to be caused by the gins hitherto furnished from the factory, is very much to be regretted, since it must depreciate the value of the cotton exported from the Southern Mahratta Country to the English market.

5. Dr. Forbes is, however, now engaged in remedying this evil, and a report which he hereafter promises to submit on the subject, will, I hope, show a successful result.

6. The prospects of the season with regard to the growth and yield of both the country and New Orleans variety, are described as having been unpromising, the yield being supposed to have been "not more than" two-thirds of an average year.

7. I would draw attention to the remarks in paragraph 9 of Mr. Ogilvy's letter, and recommend that the several alterations in the form of statement therein proposed be adopted.

8. In a letter dated 12th instant, No. 1531, forwarded herewith, Mr. Ogilvy explains the calculations by which he obtains Rs. 208. 7. 6. as the actual cost per mensem of the establishment, noticed in his fifth paragraph, and shows that the statement at close of his sixth paragraph, that "to make the factory pay in December last, it would have been necessary to dispose of the three 8-saw gins made during that month at 424½ rupees each, instead of 70 rupees, their selling price," is incorrect, the correct sum being Rs. 416. 8. 8. The difference between these and Dr. Forbes' calculation is also explained by Mr. Ogilvy.

9. I have to attract the notice of Government to the want of seasoned timber for present use, which is the subject of paras. 8 of the Collector's and Dr. Forbes' letters. I shall make a reference to the Conservator of Forests for his advice, and will report the result to Government.

I have, &c.

Poona,
Revenue Commissioner's Office,
22 September 1855.

(signed) H. W. Reeves,
Revenue Commissioner, Southern Division.

(No. 1357 of 1855.)

From T. Ogilvy, Esq., Collector of Dharwar, to H. W. Reeves, Esq., Revenue Commissioner,
Southern Division.

Sir,

Dharwar, Collector's Office, 18 August 1855.

I HAVE the honour to transmit, for your information, the copy of a report, with the accompaniments, noted in the margin,* dated the 23d ultimo, No. 75, received from Dr. Forbes, Superintendent of the Cotton Gin Factory at Dharwar, exhibiting the working of the establishment during the half-year ending the 31st May last.

2. The

* 1. Dr. Forbes' report, No. 75, dated 23 July 1855. 2. Cotton Planter's Tabular Report, ending 31st May 1855. 3. Account Current of Receipts and Disbursements for ditto. 4. Abstract Statement of the Cost and Returns of the Gin Factory, from 1 January to 31 May 1855. 5. Detailed Statement of the Sums collected on account of Gins sold during the half-year under report, and in previous half-years. 6. Detailed Statement showing the Number, Size and Value of Gins made during the half-year under report.

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2. The subjoined Abstract Statement gives a comparative view of the operations of the establishment during the two last half-years ending the 30th November 1854, and 31st May 1855, as exhibited in the returns submitted to Government.

	Half-Year ending 30 Nov. 1854.			Half-Year ending 31 May 1855.			Increase.			Decrease.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1. Value of the work performed in the construction and completion of new and other gins, and incomplete gins. <i>Vide</i> Statement No. 2, showing the cost and return of the gin factory establishment - - -	3,140	-	-	3,052	-	-	-	-	-	88	-	-
2. Value of the work performed in the repairs of gins, the property of ryots and cotton dealers - - -	315	3	6	1,054	10	-	739	6	6	-	-	-
3. Value of gins sold - - -	4,690	-	-	1,445	-	-	-	-	-	3,245	-	-
4. Amount actually collected on account of the value of gins sold during the half-year under report - - -	1,502	-	-	1,180	-	-	-	-	-	322	-	-
5. Amount actually collected on account of the repairs of gins during the half-year under report - - -	263	2	7	757	12	8	494	10	1	-	-	-
6. Amount collected on account of the value of gins, and of a cotton thrasher sold in previous half-years - - -	515	-	-	1,030	-	-	515	-	-	-	-	-
7. Amount collected on account of the repairs of gins sold in previous half-years - - -	164	1	6	57	2	5	-	-	-	106	15	1
8. Received from Messrs. Ritchie, Stuart & Co., for pressing 186 cotton bales in the press-house at Hooblee - - -	-	-	-	93	-	-	93	-	-	-	-	-

3. Dr. Forbes has, however, entered into details to show that the present and previous half-yearly reports do not exhibit a correct view of the operations of the factory, and that, in fact, in the return for the previous half-year, an excess in the value of the gins represented as sold and on hand, to the extent of rupees two thousand four hundred and ten (*Rs.* 2,410) was erroneously entered; that rupees one thousand eight hundred and fifty (*Rs.* 1,850) included in that amount, will have to be expended in correcting defects in the construction of 37 of Mr. Frost's 18-saw gins, and that rupees seventy (*Rs.* 70) have been already expended in completing 11 of the 8-saw gins entered as sold in columns 22 and 23 of Statement No. 2, submitted with my letter to your address, dated the 27th March last, No. 480. Eleven 8-saw gins were made for Mr. Brice, and it may be necessary to state that the number 15, mentioned in Dr. Forbes' third para., includes four 40-saw gins made also for Mr. Brice, who now rejects five of the 8-saw gins valued at rupees three hundred and fifty (*Rs.* 350), in consequence of defective construction as well as careless workmanship.

4. In like manner the value of three other 8-saw gins, estimated to be worth rupees two hundred and ten (*Rs.* 210), were entered under the same columns, whereas they are unsaleable for a similar reason.

5. Dr. Forbes further observes in his fourth paragraph, that he is unable to exhibit, under the head of "Profit and Loss," in Column 45 of the Cotton Planter's Report, accompanying his report, the information required, since he has been obliged to include the month of December in his half-yearly return, during which time the factory was under the management of Mr. Frost, who did not keep an account of the work done. He has, however, prepared an abstract statement, accompaniment No. 2, exhibiting the cost of the native establishment and the realisations during the five months ending the 31st May last, in which is shown a net average monthly profit of *Rs.* 111. 8. 6., or very nearly the profit, estimated at *Rs.* 116. 8., in the accompaniment to my letter to your address, dated the 19th January last, No. 141. If, however, we add to the expenses entered in the abstract, the salaries of the superintendent and apprentices,* amounting to 320 rupees per mensem, the actual cost of the establishment would appear to be about *Rs.* 208. 7. 5. per mensem.

6. Dr.

* Superintendent, 200 rupees; three apprentices, 120 rupees.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1417

6. Dr. Forbes forcibly represents the cost to Government of the previous working of the establishment, by showing that to make the factory pay, in the month of December last, it would have been necessary to dispose of the three 8-saw gins made during that month for 424½ rupees each, instead of 70 rupees, their selling price.

7. Government will learn with regret that the saw gins hitherto issued to the ryots from the factory, and used in cleaning the New Orleans cotton, have been found to damage the staple. Dr. Forbes is, however, instituting careful inquiries with a view to ascertain the causes of this, and he is making a variety of experiments in the hope of being able to remedy the defects found to exist in the gins sold to the ryots, and he purposes shortly to submit a report on the subject. I shall not, therefore, add more on this matter at present, but I may state that Dr. Forbes has taken the greatest pains with the establishment, and has brought it into excellent working order, and that the best results may be anticipated from his management.

8. The great want of the establishment at the present moment is seasoned timber. The Executive Engineer, in expressing his willingness to afford a loan of 15 logs of honee wood, has stated that he cannot spare any more; but a much larger supply is needed to meet the requirements of the establishment, and unless Government stores can be further indented on, the expenses of the factory will be greatly increased from the necessity that will exist of purchasing the wood required at its present high market price.

9. I would beg to suggest the following alterations in the form of the half-yearly "Cotton Planter's" Report: that in column 2 the words "showing also what stations, &c." should be omitted, since the appointment of superintendent of cotton experiments has been abolished; that columns 11 to 31 inclusive should be omitted, as Government have ceased to purchase cotton; that columns 32 and 33 should be left out, since Government do not make use of any gins on their own account. The heading of column 36 to be altered to "Gins belonging to Government for sale in the Factory," and that of column 37 to "Unsaleable Gins and Model Machinery in the Factory." A column to be added between columns 42 and 43, to show the number, size and value of the gins completed during the half year; columns 46 to 53 inclusive might be omitted, since Government do not clean any cotton, and because the progress reports ending 30th November of each year, show the quantity of cotton of the previous year's crop supposed to have been ginned.

I have, &c.
(signed) T. Ogilvy, Collector.

(No. 75 of 1855.)

To T. Ogilvy, Esq., Collector, Dharwar.

Sir,

IN forwarding the accompanying "Cotton Planter's Report" for the half year ending 31st May 1855, I have the honour to furnish the following explanations to account for the very material discrepancies, which will be at once apparent on comparing this return with the similar one of the previous half year.

2. Under the head of "Gins completed," the latter document contains "37" of 18-saws each, a reference to the return and valuation of dead stock tendered to me, on receiving charge of the gin factory in January last, will show that the whole of the above machines were not only in an unfinished state at that time, but also that an outlay of one thousand eight hundred and fifty rupees (Rs. 1,850) would be required to complete them. From their not being the description of gin required in these districts, there has been no demand for them, and accordingly they still remain on hand in the same condition. To render this a true return it is therefore necessary that these should be transferred to the column of "Gins being made," which is the place they ought to have occupied in the preceding report. A sum of seventy rupees (Rs. 70) has also been expended in completing 11 of the 8-saw gins.

3. Comparison with the above return will also exhibit a very considerable difference as regards the number of gins therein stated as having been sold of the 15 mentioned, five, valued at 350 rupees, still remain on hand. They were made by Mr. Frost to the order of Messrs. Brice & Co., but have been refused by that firm in consequence of their defective construction as well as careless and imperfect workmanship. Copy of Messrs. Brice & Co's letter on the subject is subjoined. To the above sums is also to be added the price of three gins of eight saws each, 210 rupees, which, and for similar reasons, are quite valueless and unsaleable, the workmanship and inferior quality of materials used in their construction were most discreditable to a Government workshop, and they will require to be entirely remade.

4. With regard to the last column, headed "Profit and Loss," I regret being unable to furnish the information required. It appears from the records of the office, that no account was previously kept, either of the daily or monthly amount of work completed by the establishment,

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establishment, and as the month of December is included in the above return, its results are not correctly ascertainable. To remedy this defect, as far as practicable, I have appended an Abstract Statement, showing the cost of native establishment, and the amount of work realised since the 1st of January 1855. From this it will appear that the average net profit per mensem amounts to one hundred and eleven rupees, eight annas, and six pies, (Rs. 111. 8. 6.), being within four rupees, fifteen annas, and six pies, of my estimate forwarded in January. In the former Cotton Planter's Report this column was filled in as "Sold at the Cost of Construction," but for the reason above assigned this could not possibly have been ascertained, and must often have been given very incorrectly, for instance, as regards December last, respecting which I was enabled to make verbal inquiry, as it was the month preceding that on which I took charge. The value of repairs done amounted to eight rupees, and three gins of eight saws each were made. The cost of native establishment and materials amounted to four hundred and twenty-four rupees, eight annas, and eight pies, to realise the cost of their construction, therefore, each of these gins would require to have been sold at one hundred and thirty-eight rupees, instead of seventy rupees, which is their selling price.

5. I regret being obliged to represent these discrepancies, but without this explanation, the present return would be unintelligible. As it will now appear that under the heads of "Work Completed," and "Gins Sold," the amount entered in the previous half yearly return was more than double what it should have been, and a sum of two thousand four hundred and ten rupees was incorrectly credited to the gin factory; all that remains to meet this amount is what the five gins, refused by Messrs. Brice & Co., may realise when they are rendered saleable, probably, at most 300 rupees.

6. I am aware that a report like the present ought to furnish a detailed account of the progress of cotton ginning throughout these districts, as well as of the efficiency of the machinery manufactured by Government for the ryots and dealers, but I trust I may be excused from doing so at present, as I have not yet had sufficient time to mature the opinion and observation, which I hope soon to be able to offer on the subject. Owing to the complete failure which has hitherto attended the ginning of native cotton in these districts, and which is now entirely abandoned, as well as to the damage done to the staple of the American variety, which cannot be cleaned by any other process, the subject is one which demands urgent inquiry, and my best attention is devoted to it, with, I hope, a fair chance of some success. If the cause of the present imperfection of the gins can be detected, one step will at least be gained towards amendment.

7. The working condition of the gin factory has greatly improved, and it will now bear favourable notice. It will be seen the last five months have cleared a profit of Rs. 557. 10. 8., and this has been accomplished without any increase to the charges for repairs, or the price of gins sold, with the exception of a sum of 46 rupees added to the cost of 12 gins of eight saws, to cover the expense of improvements introduced in their construction.

8. During the early part of the above period much obstruction was caused by the entire want of stores of any description, as well as from the worn-out condition of many of the tools, more especially files, which were perfectly unserviceable, but this was remedied with as little delay as possible by a supply indented for on the Ordnance Department, Bombay. The chief impediment I have now to contend with is the great difficulty that exists in procuring seasoned wood suitable for gin-making; I have all along been obliged to pay for it at most exorbitant rates, and can hardly now procure a proper article at any price. The cause of this scarcity is, that some time ago restrictions were imposed by the Madras authorities on the cutting of this description of timber in the neighbouring forests, and the supplies stored by wood merchants previous to that time are now becoming exhausted. I have taken precautions to guard against this state of matters hereafter, having, as you are aware, procured permission to cut a quantity of timber, which, when ready for use, will amply supply the establishment for a period of four years, and by adding annually enough for each season, a constant supply of well-seasoned and suitable timber will be available. To meet the present emergency, however, I would beg to bring to your notice that, should no objection exist, a supply might be obtained on loan from the Government engineer stores at this station, where a considerable quantity has been collected. I shall be able to return the loan as soon as the season admits of my bringing in the timber now felled in the jungle; hence wood is the description I allude to, and as it is very rarely used in building or other engineer purposes, I imagine the supply I require can be spared without any inconvenience to that department. Should this meet your approval I shall feel much obliged if you will be so good as to make the necessary application on the subject.

I have, &c.

Dharwar Cotton Gin Factory,
23 July 1855.

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1419

STATEMENT, No. 1.

COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1854, ending 31 May 1855, in the Dharwar Collectorate.

TALOOKS.	Prospect of the Season, and State of the Crops as regards each Sort of Cotton, showing also what Stations were visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.							
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.	
		Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Dharwar Nowlgoond. Dumbul. Bunkapoor. Hangul. Hooblee. Raneebednoor. Kode.	The season was one of too much drought for cotton cultivation, and the yield in both the New Orleans and native cotton was probably not more than two-thirds of an average year.	Acres chs. 63,298 21	Cds. lbs. 4,844 215½ of cleaned cotton.	Acres. chs 63,298 21	Cds. lbs. 4,844 215½ of cleaned cotton.	Acres, chs. 2,10,260 21	Cds. lbs. 16,091 287½ of cleaned cotton.	-	None.

TALOOKS.	COTTON PURCHASED FOR GOVERNMENT.																			
	NEW ORLEANS.					BROACH.					TOTAL FOREIGN.		COUNTRY COTTON.							
	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.	Quantity Purchased in Candies of 784 lbs.	Average Rate per Candy of 784 lbs.	Cost of the whole.	Quantity Purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest Rate per Candy of 784 lbs.	Lowest Rate per Candy of 784 lbs.	Average Rate per Candy of 784 lbs.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
Dharwar Nowlgoond. Dumbul. Bunkapoor. Hangul. Hooblee. Raneebednoor. Kode.	-	-	-	None	-	-	-	-	None	-	-	-	None	-	-	-	-	None	-	-

TALOOKS.	G I N S.												
	In Use.		Out of Use.				Being Made.			Sold for Government during the Half-Year under Report.			
	Belonging to Government.	Belonging to Private Individuals.		Belonging to Government.		Belonging to Private Individuals.		For Government.		For Private Individuals.	Sold for Government during the Half-Year under Report.		
	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Talooks.	Number and Size of Gins.	Number Sold.	Size of Gins.	Number and Size of Gins.	At what Cost.
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	
Dharwar Nowlgoond. Dumbul. Bunkapoor. Hangul. Hooblee. Raneebednoor. Kode.	-	None	4 of 40 saws 1 of 25 " 1 of 24 " 3 of 20 " 73 of 18 " 9 of 14 " 3 of 13 " 6 of 10 " 55 of 8 " 157 of 7 "	Unable to state, as the gins are constantly moved about from one talooka to another, and often into the adjacent Madras districts and enam villages, as the dealers may require them.	9 of 8 saws. 1 of 4 " 2 roller churkas. 1 Egyptian churka. 1 cotton thrasher.	In the factory at Dharwar.	I believe none.	42 of 18 saws 2 of 10 " 20 of 8 " 1 of 4 " 1 cotton cleaning machine. 26 roller churkas	-	None	3 of 10 saws 5 of 8 saws, at 75 rupees 11 of 8 saws, at 70 rupees	19	Rs. a. 300 - 375 - 770 - 1,445 - Value of repairing work, &c - - 1,054 10 2,499 10

No. 1.—Cotton Planter's Report for the Half-Year commencing 1 December 1854 ending 31 May 1855—continued.

TALOOKS.	Cotton Ginned for Government and for Private Individuals.								Total Net Expenses on account of the Experiments from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expenses for the Half-Year under Report.
	FOREIGN COTTON.							COUNTRY COTTON.		
	NEW ORLEANS.		BROACH.		TOTAL FOREIGN.					
	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.	Quantity Purchased in Candies of 784 lbs. for Private Individuals.	Quantity Purchased in Candies of 784 lbs. for Government.			
46.	47.	48.	49.	50.	51.	52.	53.	54.	55.	
Dharwar	None	None	None	None	None	None	None	None	Total Expenses, Rs. 5,65,211 9 11	Total Expenses, Rs. 6,683 13 -
Nowlgoond.									Total Receipts, Rs. 1,47,459 6 1	Total Receipts, Rs. 3,117 15 1
Dumbul.									Balance - Rs. 4,17,752 6 10	Balance - Rs. 3,565 13 11
Bunkapoor.										
Hangul.										
Hooblee.										
Raneebednoor.										
Kode.										

Dharwar, Collector's Office, August 1855.

(signed) T. Ogilvy, Collector.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 31st July 1856—V. 5354 to 5357.

V. 5354.

(No. 1943 of 1856.)

From the Revenue Commissioner, Southern Division, to Mr. Officiating Chief Secretary Young.

Sir,

I HAVE the honour to submit a letter, dated the 24th March last, No. 368, from the Collector of Dharwar with accompaniments, being reports on the cotton cultivation and the operations of the gin factory in that collectorate for the half-year ending 30th November last.* The delay that has occurred in the submission of these documents arose from a press of current work, and a reference which I felt it necessary to make to Mr. Ogilvy regarding certain discrepancies that attracted notice in perusing that gentleman's and Dr. Forbes' letters.

2. As regards the cotton plantations of the period under report, it is stated in column 2 of the accompanying return No. 2, that "the sowing of cotton was not completed till very late in the season for want of rain; but the crops were generally favourable," the yield proving "an average one." Prices of both descriptions of cotton, it is added "were remunerative to the cultivators," having averaged in the case of New Orleans cotton 90 rupees, and in that of native cotton 80 rupees per khundee.

Col. 5, Statement No. 2.

3. The proportion of the years' crop cleaned by saw gins is given at 4,844 khundeas, the whole being New Orleans cotton.

Statement No. 2.

4. With respect to "gins," the following information is given in columns 7 to 18.

For sale in the factory and belonging to Government	-	-	-	23
In use belonging to private individuals	-	-	-	322
Out of use - ditto - ditto	-	-	-	0
Being made for Government	-	-	-	107
for private individuals	-	-	-	0
Furnished for Government	-	-	-	19
Sold - ditto	-	-	-	10

Col. 19, Statement No. 2.

these last realising a net profit of Rs. 777. 8. 10.

5. The

* The last report was submitted by me on 22d September 1855, No. 2749.

TO PROMOTE THE CULTIVATION OF COTTON, IN INDIA. 1421

5. The expenses of the department for the half-year under report are shown at Rs. 4,971. 15. 7., which sum, added to the disbursements of previous years (Rs. 4,21,318. 1. 9.) gives a balance against the experiment of Rs. 4,26,290. 1. 4. Col. 21, Statement No. 2.
Col. 20, Statement No. 2.

6. The difference between the valuation of the work performed at the gin factory as given by Dr. Forbes* and the Collector† respectively will be found cleared up in the accompanying letter from Mr. Ogilvy, dated 20th May last, No. 666; the suggestion contained in the concluding paragraph of which should, I think, be adopted.

7. In reference to Dr. Forbes' 7th, and the Collector's 3d paras., I may draw the attention of Government to the 13th para. of my letter, dated the 7th February last, No. 402, in which I recommended that the alteration of the 37 gins alluded to should be authorised. The resolution of Government, No. 1834 of 26 May last, having approved of all the proceedings and proposals shown in that letter, includes the disposal of this point.

8. The account given in Dr. Forbes' 9th para. of the increasing demands upon his factory for gins is very satisfactory, and affords a gratifying proof of the desire of the people to employ machinery.

9. The subject of Dr. Forbes' 11th and 13th paras. is deserving of consideration. The six boys alluded to in para. 12 I saw when I lately visited the factory, and from what I witnessed of their aptitude and efficiency, I am induced to recommend Dr. Forbes' proposal for taking on, under regular indenture, 25 lads on the terms, and with the objects, explained by him in the paragraph just quoted; the experiment seems worth trying, the more particularly so, as it is not likely to be attended with any, or at all events very trifling, expense to Government.

10. In his 14th para. Dr. Forbes solicits instructions relative to the disposal of the four Anglo-Indian apprentices attached to his establishment; in the letter of the 10th July last‡ quoted by that gentleman it was suggested that "the two seniors should be installed for a further period of two years as overseers or foremen in the gin factories; one at this station (Dharwar) and the other at any establishment available;" "this will" it was added "enable them to acquire that insight and experience in conducting the different departments of a workshop, which are absolutely requisite to qualify them for an independent charge," and as regards the two juniors it was proposed to transfer them to one of the Government establishments of the Presidency, either the mint or the gun-carriage manufactory, the salary of each being raised, in consideration of the expense of living in Bombay, to 50 rupees per mensem.

11. Since receiving Dr. Forbes' letter of the 10th July, I have had a correspondence with the Revenue Commissioner, Northern Division, which has resulted in the transfer of one of the senior apprentices (Mr. J. Carvalho) to Dhundooka, in the Ahmedabad Collectorate. Dr. Forbes reports his having started for his new appointment on the 4th April last. The two junior apprentices, however, remain to be elsewhere provided for, and I respectfully solicit the orders of Government in reference to them. Their apprenticeship in the gin factory has doubtless given them some practical knowledge in mechanics, and I would suggest that reference be made to the heads of the establishments named by Dr. Forbes, to ascertain whether the young men might not be entertained by them, and instructed during the period of their indentures, in any handicraft or art likely to fit them for higher employment in the service.

12. The subject of the 15th and 17th paras. of Dr. Forbes' report has been disposed of by the following communications, and calls for no further remark here:—

My letter to Government, No. 402 of 7 February 1856.
Government Resolution, No. 519 of 18 " "
Ditto - - - No. 552 of 21 " "
Ditto - - - No. 947 of 24 March 1856, and
Ditto - - - No. 1495 of 26 April 1856.

The last but one of these letters dispensed with the "samples" of gin-cleaned cotton, alluded to in Dr. Forbes' 15th paragraph.

13. In his concluding paragraph, Dr. Forbes complains of want of sufficient accommodation for the stores in his charge, and begs that he may be allowed to provide sheds for them at an outlay of (300) three hundred rupees, as I can testify from personally seeing the existing premises, that the Superintendent's representation is correct, I unite with the Collector in soliciting the sanction of Government to the expenditure proposed.

I have, &c.
(signed) H. W. Reeves,
Revenue Commissioner, S. D.

Poona, Revenue Commissioner's Office,
2 July 1856.

* Paras. 4 and 5 of his report of 11th February. † Para. 2 of his letter of 24th March.
‡ It was received from the Collector under date 20th July 1855, No. 1172, and led to a reference to the Revenue Commissioner, Northern Division, of 28th idem, inquiring whether an apprentice's services were required in that division.

III.
Bombay.
No. 5355.

(No. 368 of 1856).

From *T. Ogilvy*, Esq., Collector of Dharwar, to *H. W. Reeves*, Esq., Revenue Commissioner, Southern Division.

Sir,

I HAVE the honour to transmit for your information the copy of a report received from Dr. Forbes, dated the 11th ultimo, No. 12, with accompaniments, exhibiting the operations of the cotton gin factory at Dharwar, under his charge during the past half-year.

2. The subjoined Table gives a comparative view of the operations of the establishment during the two half-years ending the 30th November last :—

	Half-year ending 31 May 1855.	Half-year ending 30 November 1855.	Increase.	Decrease.
Total value of work done in the factory - - - - }	3,811 8 11	4,760 14 2	949 5 4	—
Materials, artizans' labour, &c. -	3,253 14 3	3,983 5 4	729 7 1	—
Realizations - - - -	2,874 15 1	1,681 2 3	- - -	1,193 12 10

From this it appears that the value of the work done and the profit accruing thereon, have both increased considerably during the past half-year, and it is still more satisfactory to know that the machinery that has been constructed is of a superior description.

3. I trust that Dr. Forbes may be allowed to complete the 37 eighteen-saw gins referred to in his 7th paragraph, in the manner he recommends, since I feel sure that Government may rely that he will turn them to the best account.

4. I beg to bring to your favourable notice the proposition contained in Dr. Forbes' 10th and subsequent paragraphs, for the employment of apprentices with a view to train up an intelligent body of artificers skilled in smiths' and carpenters' work. I feel sure that you will agree with me in thinking that the employment of the factory as a school of industry would confer a great and lasting benefit on the country.

5. Dr. Forbes' plan involves an annual expenditure of from 600 rupees to 1,200 per annum,* but he thinks that this would be covered by the profits derived from the apprentices' labour. Considering the great advantages that the measure promises, I trust that it will be sanctioned at least as an experiment.

6. The factory would then make gins for use in the Dharwar, Belgaum and the neighbouring Madras Collectories, as well as carts of a superior description, the demand for which increases with every new road that is constructed.

7. With reference to Dr. Forbes' 14th paragraph, I beg to refer you to the correspondence quoted in the margin,† and to request that I may be favoured with definite instructions in regard to the disposal of the apprentices who are still retained on the establishment of the factory, without advantage commensurate with their salaries.

8. As specimens of Mr. Frosts' and Dr. Forbes' saw-gins have been sent to Bombay for the inspection of the Chamber of Commerce, Government will shortly be in a position to decide on the proposition of withdrawing the defective cotton gins from the ryots in this zillah, and returning them to their owners improved, at an aggregate cost of Rs. 294. 6.

9. Dr. Forbes should, I think, be allowed to provide additional sheds to the factory, at an outlay of 300 rupees, to prevent damage to valuable Government property.

I have, &c.
(signed) *T. Ogilvy*, Collector.

Dharwar, Collector's Office, Camp Wurhaba,
24 March 1856.

* APPRENTICES.	Monthly.	Annually.
	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
25 at two rupees per mensem for first year - - -	50 - -	600 - -
25 at three rupees per mensem for second year - - -	75 - -	900 - -
25 at four rupees per mensem for third year - - -	100 - -	1,200 - -

† 1. Government letter No. 10,948, dated 20 November 1851, received with Revenue Commissioner's memorandum, No. 3872, dated 22 November 1851. 2. Government resolution, No. 4491, dated 1 July 1852, received with Revenue Commissioner's memorandum, No. 1543, dated 3 idem. 3. Para. 9 of Collector's letter to the address of Revenue Commissioner, S. D., No. 141, dated 19 January 1855, with accompaniments. 4. Para. 14 of Revenue Commissioner's memorandum to Government, No. 208, dated 25 January 1855. 5. Collector's letter No. 1172, dated 20 July 1855, and accompaniment, from Dr. Forbes, in charge of gin factory, No. 71, dated 10 July 1855.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1423

(No. 12 of 1856.)

III.
Bombay.

To T. Ogilvy, Esq., Collector, Dharwar.

Sir,

I HAVE the honour to forward the cotton planters' report for the half-year ending 30th November 1855, and along with it to furnish a detailed statement of the cost and returns of the cotton gin factory at Dharwar, during the six months included in that period.

2. The total value of work completed, amounts to Rs. 4,760. 14. 2., the cost of materials and artizans' labour is Rs. 3,983. 5. 4., which leaves a profit to Government of Rs. 777. 8. 10., being an average of Rs. 129. 9. 5. per mensem.

3. This statement is framed on the conclusion that the stores provided by the Commissariat department will not exceed in price the highest market rate current at that time. I have applied to the Commissary of Ordnance for a detailed invoice, and in anticipation of receiving it, have deferred forwarding this report until now, though it has not been furnished. However, I beg to state that the accuracy of the details cannot be very materially affected in either way, as the quantity of the above mentioned stores consumed in the work reported upon, has been of a comparatively small amount.

4. The number of gins completed during the half-year is 19, of these, four were of ten saws each, and of the value of 405 rupees, 14 were of eight saws, and of the value of 1,065 rupees, and one was an experimental gin of four saws, and of the value of 50 rupees.

5. The work executed on gins in hand and in course of construction amounted in value to Rs. 211. 8. on three gins of 20 saws each; Rs. 678. 7. 3. on 15 gins of 18 saws each, and 2,175 rupees on 27 gins of 10 saws each, and 267 rupees on eight gins of eight saws each, making a total, under this head, of Rs. 3,331. 15. 3.

6. Ten gins were disposed of during the period under report, viz., three of ten saws each, and seven of eight saws each; their aggregate value amounts to 825 rupees, all of which has been recovered, with exception of 50 rupees. The value of repairs done to old gins amounts to Rs. 359. 3. 8., the whole of which amount has been collected with exception of a balance of Rs. 46. 2. 11.

7. A reference to the report of the preceding half-year will show that at that time a large number of unfinished gins remained on hand; of these, 37 were of the large description, viz., 18 saws each, and on these alone it was shown that an outlay of Rs. 1,850 would be required to complete them. Owing to a scarcity of timber, I have not been able to carry out this work to the full extent; but in as far as it has been accomplished, it will be available in the proposed alteration of these gins to a more effective and durable principle, provided this measure is sanctioned, which I trust it may be, as otherwise there is but little prospect of their ever being disposed of.

8. The dealers and ryots are now becoming acquainted with the description of machine which best suits their purpose, they are fully aware of the faulty construction of these, and of the former small framed gins with which they were supplied (the principle in both being the same), and nothing will induce them to purchase others of a similar description if they can possibly avoid doing so.

9. The number of new gins sold has been comparatively small, as the period under report was not the proper season for disposing of them; at its commencement, the cleaning of last year's crop was in full operation, and the means of effecting it had been previously provided; at present, the establishment is actively engaged in completing orders received for new gins, amounting in value to upwards of 2,400 rupees, and the hands available are barely equal to the task required of them.

10. This latter circumstance induces me to bring to your notice the benefit that would accrue to the interests of this part of the country, by having a number of native artizans trained in a good and efficient manner, and the gin factory affords an opportunity of doing so, which, I think, ought not to be lost sight of.

11. The large amount of public works now in contemplation, as well as the increasing demand on account of private enterprise, is such as must soon render the want of workmen a source of great impediment and inconvenience. I have reason to know that it has already been experienced to a very material extent by the engineer department; and as far as the gin factory is concerned, I could at present with advantage employ double the number of hands available. The price of labour has consequently risen to a most exorbitant rate, and workmen of a very inferior class command wages which render their employment for Government purposes an unprofitable affair.

12. I have already tried the experiment above alluded to, on a small scale, and have now in employment six boys, sons of artizans, whose parents applied for their admission without pay;

III.
Bombay.

pay; though they have had only six months' instruction, their attainments are most creditable, and they will soon be qualified to fill any vacancies that may occur in the regular establishment. I believe that of this class any number of lads might be procured from various parts of the country, provided pay sufficient for bare subsistence was allowed them; and if you approve of the suggestion, I trust you will be so good as to bring it to the notice of Government. In event of its being entertained, I would beg to recommend that the following measures be adopted:—

1st. As a commencement, the number of boys engaged might be limited to 25, each to be indentured for three years, receiving pay for the first year of two rupees a month, for the second of three rupees, and for the third of four rupees per mensem.

2d. That they should be instructed in every department of carpenter and smith's work during the early part of their apprenticeship, and subsequently trained to gin making.

3d. That the accounts of this department should be kept under a separate heading from those of the gin factory; and as an encouragement to industry and application, should the returns prove remunerative, that a portion of the profits be awarded, as an increase of pay to the most meritorious.

13. I have no doubt that work will be procurable in abundance, and have therefore no hesitation in stating that the plan can be carried out, not only without the loss of a rupee to Government, but even at a profit, if such should be required.

14. I beg leave to bring to your notice that I have not as yet been favoured with any instructions regarding the disposal of the four Anglo-Indian apprentices, at present entertained at the gin factory. In my letter to your address, dated the 10th of July last, I pointed out the inexpediency, as well as the loss incurred by retaining them in their present position, where, without any benefit in return, they are adding very materially to the expense of the establishment. I shall feel much obliged if you will be so good as to bring the subject forward again. The services of the senior in his present situation may be continued with advantage on the terms proposed by me in the letter above alluded to, but those of the others are quite superfluous, and until vacancies occur for them elsewhere, they might be occupied with much benefit to themselves in acquiring a further knowledge of machinery at any of the Government establishments at Bombay.

15. I regret that circumstances have hitherto prevented my complying with the requirements of the Government resolution No. 4513, of 30th October last. The attendance of the committee whose opinion was required on the merits of the "ten-saw gin," has not been attainable, nor have I been able to procure samples of the produce cleaned by the other machinery at work in the districts, as the ginning season had terminated and all the cotton been disposed of before the notification reached me. The only members of the committee who have written to me on the subject were Major Hebbert and Mr. Brice, and I beg to annex copies of their remarks.

16. I have, however, furnished all the information called for by the Revenue Commissioner, who is here at present, and who has been engaged in a careful personal investigation of the subject in question; and I am happy to say that the measure which he has approved of and recommended to Government, is one which, in my opinion, is above all others most likely to lead to a safe and speedy conclusion with regard to the important point at issue.

17. The transmission of specimens of the machinery to Bombay will place at the disposal of the Chamber of Commerce the means of testing fairly the correctness of the opinions which I have formerly advanced, and I trust that the result will prove they were not uncalled for.

18. According to the plan proposed, the actual loss to Government in withdrawing all the objectionable machinery, will not exceed Rs. 294. 6., a sum which I consider trifling in comparison with the advantages which will ensue to the interests of the country.

19. The only other point which it is necessary to notice at present is the inconvenience which is experienced from the want of accommodation of any description for storing the machinery on hand, though the workshops are crowded to excess, and one of the three entirely devoted to this use, there is still a large amount of valuable property which cannot be safely protected. I would therefore beg that I may be permitted to provide suitable sheds, which can be done at an expense not exceeding 300 rupees.

I have, &c.
(signed) G. F. Forbes,
Superintendent Gin Factory.

Dharwar Cotton Gin Factory,
11 February 1856.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1425

EXTRACT of a Letter from Mr. A. C. Brice to Dr. G. F. Forbes, in charge of Government Gin Factory, dated 2 July 1855.

III.
Bombay.

WITH reference to the eight saw-gins, of which I ordered 12 from Mr. Frost, and of which seven were received in my absence by my establishment, I beg to express my extreme disappointment; they were promised to clean each 20 maunds of kupass per diem with three men; not only do they fall very short of turning out this quantity, but they do it very badly; the machines look as if they had come out of the hands of some strap manufacturer, and, from the vibrating motion that the bad joints occasion, injury is done to the staple. Those now in the factory evidence what I say; and I have the honour to submit to you whether I ought to be required to take the remaining five; those I have will be disposed of at any sacrifice when I can find a buyer. The principle of construction is moreover faulty, and all should be adapted for the separate driving wheel stand, in applying which to a ten saw-gin, you have produced a most useful machine.

(True extract).

(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.

EXTRACT of a Letter from Major W. G. Hebbert, Executive Engineer, Dharwar Division, to Dr. G. F. Forbes, Assistant Magistrate in charge Cotton Gin Factory, dated 18 January 1856.

My opinion is unfavourable to any system of distributing saw-gins by ones and twos over the country, for the obvious reason, that the ignorant owners work them on when out of adjustment, and thus render ginned cotton a most uncertain product in the market. From the state of Mr. Frost's cheap gins returned to your stores, it is evident that their slight construction and inferior material in important places of the machine, render them particularly liable to the above objection. The only safe gin to distribute about the country is the expensive metal gin sent from England. Your own alterations in Frost's gins are all obvious improvements, being a return to the metal gins, as far as economic construction permits; compared with Frost's, your re-arranged gin is worth two of them; it is infinitely less liable to be thrown out of adjustment, and your good workmanship enables you to do more work with the same power. But I am nevertheless of opinion that this kind of saw-gin can only be satisfactorily used in large factories, as at Broach. Mr. Brice will soon set the example of this, and once successfully established, no Government gin factory will be needed; private enterprise will follow in his wake.

STATEMENT No. 2.

COTTON PLANTER'S REPORT from 1st June to 30th November 1855 in the Dharwar Collectorate.

TALOOKAS.	Remarks on the past Season as to how far anticipations regarding the Crop and its Disposal were realised.	Supposed Proportion of the last Year's Crop which has been Cleaned in the Saw Gins, or will be so Cleaned.				GINS.
		NEW ORLEANS.	BROACH.	TOTAL FOREIGN.	COUNTRY COTTON.	For Sale.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Belonging to Government in the Factory. Number and Size of Gins.
1.	2.	3.	4.	5.	6.	7.
Nowgoond - Dumbul. Bunkapoor. Hangul. Raneebdnoor. Hooble. Kode.	The sowing of cotton was not completed till very late in the season for want of rain, but the crops were generally favourable, and the yield may be said to have been an average one. Prices of both descriptions of cotton were remunerative to the cultivators during the year under consideration, having averaged, in the case of New Orleans, to 90 rupees, and in that of native cotton to 80 rupees a candy.	The whole about 4,844 candies, and 215 ½ lbs.	- - -	About 4,844 candies, and 215 ½ lbs.	None; this description of cotton is cleaned by means of the foot roller.	1 of 10 saws. 16 of 8 saws. 2 of 4 saws. 2 iron roller churkas. 1 Egyptian churka. 1 cotton thrasher. 23

Cotton Planter's Report from 1 June to 30 November 1855 in the Dharwar Collectorate—*continued.*

G I N S— <i>continued.</i>										
TALOOKAS.	In Use.		Out of Use		Gins completed in the present Half-year.		Being made.			
	Belonging to Private Individuals.		Belonging to Private Individuals.		Belonging to Government		For Government.	For Private Individuals.		
	Number and Size of Gins	Talookas.	Number and Size of Gins.	Talookas.	Number and Size of Gins	Value.	Number and Size of Gins.	Number Sold	Size of Gins	
	8	9.	10.	11	12	13	14.	15.	16.	
Nowlgoond - Dumbul. Bunkapoor. Hangul. Raneebednoor. Hooblee. Kode	4 of 40 saws 1 of 25 saws. 1 of 24 saws. 3 of 20 saws. 73 of 18 saws. 9 of 14 saws 3 of 13 saws 9 of 10 saws 62 of 8 saws. 157 of 7 saws.	I am unable to state, as the gins are constantly moved about from one talooka to another, and often into the adjacent Madras districts and Enam vilages, as the dealers may require them.	I believe none		3 of 10 saws 1 of 10 saws. 13 of 8 saws 1 of 8 saws. 1 of 4 saws 19	300 - - 105 - - 975 - - 90 - - 50 - - 1,520 - -	3 of 20 saws - 42 of 18 saws. 27 of 10 saws. 8 of 8 saws. 1 cotton cleaning machine. 26 roller churkas, wooden.	-	None.	
	322						107			

TALOOKAS.	G I N S— <i>continued</i>		Profit or Loss to Government, deducting the Cost of European Superintendence	Total Net Expenses on account of Experiments, from the Commencement to the Close of the Half-year preceding that under Report.	Total Expenses for the Half-year under Report.	Prospects of the coming Season.
	Sold for Government during the Half-year under Report.					
	Number and Size of Gins.	At what Cost.				
	17.	18.	19	20	21	22
Nowlgoond - Dumbul. Bunkapoor. Hangul. Raneebednoor. Hooblee. Kode.	3 of 10 saws 7 of 8 saws 10 Value of repairs -	Rs a p 300 - - 525 - - .825 - - 359 3 8 1,184 3 8	Net profits during six months under report is shown in the accompanying "Abstract Statement," viz, Rs. 777. 8 10.	Total Expenses 5,71,895 6 11 Total Receipts 1,50,577 5 2 Balance - 4,21,318 1 9	Total Expenses - 6,653 1 10 Total Receipts - 1,681 2 3 Balance - 4,971 15 7	The crop of the coming season promises well, with the exception of the talooka of Nowlgoond, and a portion of that of Dumbul, where it was in some instances very backward, owing to the late sowing for want of rain.

Dharwar Cotton Gin Factory,
1 December 1855(signed) G. F. Forbes,
Superintendent Cotton Gin Factory.(signed) T. Ogilby,
Collector.

MEMORANDUM.

The succeeding Half-yearly Reports of the Dharwar Superintendency are printed in connection with the subject of machinery.—S. page 1224 *et seq.*

II.
Bombay.

BELGAUM.

(No. 127 of 1849.)

Territorial Department, Revenue.

To the Honourable the Court of Directors for Affairs of the Honourable
East India Company, London.

BELGAUM.

Honourable Sirs,

WE have the honour to submit the annexed copy of a letter from the Revenue Commissioner, S. D., No. 3313, dated the 22d ultimo, and of its enclosures, handing up a progress-report of the cotton experiments at Belgaum, under the superintendence of Mr. Channing, the Government Cotton Planter in that district, for the half-year ending 30th November last. Rev. Cons. 1849,
Sept.—V. 11,662
to 65

2. The results exhibited in this report have been reviewed by Mr. Townsend in his letter above quoted, to which we beg to direct your Honourable Court's attention. His observations on them do not, however, seem to call for any particular remarks or instructions from us. The New Orleans cotton plantations of the year 1848-9, seem generally to have failed, from the unpropitious nature of the season. The actual extent of land planted with this cotton was 4,189 acres 28 g. 11 $\frac{3}{4}$ a., but the superintendent intimates that double that quantity will be cultivated during the present season.

3. Of the last year's crop of New Orleans cotton, about half was cleaned in Government, and half in private gins, 85 candies, 15 maunds, and 37 lbs. of cotton were ginned on account of Government, the number of gins employed being three. Sixteen gins appear to have been in the course of construction for Government use, and four for private individuals; only one gin was sold on account of Government, which fetched 220 rupees, and the total cost of the department, exclusive of all charges on account of the purchase of cotton for Government, was for the half-year ending 31st May 1848, 1,695 rupees, and for that under report Rs. 2,361. 8. 2., giving the annual expenditure at about Rs. 4,056. 8. 2., or an average of about 338 rupees per mensem.

We have, &c.
(signed) *Falkland.*
J. P. Willoughby.
D. A. Blane.

Bombay Castle,
15 September 1849.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 12 September 1849.—V. 11,662 to 11,665.

(No. 3313 of 1848.)

From the Revenue Commissioner, South Division, to Mr. Acting Secretary *Courtney*.

V. 11,662.

Sir,

WITH reference to the Government letters quoted in the margin,* I have the honour to submit a progress report on the New Orleans cotton experimental department, under the control of Mr. Channing, in the Belgaum Collectorate, for the half-year ending the 30th November last.

2. This report was originally received from the Acting Collector, under date the 13th February last (No. 93), unaccompanied by any remarks of the Acting Collector; its transmission to Government was deferred till the receipt of explanations, called for by this department, under dates the 23d February, 30th March, 7th April, 23d June, and 10th ultimo, in connexion with certain erroneous entries in Mr. Channing's statement. The Acting Collector's reply to the last quoted communication is dated the 26th ultimo, No. 368.

3. The New Orleans cotton plantations of the year 1847-48 are represented to have generally failed, owing, in some places, to want of rain, in others, to irregular falls of rain, and in some to late planting. The actual extent planted during the season 1848-49, to which

Col. 2 of Report.

* No. 5,465 of 31 December 1847, No. 2523 of 29th April 1848.

III.
Bombay.

which this report has reference, is given in the 27th column of the report, and in a subsequent letter of 28th June last (No. 57), from Mr. Channing, at 6,725 acres. This having been found to exceed what was contained in a statement of cotton cultivation for the same year received from the Acting Collector. under date the 19th March last, viz., 4,189 acres 28g. 11 $\frac{3}{4}$ a., the Revenue Commissioner called upon the latter officer to explain the discrepancy; he begs herewith to submit his reply, No. 368, of 26th ultimo. Mr. Channing was evidently incorrect in estimating the area of cultivation from the mere quantity of seed he distributed.

4. In regard to "ginning" operations, it is shown that of the year's crop of "New Orleans" cotton about (col. 7 of report) a half was cleaned in the Government gins, and the remainder (with two khundies of "Broach" and 29 of "Country" cotton) by certain dealers in Sounduttee and Moorgode; 12 khundies were likewise cleaned by ryots in different places. These facts appear to afford grounds to hope that, with the greater facilities for cleaning cotton which the multiplication of good cheap gins will afford to the cultivators generally, the plantation of "New Orleans" cotton in the districts will be extended.

Col. 3 and 6 of report.

5. The quantity of cotton ginned on account of Government is said to have been—

	<i>h.</i>	<i>m.</i>	<i>lbs.</i>
"New Orleans" - - - - -	26	14	11
"Country" - - - - -	59	1	26
Total - - - - -	85	15	37

all of which quantity is stated by Mr. Channing to be under transmission to Bombay.

Cols. 11, 17, and 19 of report.

6. The number of gins in use during the half-year is given at three, while 16 for Government and four for private individuals were in course of construction, under the orders of Government, dated the 25th September last, No 5703: under the instructions in the subsequent Government letter, dated the 10th May last (No. 3122), the construction of these gins has been transferred to the Koosoogul factory, in the Dharwar collectorate.

Col. 21 to 23 of report

7. Only one gin was sold in the half-year in question, on account of Government, and this was at Sounduttee, for 220 rupees.

8. The total cost of the department for the six months preceding those reported upon (viz., for December 1847 to May 1848), is given in the 25th col. of Mr. Channing's statement at Rs. 6,396. 12. 1. This amount is shown by an accompanying detailed memo., dated 8th March last, to include the cost, carriage, packing, &c. of cotton purchased for shipment to the Presidency on account of Government; excluding such items, therefore, (as I think should be done) the expenses of the department stand thus:

	<i>Rs.</i>	<i>a.</i>	<i>p.</i>
Mr. Channing's pay (excluding pay for December 1847, and January and February 1848, charged to the Dharwar collectorate) - - - - -	1,350	-	-
Mr. Channing's establishment - - - - -	204	-	-
Repairing gins - - - - -	38	-	2
Repairing gin-houses - - - - -	78	-	5
Stationery - - - - -	9	7	9
Sundries - - - - -	15	7	10
Total - - - - -	1,695	-	2

9. The expenses of the half-year under report are stated in an appended letter from Mr. Channing, dated 28th June last, and omitting all charges on account of cotton purchased for Government (as has been done above), may be thus quoted:

	<i>Rs.</i>	<i>a.</i>	<i>p.</i>
Mr. Channing's pay, with that of his establishment, from 1st June to 30th November 1848 - - - - -	2,904	-	-
Repairs to gin-houses - - - - -	34	4	-
Carriage and setting-up of gins - - - - -	39	10	9
Purchase and carriage of cotton seed - - - - -	225	10	-
Stationery - - - - -	6	11	6
Total - - - - -	3,210	4	3
Deduct,—			
Realised as hire for gins - - - - -	7	4	-
Realised by sale of seed - - - - -	841	8	1
	848	12	1
Balance - - - - -	Rs. 2,361	8	2

Which

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1429

Which amount, added to the charges of the preceding half-year above given, shows an outlay on the Belgaum cotton experimental department in the year 1847-48 of about Rs. 4,056. 8. 4, as an average monthly expenditure of about 338 rupees.

III.
Bombay.

10. As regards the prospects of the coming season, Mr. Channing speaks in very favourable terms (in col. 26), and it is to be hoped that his pleasing anticipations have been realized.

I have, &c.

(signed) E. H. Townsend,
Revenue Commissioner, South Div.

Poona, Revenue Commissioner's Office,
22 August 1849.

COTTON PLANTER'S REPORT for the Half-year from 1 June to 30 November 1848, in the Collectorate of Belgaum.

TALOOKS.	Remarks on the past Season as to how far Anticipations regarding the Crop and its Disposal were realized.	Quantity of Cotton on Hand, on account of Government, of each Sort, Ginned or not Ginned, viz. :				Supposed Proportion of the last Year's Crop which has been cleaned in Saw-gins, or will be so cleaned.			
		NEW ORLEANS.	BROACH.	TOTAL FOREIGN.	COUNTRY COTTON.	NEW ORLEANS.	BROACH.	TOTAL FOREIGN.	COUNTRY COTTON.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1	2.	3.	4.	5.	6.	7.	8.	9.	10.
Sumpgaon -	During the season of 1847-48, from the want of sufficient moisture, and the very unusual periods at which rain fell, cotton of all kinds yielded a very scanty crop; the New Orleans variety in particular, most of the produce of which was spoilt by the early rains.	Cds mds. lbs. 26 14 11 ginned. Now under transmission to Bombay.	None. The ryots do not approve of this description of cotton, as the root takes so great a hold of the soil as to cause great labour in removing the old stalks.	Cds. mds. lbs. 26 14 11	Cds. mds. lbs. 59 1 26 ginned. Now under transmission to Bombay.	About one-half of the produce has been ginned in the Government machines. A portion purchased as kuppas, and carried into the Dharwar Collectorate, and the remainder by dealers at Sounduttee and Moorgode.	About two 'candies' grown and ginned by a dealer at Moorgode.	From 45 to 50 candies.	About 59 candies, 1 maund, 26 pounds for Government. 29 candies by dealers at Sounduttee and Moorgode. About 12 candies by ryots at different places.
Pursghur -	Some fields in this talooka yielded a very fair return of New Orleans, whilst others, from being planted late, were a complete failure; the actual quantity sowed of any kind of cotton being scarcely more than one-fifth of an average crop.								
Badamee -	The New Orleans planted in the Rohan district yielded a fair crop; the greatest part of the produce was sold to dealers of Bettigherree. The native cotton crop yielded very little, apparently from want of moisture.								
Hoongoond -	A very few acres only of New Orleans cotton was planted, and yielded a fair return. Native cotton gave also a fair crop.								
Padshahpoor	In this talooka very little New Orleans was planted, the produce of which was good. The ryot objects to it, from there being no means of cleaning it at hand.								

TALOOKS.	G I N S.										
	In Use.			Out of Use.			Being Made.				
	Belonging to Government			Belonging to Private Individuals.			For Government.		For Private Individuals.		
	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.	Number.	Number of Saws.	
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.		
Sumpgaon - Pursghur. Badamee. Hoongoond. Padshahpoor	3	1 at Moorgode, removed to Ilakul. 1 at Naginhal, removed to Hoongoond. 1 at Sounduttee.	1 of 25 saws, English made, received from Broach, 1846. 1 of 25 saws, American 1 of 22 saws, American.	-	-	None	-	16	Of 20 saws each, as per instructions contained in Mr. Secretary Lumsden's letter, No. 5703, dated 25th September 1848.	4	Of 20 saws each.

Cotton Planter's Report for the Half-year from 1 June to 30 November 1848, in the Collectorate of Belgaum—*continued.*

TALOOKS.	G I N S— <i>continued.</i>			Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on Account of the Experiments, from the Commencement to the Close of the Half-year preceding that under Report.	Prospects of the coming Season.
	Sold for Government during the Half-year under Report.					
	Number Sold. 21.	Number of Saws each. 22.	At what Cost. 23.			
Sumpgaon - Pursghur. Badamee. Hoongoond. Padshahpoor.	1	Of 21 saws, obtained from the Dharwar Collectorate, and disposed of at Soudutty, where it has been kept constantly at work, and given great satisfaction to the owner.	Rs. 220	Not known -	Rs. a. p. - - - 6,396 12 1 From 1st June to 30th November 1848 5,180 3 10½ Total - Rs. 11,596 15 11½	The standing crops give every prospect of an excellent crop being realized. The New Orleans plants being the finest I have seen since my first entering on the experiment, I look forward with every confidence to seeing a good and plentiful return realized from them.

Remarks.—The early fall of rain in March did great injury to the cotton crop in each of the talookas named in this report: in some places the whole of the produce was beaten off the plants, and on the whole, to the best of my judgment, scarcely one-fifth of an average crop was gathered. The present season promises to yield a large and very early crop, the weather having been very favourable, and the seed planted early: 6,725 acres are under New Orleans cotton, and I have every reason to hope the next season will see that quantity doubled.

(signed) T. W. Channing,
Cotton Planter.

(No. 368 of 1849.)

To E. H. Townsend, Esq., Revenue Commissioner, S. D., Poonah.

Sir,

IN reply to your letter, No. 2815, of the 10th instant, requesting me to explain the cause of the discrepancy between the extent of New Orleans cotton plantation for the years 1847-48 and 1848-49, given in Mr. Channing's letter, No. 57, of 28th ultimo, and that contained in the statements forwarded with my communication, No. 143, of the 19th March last, I have the honour to inform you, that Mr. Channing has estimated the extent of plantation upon the quantity of seed distributed, and that the extent given in my statements is the actual cultivation as reported by the mamludars, from observations made by them at the end of the season.

Belgaum, Collector's Office,
29 July 1849.

I have, &c.
(signed) J. D. Inverarity,
Acting Collector.

V. 11,664.

MINUTE by the Right Honourable the Governor, subscribed to by the Honourable Messrs. Willoughby and Blane.

THE results exhibited in this progress report have been received by the Revenue Commissioner in his letter; his observations on them do not suggest any particular remark or instructions.

The New Orleans cotton plantations of the year seem generally to have failed, from the unpropitious nature of the season: the actual extent of land planted was 4,189 acres 28 g. 11½ a.; and the superintendent estimates that double that quantity will be cultivated during the next season.

Of the year's crop of New Orleans cotton, about half was cleaned in Government, and half in private gins; 85 c. 15 m. 37 lbs. of cotton were ginned on account of Government; the number of gins in use were three; sixteen were making up for Government, and four for private individuals; only one gin was sold on account of Government; it fetched 220 rupees, and the total cost of the department, exclusive of all charges on account of the purchase of cotton for Government, was, for the half-year ending 31st May 1848, 1,695 rupees, and for the half-year ending 30th November last, Rs. 2,361. 8. 2., giving the annual expenditure at about Rs. 4,056. 8. 4., or on an average of about 338 rupees per month.

3 September 1849.

(signed) Falkland.
J. P. Willoughby.
D. A. Blane.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1431

(5565 of 1849.)

From Mr. Chief Secretary *Malet* to the Revenue Commissioner, South Division.

Sir,

I HAVE been directed by the Right Hon. the Governor in Council to acknowledge the receipt of your letter, No. 3313, dated the 22d ultimo, handing up the half-yearly progress report of the cotton experiments at Belgaum, ending 30th November last, and to state, that your observations on the results exhibited on this report do not suggest any particular remarks or instructions.

2. The New Orleans cotton plantations of the year 1848-49 seem generally to have failed, owing to the unpropitious nature of the season. The actual extent of land cultivated with this cotton was 4,189 acres 28 g. 11 $\frac{1}{2}$ a.; but the superintendent intimates that double that quantity will be cultivated during the present season.

3. Of the last year's crop of New Orleans cotton, about one-half was cleaned in Government, and one-half in private gins; 85 candies 15 maunds and 37 lbs. of cotton were ginned on account of Government, the number of gins employed being three; 16 gins appear to have been in the course of construction for Government use, and four for private individuals; only one gin was sold on account of Government, which fetched 220 rupees, and the total cost of the department, exclusive of all charges on account of the purchase of cotton for Government was, for the half-year ending 31st May 1848, 1,695 rupees, and for that under report, Rs. 2,361. 8. 2, giving the annual expenditure at about Rs. 4,056. 8. 2, or an average of about 338 rupees per mensem.

Bombay Castle,
12 September 1849.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 3d May 1850.—V. 7217 to 19.

(No. 1963 of 1850.)

From the Revenue Commissioner, South Division, to Mr. Secretary *Goldsmid*.

V. 7217.

Sir,

WITH reference to my letter, No. 3313, dated the 22d August last, forwarding the progress report of the cotton experiment in the Belgaum Collectorate for the half-year ending 30th November 1848, I have the honour to transmit a similar report from Mr. Channing for the succeeding six months, ending 31st May 1849. It was originally received in this office with a letter from the Acting Collector, dated the 20th July last, No. 358, but, on being returned for explanation under date the 12th October following, No. 3863, it would appear to have been lost—[*Vide* Collector's letter accompanying No. 98, of the 4th February, forwarding another copy].

2. As noticed in the concluding paragraph of my letter of the 22d August, above quoted, the 26th column of Mr. Channing's report for the half-year ending the 30th November 1848, spoke favourably of the prospects of the "coming season:" as the present report afforded no information as to how far Mr. Channing's anticipations had been realized, I referred to the Collector on the subject on the 4th February, No. 732. A reply is contained in the fifth paragraph of Mr. Reeves' letter of the 9th ultimo, No. 181, appended, where it is represented that the cotton season had "generally" proved favourable.

3. With respect to the 3d column of the accompanying report, in which it is stated by Mr. Channing that New Orleans cotton "seed. for 6,725 acres, was distributed for planting," I requested the Collector, in the letter of the 14th February, above alluded to, to ascertain the actual extent of land planted. His reply, dated the 9th ultimo, is accompanied by a statement which shows that the entire extent was 4,189 acres 28 g. 11 $\frac{1}{2}$ a. the cultivation of the New Orleans cotton being chiefly in the Pursghur and Hoongoond talookas, where 1,755 acres 15 g. 11 a, and 1,742 acres 2 g. 3 $\frac{1}{2}$ a. respectively had been planted. Country cotton is also shown in the 9th column of the report to have been planted to the extent of 1,34,514 acres 8 g. during the year 1848-49.

4. An "estimate" of the produce of the New Orleans cotton cultivation above referred to is given in the 5th paragraph of an appended letter of 25th October last (No. 85), from Mr. Blount (who officiated for Mr. Channing during his absence on sick leave), and is said to amount to 89 "candies." Estimates of the quantity of New Orleans and country cotton purchased for Government are also given in the same paragraph at 42 $\frac{1}{2}$ candies and 28 candies respectively. The supposed average cost of the New Orleans cotton is stated in the 12th column of the report at 66 rupees per candy of 784 lbs.: that of the country cotton (*see* 30th column) cannot be well ascertained till the whole is ginned.

296—Sess. 2.

9 B 4

5. Seven

III.
Bombay.

V. 11,665.

1432 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

5. Seven Government and three private gins are said (columns 32 and 35) to have been "in use" during the half-year under report; none were "out of use." Two had been sold (column 48), each for Rs. 179. 8., which (column 51) was the actual cost to Government.

6. The net expenses of the department during the present half-year are given in the 61st column at Rs. 8,298. 8. 1., which will be found detailed in the "accompanying appendix." From this, however, should be deducted Rs. 4,432. 6. 10., the sum total of items 10, 11, and 15 (purchase of cotton for Government), which are not, rightly speaking, charges on the department, and the expenses are reduced to Rs. 3,866. 1. 3.; and adding to this amount the net expenses incurred from December 1847 till the 30th November 1848, we have against the Belgaum cotton experiment a sum of Rs. 7,922. 9. 7.

Revenue Commissioner's Camp, "Nehr,"
19 April 1850.

I have, &c.
(signed) E. H. Townsend,
Revenue Commissioner, S. D.

(No. 98 of 1850.)

V. 7218.

To E. H. Townsend, Esq., Revenue Commissioner, South Division, Poonah.

Sir,

IN reply to your letter, No. 4432, of the 7th December last, I have the honour to inform you, that the half-yearly report of the cotton experiment, ending 31st May 1849, was forwarded to Mr. Blount, who was performing the duties of the cotton experiment of this collectorate during Mr. Channing's absence on sick leave, on the 18th October last, together with your original remarks, No. 3863, dated 12th idem, which accompanied it. It appears that Mr. Blount, then in the Dharwar districts, returned the above documents with the required explanations; but as they never reached this office, I have obtained copies of the half-yearly report, together with Mr. Blount's explanations, from the records of the cotton superintendent of this collectorate, and I have now the honour to forward them.

Belgaum, Collector's Camp, "Hookeree,"
4 February 1850.

I have, &c.
(signed) H. W. Reeves,
Collector.

COTTON PLANTER'S REPORT for the Half-year commencing 1 November 1848 and ending on 31 May 1849, in Belgaum Collectorate.

TALOOKAS.	Prospects of the Season, and State of the Crops as regards each Sort of Cotton, showing also what Stations were visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.							
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.	
		Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.	Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.	Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.	Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Sumpgaon - Pursghur. Badamee. Hoongoond, and the Mahals. Balowdie. Moorgode. Rohan, and Ilakul.	The picking season was very favourable through the eastern talooks, and the crops realised were abundant. A great want of purchasers was felt, and the ryots generally were very careless in picking their native cotton. The following stations were visited: Naiginhall. Moorgode. Sounduttee. Rohan. Hoongoond, and Kumutghee, and most of the villages in the Sumpgaon, Pursghur, Rohan, and Hoongoond talooks. The native cotton cultivated, 1,34,514 acres, includes the whole collectorate for 1848-49.	Seed for 6,725 acres was distributed for planting.	Unknown at present, a great portion of the produce still remaining in the hands of the ryots, and much of it having been sold into the Dharwar Collectorate.	About 16 acres planted in the Ilakul Mahal.	Unknown, the produce being retained by the grower.	6,741 acres.	Unknown	1,34,514 acres, 8 goontas: the whole collectorate.	Unknown.

Cotton Planter's Report for the Half-year from 1 November 1848 to 31 May 1849, in Belgaum Collectorate—*continued.*

TALOOKAS.	GINS— <i>continued.</i>				COTTON GINNED FOR GOVERNMENT.								TOTAL Net Expense on Account of the Experiment from the Commencement to the Close of the Half-year preceding that under Report.	TOTAL Net Expense of the Half-year under Report.
	Sold by Government during the Half-year under Report.			Profit or Loss to Government, deducting Cost of European Super- intendence.	FOREIGN COTTON.						COUNTRY COTTON.			
	Number.	Number of Saws.	Of what Cost each.		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.		
					Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.	Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.	Quantity purchased in Candies of 784 lbs. each for Government.	Quantity purchased in Candies of 784 lbs. each for Private Individuals.				
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.	
Sumpgaon - Pursghur. Badamee. Hoongoond and the Mahals. Balowdie. Moorgode. Rohan, and Ilakul.	2 (Two.)	Of 20 saws each.	Rs. 178. 0. 8. (one hundred and seventy- nine rupees and eight pies).	Disposed of at actual cost, as per G. L., No. 5,703, dated 25th September 1848.	Unknown until the whole is ginned.	None	None	None	None	None	None	None	From 1st June to 30th Novem- ber 1848: Rs. 5,180. 3. 10½.	From 1st De- cember 1848 to 31st May 1849: Rs. 8,298. 8. 1¼.

Remarks.—The prospects of the planting season, 1849, 1850, are not very encouraging, the kuppas of last year having been left too long on the hands of the ryots. The rain is also, up to the present time, very partial, but in the vicinity of the gin stations many ryots will plant New Orleans.

(signed) T. W. Channing,
Superintendent of Cotton Experiment, Belgaum Collectorate.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 12th June 1850.—V. 8348 to 8353.

(No. 2108 of 1850.)

V. 8348. From the Revenue Commissioner, Southern Division, to Mr. Secretary *Goldsmid*.

Sir,

I HAVE the honour to forward Mr. Channing's progress report on the cotton experiment under his superintendence in the Belgaum zillah, for the half-year ending the 30th November last, received with a letter from the Collector, dated the 6th ultimo, No. 175. The report for the half-year preceding accompanies my letter, No. 1963, of the 19th instant.

2 In the 2d column of the present report, Mr. Channing states that the cotton crop of the past season "generally was good." It had failed in a few villages of the Badamee district through excessive rain. In some parts of the collectorate the produce was such that, had a ready market been found for its sale, the ryots would have been induced greatly to extend the cultivation of the New Orleans cotton. This subject is noticed in the 4th and 6th paragraphs of the Collector's letter, and in much that is said by that officer I fully agree. I would, however, respectfully refer his Lordship in Council to my letter, No. 226, of the 16th January last, transmitting a communication from the Collector of Dharwar on the subject of the apathy manifested by the Bombay merchants in connexion with the cotton experiments in the Southern Marhatta country. I have there adverted to the deficiency of roads as also offering considerable obstructions to the prosperity of the cotton trade.

3. The quantity of New Orleans cotton on hand, on account of Government, at the close of the half-year under report, ginned and not ginned, is stated in the 3d column, at 66 candies; and that of country cotton, at 30 candies and 11 maunds.

4. The supposed proportion of the last year's New Orleans cotton crop which has been cleaned in saw gins, is stated in the 7th column at 116 candies, *i. e.*, 66 candies on account of Government, and 50 on account of private dealers. One candy of Broach cotton has also been grown and cleaned by a dealer at Moorgode; of the native cotton, there were cleaned for Government, 30 candies and 11 maunds, and for dealers, 120 candies; making in all, 150 candies and 11 maunds.

5. Column

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1435

III.
Bombay.

5. Column 11 shows that seven Government gins were "in use;" and column 14, that only one belonging to a private individual was "out of use."

6. In his 7th paragraph, the Collector mentions that applications have been received for saw-gins from the chiefs of Koorundwar, Shedbal, and Jamkhundee, and two dealers in the Moodhole and Sanglee territory. Mr. Reeves will, I doubt not, make arrangements to supply these requisitions with as little delay as possible. The proposition quoted in Mr. Reeves' 7th paragraph, No. 172, of the 4th ultimo, of the gift of a saw-gin to a ryot in Sounduttee, was sanctioned by Government, under date the 19th instant, No. 3183. Another letter, also from the Collector, dated the 4th ultimo, No. 171, inquiring the price at which the cottage gins recently furnished to him should be disposed of, was submitted by me for the orders of Government on the 16th idem, No. 1577; your reply of the 6th instant, No. 2603, has fixed the price at 32 rupees per gin.

7. Adverting to the Collector's concluding paragraph, I beg to support his recommendation, that a quantity of the cotton produced in the Belgaum collectorate be offered for sale simultaneously with any of the Dharwar produce that may be put up to auction at the Presidency. In the 4th paragraph of my letter of the 19th instant, No. 1965, I have already expressed myself in favour of this measure.

8. The prospects of the coming season are favourably alluded to in Mr. Channing's 26th column, but much, if not all, is said to depend on a ready market being found for the cotton produced.

9. The disbursements on account of the experiment for the six months reported on, are quoted in the 25th column at Rs. 5,244. 9. 4. From the details of this sum, however, given in the accompanying "Appendix," items 22 to 25, 27, 28, 31, and 33 to 36, amounting to Rs. 2,362. 11. 1. should be deducted, as they are hardly legitimate charges on the experiment. This will leave the disbursements at Rs. 3,644. 7. 11.; and excluding from this sum the two items on account of unfinished gins transferred to Dharwar, the net expenses of the department are reduced to Rs. 2,881. 14. 3. If to this be added those incurred up to the close of the preceding half-year, viz., Rs. 7,922. 9. 7. (quoted in the concluding paragraph of my letter of the 19th instant, No. 1963), the entire amount standing against the experiment for the year ending on the 30th November last, will be Rs. 10,804. 7. 10.

I have, &c.
(signed) E. H. Townsend,
Revenue Commissioner, Southern Division.

Revenue Commissioner's Camp, Nehn,
30 April 1850.

(No. 175 of 1850.)

To E. H. Townsend, Esq., Revenue Commissioner, Southern Division, Poonah.

V. 8349.

Sir,

I HAVE the honour to forward copy of Mr. Channing's report for the half-year ending 30th November last, from which it will be seen that the expenses have been Rs. 5,244. 9. 4 $\frac{1}{2}$., including conveyance to the coast and freight to Bombay, of the cotton purchased on the behalf of Government.

2. In his remarks on the past season, Mr. Channing observes, that the cotton crop was generally good, and the ryots were satisfied with it, and that they were ready to carry on their cultivation of cotton to any possible extent, but that owing to want of purchasers they were not benefited by the goodness of the season, and are now discouraged.

3. The prospects of the present season also are stated to be good, and if purchasers are forthcoming, the cultivation of cotton will be greatly extended; but if otherwise, it will be diminished.

4. It thus appears from Mr. Channing, that all we require, in this collectorate is a market, and this is exactly what my own views are on this important subject. The New Orleans produce of the Belgaum collectorate is in no degree, as far as I find, inferior to that of Dharwar, together with which it has been despatched to England and sold; but the ryots themselves being too ignorant and too much involved in debt, and possessing too little enterprise to clean, pack, and export their produce themselves, are obliged to trust native dealers for the disposal of it; but again, the native dealers are exceedingly backward, and very few of them will have anything to do with this article; its merits, although the result of the sales on account of Government has been published throughout the Belgaum districts, being still unappreciated by them.

5. The British merchants of Bombay appear to be equally apathetic with the native dealers of my districts; and if Mr. Bright and other such philanthropists now haranguing at the commercial meetings of Liverpool and Manchester were just to direct the fire of their eloquence upon these hitherto immovable gentlemen, instead of troubling themselves with strictures on the land tax, which they know nothing about, the only difficulty which exists

-III-

• Bombay.

to the introduction of the required quantity of cotton into the English markets would probably be removed. If merchants were to come forward and ask for it, the cotton finding a ready sale would necessarily be readily produced.

6. As an experiment the cultivation of the New Orleans cotton has succeeded well; but no reduction of the land tax will ensure a market; that must be created by private capitalists of enterprise, and, unfortunately, these are wanting.

7. In his fourth paragraph Mr. Channing reports that a ryot at Roan has applied for a saw-gin, but since his letter was penned five machines have been applied for by the following parties: the chief of Koorundwaur, the chief of Shedbal, the chief of Jamkhundee, Veersungapa Bagee, merchant of Mahalingpoor, in the Moodhol territory, Purapa Oodmee, of Rubkubee, in the Sanglee territory. And I would here attract your attention to my letter dated 4th instant, No. 172, in which I represented the claims of a ryot at Sounduttee, who, in consequence of his attention to the cultivation of the New Orleans cotton, appears to me worthy of having one of the cottage gins presented to him "gratis."

8. On the subjects of machinery also, it is my opinion that Government has done everything that can be required of it. The New Orleans cotton has been both grown and cleaned in a satisfactory style, but the best machinery in the world will never induce the cultivators of this country to grow a crop for which they cannot find a market close at hand. There is a market at Liverpool indeed, but the thing is to purchase the crop from the ryots of the Southern Marhatta country, and take it to Liverpool, and for this middlemen are required.

9. I would respectfully recommend that a portion of the Belgaum cotton crop may, in accordance with the request made in Mr. Channing's fifth paragraph, be offered for sale at Bombay, in order that we may be furnished with exact information as to our success in raising and preparing cotton. Mr. Channing appears to be actuated by a laudable spirit of emulation, and I would submit that justice to his exertions requires that his proposal be acquiesced in.

Belgaum, Collector's Camp, Yekoondee,
6 March 1850.

I have, &c.
(signed) H. W. Reeves,
Collector.

(No. 12 of 1850.)

To H. W. Reeves, Esq., Collector, Belgaum.

Sir,

I RESPECTFULLY submit my progress report for the half-year ending 30th November 1849, and beg to state that the amount shown in column No. 25, viz., Rs. 5,244. 9. 4½, embraces the whole cost of the carriage and freight of cotton purchased in behalf of Government to Bombay.

2. I also submit a memorandum, showing the amount per candy, for each kind, as far as the coast and Bombay, exclusive of European superintendence, by which you will observe that New Orleans cotton is much cheaper, although purchased at a higher rate as kuppas, than clean native cotton. This arises from the greater quantity of wool in proportion to seed, which it yields, the profit of which would be enjoyed by the ryot had they the means of cleaning it themselves, as the cotton is worth quite 20 per cent. more in the market than the best native cotton.

3. I would also beg to state that, owing to the lateness of the season ere I could commence ginning, the greater portion of the seed has been left on hand, which will yet have to be sold, and the money brought to account; but from the great quantity of seed in the districts, it will not, I fear, yield near so much money as last season; I have used every effort to dispose of it, but as yet can find no purchasers.

4. An application for one gin has been made by a dealer of Abeegharee, in the Rohan Mahal, to whom I have written to ascertain the size he prefers having; on receiving his answer I will apply to the Dhârwar manufactory for one, and see it properly set up for him.

5. In conclusion I would beg to state that, as I understand a portion of Mr. Blount's cotton is to be sold by auction at Bombay, I would solicit that mine may also be submitted, as, from the fact of the whole having been hitherto forwarded to England under the head of Dharwar cotton, I have never heard as to how the cotton of this collectorate turned out, or whether it was approved of further than the account lately sent of the sale of the Quintin Leitch's cargo, which is certainly very favourable.

Moodhole, 22 January 1850.

I have, &c.
(signed) T. W. Channing,
Superintendent of Cotton Experiments,
Belgaum Collectorate.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1437

COTTON PLANTER'S REPORT for the Half-year, from 1 June to 30 November 1849, in the Collectorate of Belgaum.

TALOOKS.	Remarks on the past Season, as to how far Anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on hand, on account of Government, of each Sort, Ginned or not Ginned, &c. &c. &c., viz.				Supposed Proportion of the last Year's Crop which has been Cleaned in the Saw-Gins, or will be so Cleaned.			
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cotton.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Padshahpoor - Sumpgaon. Pursghur. Badamee. Hoongoond.	The crop of cotton generally was good; in some few villages in the Badamee talook the plants suffered from excess of late rain, and the produce was consequently very little. In many parts of the Collectorate the natives were highly pleased with the crop, but the purchasers for it were not to be found until very late in the season, by which time it had mostly passed into the hands of the native dealers, at a very low price, and consequently the ryot was no way profited by the goodness of the season. The New Orleans cotton in the different parts of the Collectorate generally yielded well, and had purchasers been found at the picking season the ryots would have planted to any extent; but from there being no one to take it off their hands at the right time, many have declined planting it. Two local dealers purchased a good quantity, and most of it has been sent to Bombay. Many of the ryots at Rohan, in the Badamee talook, had to sell their's to dealers of the Dharwar Collectorate, by whom money was advanced at the proper time; and one individual has still, I understand, some 500 (five hundred) maunds of kuppas on hand; he intends having it cleaned and forwarded to Bombay.	Cds. 66	None	Cds. 66	Cds. mds. 30 11	66 candies. 30 " " 20 " " 116 " "	Cds. 1 grown and cleaned by a dealer at Moorgode.	Cds. 117 in the Belgaum Collectorate.	Cds. mds. 30 11 20 11 50 11 50 11 150 or 150th part.
						On Government account. By a dealer at Moorgode, about 30 By a dealer at Sounduttee, about 20 About 500 maunds is understood to remain unginned in the Rohan Mahal, the owner declining to sell it.			On Government account By a native dealer at Moorgode By a native dealer at Sounduttee By a native dealer at Kumutgee

TALOOKS.	G I N S.									
	In Use.			Out of Use.			Being made.			
	Belonging to Government.			Belonging to Private Individuals.			For Government.		For Private Individuals.	
	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.	Number.	Number of Saws.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	
Padshahpoor Sumpgaon. Pursghur. Badamee. Hoongoond.	7 (Seven).	2 at Hoongoond 1 at Rohan. 2 at Sounduttee. 2 at Naginhal.	1 English, made of 25 saws - 1 American, made of 25 saws. 1 American, made of 22 saws. 1 American, made of 15 saws. 3 Belgaum, made of 20 saws each.	1	At Aloor, in the Badamee talooka.	20	-	None	-	None.

Cotton Planter's Report for the Half-year, from 1 June to 30 November 1849, in the Collectorate of Belgaum—*continued.*

TALOOKS.	G I N S— <i>continued.</i>			Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on account of the Experiments from the Commencement to the Close of the Half-Year preceding that under Report.	Prospects of the coming Season.	
	Sold for Government during the Half-Year under Report.						
	Number.	Number of Saws in each.	At what Cost.				
21.	22.	23.	24.	25.	26.		
Padshahpoor -	-	-	-	None -	From 1st December 1848 to 31st May 1849, as per half-yearly Report, dated 31st May 1849 - - -	<i>Rs. a. p.</i> 8,298 8 1½ 5,244 9 4½ TOTAL for the } <i>Rs.</i> year 1849 - } 13,543 1 5½	The prospects of the coming season are favourable, and if purchasers are in the market at the picking season, the ryots will plant much more cotton of both kinds; but if otherwise, they will, from necessity, decrease the quantity. The New Orleans cotton plants are very healthy.
Sumpgaon.				From 1st June 1849 to 1st December 1849, as per Appendix - - -			
Pureghur.							
Badamee.							
Hoongoond.							

Remarks.—The New Orleans cotton at present looks remarkably well, but it would be almost impossible to say what effect another month may have on it, as the easterly wind is very trying to it. The native cotton, in most places, promises a fair average crop in the eastern talooks, but to the northward the plants are not so healthy in appearance. The average produce of the year 1848-49, as far as can be ascertained, is—New Orleans, 116 candies, ginned; 6 candies, unginned; total, 122 candies. There is also a portion bought by the Dharwar dealers, which Mr. Blount computes at 5 candies; Broach about 1 candy; native cotton, between 8,500 and 9,000 candies.

(signed) T. W. Channing,
Superintendent of Cotton Experiments, Belgaum Collectorate.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 19 February 1851.—V. 2301 and 2302.

(No. 750 of 1851.)

From the Revenue Commissioner, Southern Division, to Mr. Secretary *Goldsmid.*

Sir,

V. 2301.

I HAVE the honour to forward Mr. Channing's progress report on the cotton experiment in the Belgaum zillah for the half-year ending the 31st May 1850, received with a letter from the Collector, dated the 13th August last, No. 826. The delay in laying it before Government was occasioned by references to the latter officer for correction of certain entries in the tabular report. Mr. Reeves' last reply is dated the 10th ultimo (No. 27).

2. It is stated in column 2 of the report, that the picking season was "very favourable in all places," excepting the Hoongoond talooka and Roan Mahal, where the crops had sustained injury from rain. The produce of the New Orleans and native cottons is also there shown to have been satisfactory in the eastern districts, but not so in the northern.

* See column 3.

† See column 9.

‡ See column 4.

§ See column 10.

3. The extent of land planted with New Orleans cotton is given at acres 4,743. 4.* and that with indigenous cotton at acres 145,216†; the yield of the former being estimated at from 200 to 220‡ khundeas, or about 37 lbs. per acre, and that of the latter at 10,000 § khundeas, or about 39 lbs. per acre. The extent of New Orleans cotton cultivation in the preceding season|| was acres 4,189. 28. 11‡, and that of country cotton 134,514 acres, which comparison shows an increased cultivation of the former in the season now reported on to the extent of acres 553. 15. 4¼., and of the latter also to the extent of about 10,702 acres.

¶ Column 11.

** Column 26.

†† Column 16.

‡‡ Column 30.

4. The quantity of cotton purchased and delivered at the gin-houses on account of Government (at the date of Mr. Channing's report) is stated to have been, New Orleans cotton about 41 khundeas,¶ and native about 60 khundeas,** the average price of the former being 72 rupees per khundee,†† and that of the latter 66 rupees.‡‡ From my letter of the 30th August last (No. 3664), forwarding the half-yearly report on the Dharwar cotton experiment, Government will observe that in that collectorate New Orleans cotton cost 80 rupees per khundee.

§§ Cols. 32 and 35.

|||| Column 48.

5. Six gins belonging to Government,§§ and 14 the property of private individuals, are stated to have been in use during the period embraced by this report; and 11 gins are said to have been sold for Government,|||| realising *Rs.* 1,655. 0. 8. Of these 11 gins, seven are represented to have been received from Dharwar, and would appear to be identical with those marked A and B. in the 48th column of the Dharwar progress report, accompanying my letter quoted in the preceding paragraph.

6. The disbursements on account of the department are given in the 61st column at *Rs.* 12,051. 14. 5., which sum is detailed in the accompanying Appendix (A.) As, however, items, 12 to 15, 17 to 20, 23, and 28 to 33, would not appear to be legitimate charges on the experiment, I deduct them from the amount above quoted, and this reduces the expenditure to *Rs.* 4,247. 0. 6. for the six months, and adding this to the sum total of disbursements up to the 30th November 1849 (given at the end of my letter of 30th April 1850, No. 2108) at *Rs.* 10,804. 7. 10., the entire cost of the department from the commencement is found to be about *Rs.* 15,051. 8. 4.

Ahmednuggur District,
Revenue Commissioner's Camp, Duheephul,
5 February 1851.

I have, &c.
(signed) E. H. Townsend,
Revenue Commissioner, S.D.

|| See paragraph 3 of Revenue Commissioner's letter, of 19th April 1850 (No. 1963).

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

14/39

(V. 2302.)

COTTON PLANTER'S REPORT for the Half-year commencing 1 December 1849, and ending 31 May 1850 in Belgaum Collectorate.

TALOOKS.	Prospects of the Season, and State of the Crops as regards each sort of Cotton, showing also what Stations were visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.							
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.	
		Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.	Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.	Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.	Extent in Acres.	Estimated Produce in Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Sumpgaon - Pursghur. Badamee. Rohan. Hoongoond. Ilakul. Bagulkote. Padshahpoor and Moodul. Jamkhundee.	The picking season was very favourable in all places except the Hoongoond talooka and Rohan mahal, where heavy rain fell immediately after the first picking, and injured a great portion. The stations visited during the picking season were— Neginhal - - - 6 times, Balowdie - - - 3 ditto, Sounduttee - - - 6 ditto, Rohan - - - 3 ditto, Hoongoond - - - 4 ditto, Kumutghee - - - 4 ditto, Kulludghee - - - 3 ditto, Moodhal - - - 3 ditto, Mahlingpoor - - 1 ditto, With the most of the villages in the different talookas mentioned in Column 1. The yield of both native and New Orleans was very good in the eastern talookas, but not so in the north, but generally satisfactory.	Seeds for about 4,000 acres was distributed. The mamlut-dars' reports show 4,743 acres 4 goon-tas as planted.	From 200 to 220 candies.	A few acres was planted in the Moorgodie Mahal, but yielded very little, owing to being planted late.	½ part of a candy.	Acres. g. 4,743 4	From 200 to 220 candies.	Acres. 145,216	About 10,000 candies.

TALOOKS.	OF WHICH PURCHASED FOR GOVERNMENT.																			
	NEW ORLEANS.				BROACH.				TOTAL FOREIGN.		COUNTRY COTTON.									
	Quantity Purchased in Candies of 784 lbs. each.	Rate per Candy of 784 lbs. each.	Cost of the whole.	Highest Rate per Candy of 784 lbs. each.	Lowest Rate per Candy of 784 lbs. each.	Average Rate per Candy of 784 lbs. each.	Quantity Purchased in Candies of 784 lbs. each.	Rate per Candy of 784 lbs. each.	Cost of the whole.	Highest Rate per Candy of 784 lbs. each.	Lowest Rate per Candy of 784 lbs. each.	Average Rate per Candy of 784 lbs. each.	Quantity Purchased in Candies of 784 lbs. each.	Rate per Candy of 784 lbs. each.	Highest Rate per Candy of 784 lbs. each.	Lowest rate per Candy of 784 lbs. each.	Average Rate per Candy of 784 lbs. each.	Cost of the whole.		
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
Sumpgaon - Pursghur. Badamee. Rohan. Hoongoond. Ilakul. Bagulkote. Padshahpoor and Moodul. Jamkhundee.	About 41 candies have been purchased and delivered at the gin houses. A good quantity yet remains to come in, but the ryots hold back in hope of still higher rates.	About 72 rupees per candy (kuppas 12 annas per maund).	2,923 rupees 12 annas 3 pies.	Rs. 73	Rs. 71	Rs. 72	-	-	None	-	-	55 candies have been purchased, of which about 41 candies have been delivered into the gin-houses.	Rs. 72	2,923 rupees 12 annas 8 pies, for quantity delivered.	About 60 candies have been delivered at the different gin-houses; much more has been agreed for, and is being delivered, but room is required to stow it in larger quantities.	About 70 rupees. (The kuppas purchased at 10 annas per maund.)	Rs. 70	Second class, of which some portion is purchased; will cost about 63 and 64 rupees per candy.	Rs. 66	3,971 rupees 4 annas 6 ½ pies.

Cotton Planter's Report for the Half-year from 1 December 1849 to 31 May 1850—continued.

TALOOKS.	G I N S.															
	In Use.						Out of Use.						Being Made			
	Belonging to Government.			Belonging to Private Individuals.			Belonging to Government.			Belonging to Private Individuals.			For Government.		For Private Individuals.	
	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.	Number.	Number of Saws.
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.	
Sumpgaon - Pursghur. Badamee. Rohan. Hoongoond. Ilakul. Bagulkote. Padshahpoor and Moodul. Jamkhundee.	6 (Six.)	Naginhal, one of 15 saws; Soundattee, one of 25 saws, and one of 20 saws; Rohan, one of 20 saws; Hoongoond, one of 25 saws, and one of 22 saws.	Two of 25 saws each, two of 20 saws each, one of 22 saws, and one of 15; total, 127 saws.	14 (Fourteen).	One of 20 saws at Moodul; one of 20 saws at Kuntighee; one of 20 saws at Mahlingpoor; one of 21 saws at Soundattee; one of 20 saws at Jankandee; one of 20 saws at Moorgodie; one of 20 saws at Koorundwar; one of 19 saws at Abegheres; one of 20 saws at Kogwad; one of 4 saws at Rohan; one of 20 saws at Doodwar; one of 4 saws at Kulludghee; one of 20 saws at Rubkabbie; one of 4 saws at Soundattee.	226	-	None	-	1 (One).	Al-loore	22	17 (Seventeen.)	Of four saws each, being bespoke at that size.	-	None.

TALOOKS.	GINS—continued.				COTTON GINNED FOR GOVERNMENT.									
	Sold by Government during the Half-year under Report.			Profit or Loss to Government, deducting Cost of European Superintendent.	FOREIGN COTTON.						COUNTRY COTTON.		Total Net Expenses on account of the Experiments from the Commencement to the Close of the Half-year preceding that under Report.	Total Net Expense of the Half-year under Report.
	Number.	Number of Saws.	At what Cost each.		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.			
					Quantity Purchased in Candles of 784 lbs. each for Government.	Quantity Purchased in Candles of 784 lbs. each for Private Individuals.	Quantity Purchased in Candles of 784 lbs. each for Government.	Quantity Purchased in Candles of 784 lbs. each for Private Individuals.	Quantity Purchased in Candles of 784 lbs. each for Government.	Quantity Purchased in Candles of 784 lbs. each for Private Individuals.	Quantity Purchased in Candles of 784 lbs. each for Government.	Quantity Purchased in Candles of 784 lbs. each for Private Individuals.		
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.	
Sumpgaon - Pursghur. Badamee. Rohan. Hoongoond. Ilakul. Bagulkote. Padshahpoor and Moodul. Jamkhundee.	11 (Eleven)	Seven of 20 saws, one of 19 saws, and three of four saws each.	Six of the 20 saws were received from the Dharwar Collectorate, at 200 rupees; one of the 19 saws was received from the Dharwar Collectorate, at 180 rupees; one of the 20 saws, Belgauim make, Rs.179.0.8.; 3 (three) of four saws, 32 rupees each.	Sold at prime cost.	Unknown until the whole is finished.	None by Government establishment.	None	None by Government establishment.	Unknown until the whole is finished.	None by Government establishment.	Unknown, until the whole is finished.	None by Government establishment.	Rs. 5,244. 9. 4½.	Rs. 12,051. 14. 5½.

Remarks.—The opening of the present season was favourable for preparing the land, and a great quantity of New Orleans seed has been already applied for, and I have every prospect of the cultivation of it being greatly extended. As the ryots of some of the northern talookas have applied for seed, and the principal portion of the crop at Rohan having been disposed of to the dealers of the Dharwar Collectorate, they are supplying the ryots there with seed. The price of New Orleans cotton during the past season has been very good, as high as (13) thirteen annas per maund for kuppas having been paid; and as many ryots have obtained good crops and sold at this price, they will increase the quantity.

(signed) T. W. Channing,
Superintendent of Cotton Experiments, Belgauim Collectorate.

COTTON PLANTER'S REPORT, for the Half-Year from 1st June to 30th November 1850, in the Belgaum Collectorate, Southern Mahratta Country.

TALOOKAS.	Remarks on the past Season, as to how far anticipations regarding the Crop and its disposal were realised.	Quantity of Cotton on hand on account of Government of each sort, Ginned or not Ginned.				Supposed Proportion of the Last Year's Crop which has been Cleaned in Saw-gins.			
		New Orleans.	Broach.	Total Foreign.	Country Cotton.	New Orleans.	Broach.	Total Foreign.	Country Cotton.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Sumpgaon - Pursghur, Badamee, Hoongoond, Bagulkote, Uthnee, and Padshahpoor.	<p>The cotton crop in the whole of these talookas bore a promising appearance, and the crop was abundant, but the rain which fell in the month of March had a pernicious effect on it, beating off unripe bolls, and, where the cotton was ripe, making it dirty and bad coloured. There was, however, on the whole, a good quantity secured unharmed, and the prices rising just at the gathering season, gave the ryuts generally a good return.</p> <p>Any quantity of cotton could have been disposed of at a very enhanced price, and had attention been paid to the cleaning of the cotton from its seed, a very fair quantity might have been sent to Bombay of clean good cotton.</p> <p>One dealer of the Dharwar district brought six gins into the Hoongoond talooka, but found little employment for them, as the principal part of the crop had been purchased to be cleaned by the foot roller, by which process, a good portion of the seed and dirt being left in the cotton, the dealer may well afford an additional price for kuppas.</p>	Cds. mds. 59 8 now on its way to Bombay.	None. Very little has been grown during the last season, and that has been used for home consumption.	Cds. mds. 59 8	54 candies 15 maunds & 18 lbs. of 1st class, 42 " 3 " of 2d class, " now on its way to Bombay.	About 200 candies of this cotton has been cleaned by saw-gins in this collectorate, and a good quantity was taken from the Roan mahal, cleaned at Nurgul by a dealer. The exact quantity cannot be ascertained.	From 2 to 3 candies, grown and cleaned by a dealer, but used for home consumption.	About 200 candies.	It would be difficult to ascertain the exact quantity of native cotton cleaned by the gins in the collectorate. For the Government 97 candies have been cleaned, whilst the Dharwar dealers have had seven or eight gins working at times; and the private gins of owners in the districts have cleaned a good portion.

TALOOKAS.	G I N S.													
	In Use.			Out of Use.			Out of Use.			In Use.			Being made for Government.	
	Belonging to Government.			Belonging to Government.			Belonging to Private Individuals.			Belonging to Private Individuals.				
	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	
Sumpgaon - Pursghur, Badamee, Hoongoond, Bagulkote, Uthnee, and Padshahpoor.	1 1 1 1 1 1 6	Hoongoond - Ditto - Sounduttee - Ditto - Roan - Naginhal -	25 20 25 20 20 15	None.	None.	None.	1	Alloor	22	6	Uthnee - Sounduttee - Kulladghee - Hoongoond - Roan - Koorunwad - Rubcubbee - Dordwar - Abbherry - Mudhole - Jaumkhundee - Mahlingpoor - Sounduttee - Cumatghee - Moorgode - Kagwad -	4 4 4 4 4 20 20 20 17 20 20 20 20 20	1 2	of 9 saws. of 7 saws.

Cotton Planter's Report for the Half-Year, from 1 June to 30 November 1850, in the Belgaum Collectorate—continued.

TALOOKAS.	G I N S—continued.					Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on account of the Experiments from the Commencement to Close of the Half-Year preceding that under Report.		Prospect of the Coming Season.
	Being made for Private Individuals.		Sold for Government during the Half-Year under Report.				31.	32.	
	Number.	Number of Saws.	Number Sold.	Number of Saws each.	At what Cost.				
25.	26.	27.	28.	29.	30.			33.	
Sumpgaum - Pursghur, Badamee, Hoongoond, Bagulkote, Uthnee, and Padshahpoor.	2 30 1 2 1 1	Have been made for the Collector of Sholapoor, and despatched, of 20 saws each. Are now under construction, the same being bespoke by a cotton dealer, of 20 saws each. Shaft has been made up and completed, with seven saws, for a ryut of Souduttee. An order had been received for 17 of four saws each, but the receipt of nine cottage gins from Bombay prevented their all being made. The frames are, however, ready, in case they are required. Of 10 saws each, for Kolapoor. Of nine saws, for ryut of Sangolee; and Of 14 saws, for ryut of Naginhal.	2 7 14	20 4 4	182 rupees. 32 " 32 English.	Sold at the net price of their construction, including saws, and the labour of my assistant.	As per Report, dated 1st June - From 1st June to 30th November Total Outlay } for 1850 - }	Rs. a. p. 12,051 14 5 7,161 1 9 Rs. 19,213 - 2	The prospect of the coming season, in many parts, is favourable. In Roan, Hoongoond and Bagulkote, the New Orleans looks well, as also in the Padshahpoor talooka, at Ac-tunguteah, but in the Pursghur talooka it appears somewhat blighted.

Remarks.—The calls for saw gins are becoming numerous, and orders for 30 of 20 saws each, two of 10 saws, one of nine and one of 14 saws, have been received, and every prospect of more being required.

(signed) T. W. Channing,
Superintendent of Cotton Experiments.

EXTRACT Bombay Revenue Consultations, 8th September 1852.

(No. 2098, with enclosure.)

From the Revenue Commissioner, Southern Division, to

Sir,

I HAVE the honour to forward Mr. Blount's report on the progress of the cotton experiment in the Belgaum zilla, for the half-year ending the 31st May 1851, received from the Collector, under date the 10th April last (No. 228). The delay in laying the report before Government was caused by references which it was found necessary to make to the latter officer on the 16th idem, and 3d and 16th instant, for explanations on certain points connected with it.

No 11,333.

2. The season to which the report refers is stated to have proved a rather unfavourable one, owing to heavy rain in the month of November, and the prevalence of easterly winds. The New Orleans crop in the districts of Sumpgaon, Bagulkote, Gokak, Uthnee, and Tasgaon, was "quite a failure," while of that in Pursghur, Badamee, Padshahpoor, and Hoongoond, about a half only succeeded; the average produce per acre for the whole zillah was about 30 lbs. of clean cotton. The country cotton crop likewise is reported to have suffered from the same causes, and to have been below an average one; its produce for the whole zillah was estimated at about 23 lbs. of clean cotton per acre.

3. The quantity of New Orleans cotton purchased for Government, was 19 khundeeds and 252 lbs.; and of country cotton, 161 khundeeds and 707 lbs.

4. Of the Government gins in the collectorate, five were in use at Hoongoond, Souduttee, and Roan, and 18 out of use. Six of the latter are English made, and will, it is said, require alteration to adapt them to the cleaning of cotton grown in India. There were also 22 private gins in use, and 34 out of use; one was being made for Government, and 30 of 20 saws each, for private individuals.

5. The remark made in column 48, respecting these 30 new gins, induced me to call for more particular information concerning them, and from communications from the Collector, dated the 27th ultimo, and 9th and 20th instant, I find that the late Mr. Channing had contracted to supply a Mr. Davis, of Belgaon, with 30 new gins at 180 rupees each; that 25 of these had been finished and delivered, but that owing to their faulty construction, they

III.
Bombay.

they had been returned by Mr. Davis. The transaction, as well as the probable amount of loss which it involved, formed subject of the Collector's reports to Government, dated the 10th June 1851 (No. 641), and 15th April last (No. 248), and does not therefore call for any further notice in this place.

6. The expenses of the half-year are detailed in the accompanying statement marked A., and amount to Rs. 6,791. 8.

Poona Revenue Commissioner's Office,
28 August 1852.

I have, &c.
(signed) *W. Courtney,*
Revenue Commissioner, Southern Division.

(No. 228 of 1852.)

To *W. Courtney, Esq.,* Revenue Commissioner, Southern Division, Poona.

No. 11,334.

Sir,

I HAVE the honour to forward the cotton planter's half-yearly reports, ending 31st May and 30th November 1851, together with the letters from Mr. Blount, superintendent cotton experiment, Nos. 111 and 135, dated 14th October and 29th December 1851. From these the prospects of the experiment appear to be anything but encouraging.

2. The delay in the transmission of these has been occasioned by the return of these reports to Mr. Blount, Superintendent cotton experiment, for correction.

Belgaum, Collector's Office,
10 April 1852.

I have, &c.
(signed) *J. D. Inverarity,*
Collector.

(No. 111 of 1851.)

To *H. W. Reeves, Esq.,* Collector of Belgaum.

Sir,

I HAVE the honour to forward you the half-yearly report of the cotton experiments of the Belgaum collectorate for the half-year ending 31st May 1851.

2. The work having been given in my charge at the commencement of the monsoon, I was unable to visit each district to ascertain personally how far expectation regarding the crop was realised; in Sumpgaon, Bagulkote, Gokak, Uthnee, and Tasgaon, the American cotton was quite a failure; and in Pursghur, Badamee, Padshahpoor, and Hoongoond, about half a crop; the average produce per acre for the whole zillah of American cotton, is about 30 lbs. of clean cotton per acre. The native cotton is also considered to have suffered from the same causes which injured the American, and the produce is below an average crop, being, per acre, for the whole district, about 23 lbs. of clean cotton.

3. The cost of the cotton purchased for Government cannot be ascertained until the ginning of the cotton is completed, but it will be about 80 and 73 rupees respectively, for American and native cotton.

4. From the information I have been able to collect, it appears but few of the gins were at work at the date of the close of this report, in fact, a large number of them unfit for use; those made in Belgaum, judging from a few I have seen, are entirely useless, and those lately received from England must undergo alterations before they can be made to clean either native cotton or that grown from American seeds.

5. In the shop account, I find the charge to be since the 28th May 1850 up to 28th March 1851, Rs. 3,527. 5. 10.; from this amount there is to be deducted for work completed before the 1st December, commencement of half-year under report, Rs. 625. 4. 1., leaving the amount expended on 30 gins completed or under construction, Rs. 2,902. 1. 9., exclusive of the cost of saws, materials furnished from other departments, and European superintendence.

6. Under sanction given in Government letter, No. 34, dated 2d January 1851, a small quantity, about 10 candies, of cotton was purchased for the firm of Messrs. King & Co., of Bombay; this cotton is in store at the villages of Moodhole, Naginhal, and Hoongoond, and will be cleaned and forwarded to Messrs. King & Co. during the month of December.

7. The cotton purchased on account of Government at Sounduttee, has been all cleaned. To Naginhal, I sent in August two gins for cleaning the cotton in store at that place, and the work will be completed by the end of this month. The gin at Roan being unserviceable, I also sent to that place one large and one small gin, and the whole of the cotton at that village will be in readiness for transit early in November. At Hoongoond, where the largest quantity has been purchased, I have also sent one large gin, which, together with the two previously at work, will take until the end of January to complete the work. I shall therefore have to send an additional number of gins to this station, as it is desirable to have the cotton out of the district by the end of December, to secure an early arrival at Bombay.

Dharwar,
14 October 1851.

I have, &c.
(signed) *J. M. Blount,*
Superintendent of Cotton Experiment, S. M. C.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1445

STATEMENT, No. 1.

COTTON PLANTER'S REPORT for the Half-Year commencing 1 December 1850, ending 31 May 1851, in the Belgaum Collectorate.

TALOOKAS.	Prospect of the Season and the State of the Crops, as regards each Sort of Cotton, showing also what Stations were visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.								
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.		
		Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
Padshahpoor - Sumpgaon. Bedee. Chickodee. Pursghur. Bagulkote. Badamee. Hoongoond. Gokak. Uthnee. Tasgaon.	In the early part of the season the prospect was good, but owing to the heavy rain, which fell easty, in November, and continuation of east winds, the fields of cotton were seriously injured, and the crop generally a short one, the American cotton in some instances proving a failure.	2,331 $\frac{1}{2}$	Clean cotton, 89 candies 624 lbs.	-	None	-	2,331 $\frac{1}{2}$	Cds. lbs. 89 624	181,728	6,546 candies 88 lbs. of rooe.

TALOOKAS.	COTTON PURCHASED FOR GOVERNMENT.																			
	NEW ORLEANS.				BROACH.					TOTAL FOREIGN.			COUNTRY COTTON.							
	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the whole.	Highest rate per Candy of 784 lbs.	Lowest rate per Candy of 784 lbs.	Average rate per Candy of 784 lbs.	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Cost of the whole.	Highest Rate per Candy of 784 lbs.	Lowest rate per Candy of 784 lbs.	Average rate per Candy of 784 lbs.	Quantity purchased in Candies of 784 lbs.	Rate per Candy of 784 lbs.	Highest rate per Candy of 784 lbs.	Lowest rate per Candy of 784 lbs.	Average rate per Candy of 784 lbs.	Cost of the whole.		
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
Padshahpoor - Sumpgaon. Bedee. Chickodee. Pursghur. Bagulkote. Badamee. Hoongoond. Gokak. Uthnee. Tasgaon.	19 candies 252 lbs.	Cannot furnish until the work is complete.	Not known.	Cannot be ascertained until the cotton is cleaned.					- None -			19 candies 252 lbs.	not known		161 candies 707 lbs.	These columns cannot be filled until the cotton is cleaned.				

STATEMENT, No. 1.—Cotton Planter's Report for Half-Year commencing 1 December 1850, ending 31 May 1851—continued.

TALOOKAS.	G I N S.															
	In Use.						Out of Use.						Being Made			
	Belonging to Government.			Belonging to Private Individuals.			Belonging to Government.			Belonging to Private Individuals.			For Government.		For Private Individuals.	
	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Where.	Number of Saws each.	Number.	Number of Saws.	Number.	Number of Saws.
32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.	
Padshahpoor -	1	Hoongoond	25	6	Uthnee	4	1	Hoongoond (E.)	25	1	Sounduttee	4	1	7	30	20
Sumpgaon.	2	Ditto	20	11	Hoongoond	4	1	Ditto	7	1	Kulladghee	4				
Bedee.	1	Sounduttee	25	1	Roan	4	1	Sounduttee	20	1	Koorundwad	20				
Chickodee.	1	Roan	20	1	Abbegherry	13	1	Ditto	4	1	Rubcubbee	20				
Pursghur.				1	Mahngapoor	20	1	Naginhall	7	1	Dodwad	20				
Bagulkote.				1	Cumutghee	20	1	Belwadee (E.)	25	1	MoJale	20				
Badamee.				1	Moregode	20	1	Byle Hongul	15	1	Jamkundee	20				
Hoongoond.							7	Cumutghee	25	1	Sounduttee	20				
Gokak.							1	Ditto (E.)	7	1	Kogwad	20				
Uthnee.							3	Belgaum (E.)	25	25	At different vil- lages a few used, but all out of service, or rather un- serviceable.	20				
Tasgaon.																

TALOOKAS.	G I N S—continued.			COTTON GINNED FOR GOVERNMENT, AND FOR PRIVATE INDIVIDUALS.							Total Net Expenses on Account of Cotton Experiment, from the Commencement to the close of the Half-year preceeding that under Report.	Total Expenses for the Half-year under Report.		
	Sold for Government during the Half-year under Report.			FOREIGN COTTON.				COUNTRY COTTON.						
	Number.	Number of Saws	At what Cost.	NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.				
				Quantity purchased in Candies of 784 lbs. for Government.	Quantity purchased in Candies of 784 lbs. for Private Individuals.	Quantity purchased in Candies of 784 lbs. for Government.	Quantity purchased in Candies of 784 lbs. for Private Individuals.	Quantity purchased in Candies of 784 lbs. for Government.	Quantity purchased in Candies of 784 lbs. for Private Individuals.	Quantity purchased in Candies of 784 lbs. for Government.			Quantity purchased in Candies of 784 lbs. for Private Individuals.	
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.	
Padshahpoor -			From the account it appears the expenditure on these gins, exclusive of superintendent's and assistants' pay, saws, tools, &c., was Rs. 2,902. 1. 9., the whole of which is loss.	Very little was cleaned, perhaps 10 candies, for Government. None for private individuals.							For Government, 20 candies.	None	Rs. a. p. - 2	Rs. a. p. -
Sumpgaon.														
Bedee														
Chickodee.														
Pursghur.														
Bagulkote.														
Badamee.														
Hoongoond.														
Gokak.														
Uthnee.														
Tasgaon.														

Remarks—Columns 12 to 16 I cannot give the correct cost; the cotton will I think cost, including all expenses in the district, 80 rupees. Columns 27 to 31, actual cost not yet ascertained, it will be about 75 rupees per candy.

Columns 37 to 40. Gins marked (E.) are new ones made in England; will have to be altered before they will clean cotton grown in India.

(signed) J. M. Blount,
Superintendent of Cotton Experiments, S. M. C.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1447

From the Revenue Commissioner, S. D., No. 2,099, with Enclosures.

III.
Bombay.

No. 11,335

Sir,

I HAVE the honour to submit the report of the superintendent of the cotton experiment in the Belgaum collectorate for the half-year ending the 30th November 1851, and in explanation of the cause of delay in forwarding it, respectfully to refer to the 1st paragraph of my letter of this date, No. 2,098, submitting the report for the previous half-year, and to paragraph 2d of the Collector's communication of 10th April last, thereto appended.

2. The season's crops are represented to have proved much below the usual average throughout the districts, particularly the New Orleans crop in the Sumpgaon, Bagulkote, Padshahpoo, and Pursghur talookas. Of the produce, about 19 khundeas were bought for Government, and a portion by the agent of Messrs. Lancaster & Co., of Bombay; but by far the greater part was taken up by the native dealers, who cleaned and sold it in the early part of the year.

3. The quantity of New Orleans cotton on hand on account of Government is shown to have been 19 khundeas and 592 lbs., and of indigenous cotton 162 khundeas and 392 lbs., making in all 182 khundeas 200 lbs.

4. The number of Government gins in use is stated at seven; viz., three at Hoongoond, two at Naginhal, and two at Roan, and these were considered more than sufficient for the cleaning of the cotton purchased during the season 1851-52. The number of Government gins out of use is given at 20, and (excepting three 7-saw gins which cannot be made serviceable at all) the whole of them require repair and alterations. Of the private gins, 21 were in use, and 34 out of use. The latter number includes the 25 gins made up for Mr. Davis, alluded to in the fifth paragraph of my letter of this date, No. 2,098, but as it has apparently been decided that these should be received back, they will probably in the next report appear under the head of Government gins.

5. The expenditure during the half-year is given in the accompanying account, marked B, at Rs. 882. 9. 4., and deducting from this sum the amount of "Receipts" for the use of Government gins (Rs. 14. 12.), the outlay is reduced to Rs. 867. 13. 4.

6. The prospects of the coming season in Sumpgaon, Pursghur, Budamee, and Hoongoond are represented to be very favourable; it is to be hoped the Superintendent's expectations will be realised.

Poona, Revenue Commissioner's Office,
28 August 1852.

I have, &c.
(signed) W. Courtney,
Revenue Commissioner, S. D.

(No. 135 of 1852.)

To J. D. Inverarity, Esq., Collector of Belgaum.

No. 11,336.

Sir,

I HAVE the honour to forward the half-yearly report of the cotton experiment in the Belgaum district for the half-year ending 30th November 1851.

The cotton crop, as was anticipated, was an inferior one as regards quantity, both with the native and exotic plant; the American having, in some of the talooks, proved a failure, and in those talooks the cultivation has greatly fallen off or ceased. This is made up in a great measure by the increased cultivation in the Hoongoond talook. A comparison with the previous year, which is given below, shows a small decrease in cultivation.

	ACRES, 1850.	ACRES, 1851.
Padshahpoo - - - - -	10	—
Sumpgaon - - - - -	58	—
Chickoree - - - - -	-	1 $\frac{4}{10}$
Pursghur - - - - -	823	23
Bagulkote - - - - -	291	175
Badamee - - - - -	512	256
Hoongoond - - - - -	613	1,628
Gokak - - - - -	12	18
Uthnee - - - - -	9	38

The machinery belonging to Government on my taking charge was generally unserviceable, or became so from work during the half-year, and I had to supply, for cleaning the cotton, two gins to Naginhal, two to Roan, and two to Sounduttee. The new gins received from Bombay in the early part of the year are all unfit for use, as well as the old machinery which has been in use for some years past, and I shall have the whole of this machinery moved into Dharwar for repairs and alterations.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1449

No. 2.—Cotton Planter's Report for the Half-year from 1 June to 30 November 1851, &c.—continued.

TALOOKS.	GINS—continued.			Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on account of the Experiment from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expense for the Half-year under Report.	Prospect of the coming Season.
	Sold for Government during the Half-Year under Report.						
	Number.	Number of Saws each.	At what Cost.				
27.	28.	29.	30.	31.	32.	33.	
Padshahpoor - Sumpgaon. Bedee. Chickodee. Pursghur. Bagulkote. Badamee. Hoongoond. Gokak. Uthnee. Tasgaon.	-	None.	-	None.	Total Expense - Rs. a. p. 26,004 8 2	Total Expense - 882 9 4 Total Receipt - 14 12 -	* The prospect of the coming season is most flattering, both the native and American plants promise to yield a large average produce — Sumpgaon, Pursghur, Badamee and Hoongoond.

Remarks.—Column 15: These gins all need alteration and repairs before they can be made serviceable. Column 18. A few of these gins are serviceable; 25 are unserviceable, which were made up at Belgaum, and sold to Mr. Davis.

* The remarks refer particularly to Sumpgaum, Pursghur, Badamee, and Hoongoond, each of which, except Hoongoond, I visited, and of the latter district I had the report from my carkoon.

Dharwar District, Camp, Oolikope, }
29 December 1851.

(signed) J. M. Blount,
Superintendent of Cotton Experiments, S. M. C.

EXTRACT Bombay Revenue Consultations, 19 January 1853.

From the Revenue Commissioner, Southern Division, No. 3137, with Enclosures.

No. 606.

FORWARDED for the information of Government. The details given in the tabular report suggest no particular remark.

2. These papers were originally received with a letter from the Collector of Belgaum, dated the 1st ultimo (No. 784), but were returned for correction by the Revenue Commissioner on 8th idem, No. 2763.

Solapoor Districts, Camp, "Tumba,"
24 December 1852.

(signed) W. Courtney,
Revenue Commissioner, S. D.

(No. 66 of 1852.)

To J. D. Inverarity, Esq., Collector, Belgaum.

No. 607.

Sir,

I HAVE the honour to forward the half-yearly report of the cotton experiments in the Belgaum zillah, ending 31st May 1852. I trust that I may be excused for the delay which has taken place in forwarding the report, as it has been unavoidable, owing to my absence from Dharwar, pressure of other work after my return, and sickness of my accountant or head writer.

The progress of the experiments in the Belgaum Collectorate is far from satisfactory as compared with the reports of previous years. The number of acres reported to have been planted in 1851 and 1852 is, however, only 119 acres 11 goontas less than the previous year, a much smaller falling off than I expected. I was in the Pursghur and Sumpgaum talooka in August 1851, and many of the ryots expressed their determination not to plant the New Orleans cotton again unless a remission of land rent was made in case of failure; the reason of their dislike to the cotton was that they had tried it for several years, and it had always proved a failure: this I reported to your predecessor in the 6th and 8th paragraphs of my letter, No. 80 of 1851.

The number of acres reported to be in cultivation in American cotton in column 3 of this report I think incorrect, and that it has been incorrectly stated for several years past. I reported my opinion on this head in my letter No. 85 of 1849, and the mamlutdar's reports, subsequent to the forwarding of the report of that year, showed that the number of acres planted was less about 3,000 than the estimate given. This incorrectness has no doubt

296—Sess. 2.

9 E

III.
Bombay.

doubt arisen from the estimates having been given according to the quantity of seeds distributed instead of from the reports of the number of acres actually planted; but as I have already reported to you on this subject in my letter No. 25 of 1852, it is scarcely necessary to repeat it in these remarks.

The estimate of produce given in column 4 for the New Orleans, 222 candies 56 lbs. candies, is calculated at a fair average of eight maunds of cuppas the acre, but from what I can learn, there certainly has not been 25 candies produced in the whole district, and of that I have purchased the larger portion (about 15 candies), in fact all that was to be had in Hoongoond, where the largest number of acres was under cultivation, and part of that in Bagulkote and Badamee.

Taking 25 candies as the whole produce, it would give an average of less than 6 lbs. of rooe the acre, a result sufficient to discourage any people from planting the cotton, but I think such has not been the result, and that the number of acres has been erroneously returned, for the ryots are planting again this season, and in Bagulkote and Pursghur perhaps to a larger extent than during the previous year; now if the cotton has yearly, as would appear from reports of the acres planted and produce secured, been a failure, or comparatively so, they would scarcely have applied for seeds for the present season, and this fact further induces me to think the reported extent of cultivation is incorrect.

Column 33.—There are only two gins at work on account of Government, and there has been no necessity of employing more, as the two in use are quite sufficient for cleaning the cotton purchased of the ryots during the season.

Column 36.—These gins are worked by the owners, and principally for cleaning native cotton on Government account.

Columns 39 and 42.—These gins are for the most part unserviceable or out of repair. I am not positive that none of them have been at work during the season, but my impression is that they have not, as there was no New Orleans cotton to be cleaned on them; and the natives will not use the gin for cleaning indigenous cotton on their own account, owing to its taking out, in the cleaning process, effectually the seeds and dirt, a large proportion of which, when the cotton is cleaned by the foot-roller, passes along with the lint and makes a greater weight of rooe than a like quantity of cotton cleaned with the gin.

Dharwar,
25 September 1852.

I have, &c.
(signed) J. M. Blount,
Superintendent of Cotton Experiments, S. M. C.

STATEMENT No. 1.

COTTON PLANTER'S REPORT for the Half-Year commencing 1st December 1851, ending 31st May 1852, in the Belgaum Collectorate.

TALOOKAS.	Prospects of the Season, and State of the Crops as regards each Sort of Cotton, showing also what Stations were visited by the Superintendent.	EXTENT IN ACRES OF COTTON CULTIVATION.							
		NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		COUNTRY COTTON.	
		Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.	Extent in Acres.	Estimated Produce in Candies of 784 lbs.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Padshapoor - Sumpgaon. Bedee. Chickodee. Pursghur. Bagulkote. Badamee. Hoongoond. Gokak. Uthnee. Tasgaon.	The talooks mentioned in column 1 are those in which the largest number of acres of American cotton is planted, and in which the Government gin stations are situated. Owing to pressure of work in Dharwar, I had no opportunity of visiting them during the half-year, and cannot say from my own knowledge what the prospect of the season was; but I have been informed by the carkoon belonging to the establishment, that neither crop was a good one, the plants having been much injured by continuance of dry east winds.	22 12 19	Estimated at 8 maunds of cuppas acre, 222 candies and 56 lbs. of clean cotton.	None		2,212 19	C. lbs. 222 56	158,371 25	Estimated at 8 maunds per acre of cuppas, equal to 11,512 candies and 231 lbs. of clean cotton.

No. 1.—Cotton Planter's Report for the Half-year commencing 1 December 1851, ending 31 May 1852, &c.—*continued.*

TALOOKAS.	GINS— <i>continued.</i>			COTTON GINNED FOR GOVERNMENT AND FOR PRIVATE INDIVIDUALS.								TOTAL Net Expenses on Account of the Experiments from the Commencement to the Close of the Half-year preceding that under Report.	TOTAL Expenses for the Half-year under Report.		
	Sold for Government during the Half-Year under Report.			FOREIGN COTTON.						COUNTRY COTTON.					
	Number.	Number of Saw.	At what Cost each.	Profit and Loss to Government, deducting the Cost of European Superintendent.	NEW ORLEANS.		BROACH.		TOTAL FOREIGN.		Quantity Purchased in Candies of 784 lbs. each for Government.			Quantity Purchased in Candies of 784 lbs. each for Private Individuals.	
					Quantity purchased in Candies of 784 lbs. each for Government.	Quantity Purchased in Candies of 784 lbs. each for Private Individuals.	Quantity Purchased in Candies of 784 lbs. each for Government.	Quantity Purchased in Candies of 784 lbs. each for Private Individuals.	Quantity Purchased in Candies of 784 lbs. each for Government.	Quantity Purchased in Candies of 784 lbs. each for Private Individuals.					
48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.		
Padshahpoor - Sumpgaon. Bedee. Chickodee. Pursghur. Bagulkote. Badamee. Hoongoond. Gokak. Uthnee. Tasgaon.	1	15	180	-	-	-	-	-	None ginned	-	-	-	-	Expenditure, Rs.26,887. 1. 6. Total receipts for the same period, Rs.14. 12.	

Dharwar,
25 September 1852. }(signed) John M. Blount,
Superintendent Cotton Experiments, S. M. Country.

(No. 608.)

RESOLUTION.

Mr. Courtney observes that "the details given in the Tabular Report suggest no particular remark," but Mr Blount's report appears to require notice. Mr. Courtney should be requested to favour Government with any observations or suggestions he may have to offer thereon.

(signed) Falkland.
D. A. Blane.
A. Bell.

EXTRACT Bombay Revenue Consultations, 20 April 1853.

No. 4472.

From the Revenue Commissioner, Southern Division (No. 691).

Sir,

In reply to the Government resolution dated the 17th January last, No. 304, desiring me to submit any observations or suggestions I may have to offer in connexion with Mr. Blount's report, No. 66, dated the 27th September preceding, I have the honour to state that, having consulted the reports of former years, I am inclined to agree in the opinion of the Superintendent (expressed in his second paragraph) that "the progress of the experiment in the Belgaum Collectorate is far from satisfactory."

2. This opinion appears borne out by the following contrast of the New Orleans cotton cultivation

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1453

cultivation during the years 1848-49 and 1852-53, the former being the first year for which any regular returns were furnished to this department.

III.
Bombs

Y E A R S.	CULTIVATION OF GOVERNMENT LAND.		CULTIVATION OF INAM LAND.		TOTAL.	
	A cres.	g.	A cres.	g.	A cres.	g.
In 1848-49 - - - -	2,532	15	1,657	13	4,189	28
In 1849-50 - - - -	1,906	27	1,151	37	3,058	24
In 1850-51 - - - -	1,568	29	763	1	2,331	30
In 1851-52 - - - -	1,589	18	623	1	2,212	19
In 1852-53 - - - -	1,210	36	738	31	1,949	27

This shows that, excepting a very slight extension in 1851-52, beyond that of the year preceding, the cultivation of New Orleans cotton has gradually and considerably decreased, the current year's plantations being less than those of 1848-49 by 1,322 acres in Government land, and by 919 acres in inam land.

3. The particulars on record in respect to the introduction of cotton saw gins seem equally unsatisfactory, as is shown in the following—

DURING WHAT PERIOD.	GINS IN USE.			GINS OUT OF USE.			TOTAL GINS.
	Government.	Private.	TOTAL.	Government.	Private.	TOTAL.	
Half year ending—							
31 May 1849 -	7	3	10	-	-	-	10
31 May 1850 -	6	14	20	-	-	-	20
31 May 1851 -	5	22	27	21	34	55	82
31 May 1852 -	2	13	15	50	26	76	91

The number of both Government and private gins "in use" during the last half year reported on, would thus appear to be about half that registered for the corresponding period in the previous year, while the total number of Government and private gins "out of use" has greatly increased, and is six times that of those in use.

4. These facts tend, I think, to show that the experiment has not attained that footing in the collectorate which the exertions of the local officers, and expense incurred for so many years past, might have warranted Government in expecting.

5. In a letter of the 24th ultimo, No. 147, the Collector, Mr. Inverarity, offers his opinion that the unfavourable prospects of the experiment "are due to the inferior" yield of the Orleans cotton; and that "except as an irrigated crop, New Orleans cotton will not thrive" in his districts; and in a later communication (of 7th instant, No. 170) he observes, "It is said this cultivation has not been so remunerative as to induce its continuance; hence the falling off of late, and hence the disfavour shown to the variety." I have lately called for some information from the Collectors of Dharwar and Belgaum, relative to the progress and present state of the experiments; this I have not as yet received, and I shall therefore defer, for the present, offering any remarks on Mr. Inverarity's observations, but I trust to be able to refer to them again before very long.

6. The Collector also states, in his letter of the 24th ultimo, above quoted, that Mr. Blount's supposition* of the incorrectness of the area planted with New Orleans cotton during the season reported on, has proved unfounded.

I have, &c.

Revenue Commissioner's Camp, "Nehr,"
18 March 1853.

(signed) W. Courtney,
Revenue Commissioner, Southern Division.

* Para. 3 of Mr. Blount's letter, forwarded to Government with Revenue Commissioner's memorandum of 24th December 1852, No. 3137.

III.
Bombay.

(No. 4473.)

RESOLUTION.

It is not clear to Government how far this unsatisfactory state of experiments, on which so much trouble and money have been expended, may have arisen from the manner in which the late Mr. Channing carried on operations and manufactured gins. Government have already learnt that the latter were faulty, and this may probably have occasioned a distaste on the part of the people to their extended use.

2. The state of affairs in Dharwar should be compared with that in Belgaum, and Mr. Courtney report what measures he would now suggest.

(signed) *Falkland.*
D. A. Blane.
A. Bell.

EXTRACT Bombay Revenue Consultations, 4 May 1853.

No. 5025. Recorded the following from the Revenue Commissioner, Southern Division, No. 902, with Enclosures.

Forwarded for the information of Government. The particulars detailed in Mr. Blount's Tabular Report suggest no remark.

Revenue Commissioner's Camp, "Nehr," (signed) *W. Courtney,*
9 April 1853. Revenue Commissioner, S. D.

(No. 204 of 1853.)

No. 5026.

To *W. Courtney,* Esq., Revenue Commissioner, Southern Division, Nehr.

Sir,
WITH reference to your memorandum, No. 689, dated 18th instant, I have the honour to submit the accompanying half-yearly report of the cotton experiment, ending 30th November last, and its accompaniments, and to state that I have no remarks to offer thereon.

Belgaum, Collector's Office,
21 March 1853.

I have, &c.
(signed) *J. D. Inverarity,*
Collector.

STATEMENT No. 2.

COTTON PLANTER'S REPORT for the Half-Year, from 1 June to 30 November 1852, in the Belgaum Collectorate.

TALOOKAS.	Remarks on the past Season as to how far anticipations regarding the Crop and its Disposal were realised.	Quantity of Cotton on Hand on account of Government, of each Sort, Ginned or not Ginned.				Supposed Proportions of the last Year's Crop which has been Cleaned in Saw Gins, or will be so Cleaned.			
		NEW ORLEANS	BROACH.	TOTAL FOREIGN.	COUNTRY COTTON.	NEW ORLEANS.	BROACH.	TOTAL FOREIGN.	COUNTRY COTTON.
		Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Sumpgaon Begulkote. Chuckodee. Badamee. Pursghur. Hoongoond. Bedee. Fachahpoor. Gokak. Uthnee. Tasgaon.	In Bedee, Patchapoor and Gokak the native crops were not good. In all the other divisions it is reported to have been a medium crop. The American crop in Pursghur and Badamee was good. In all the other divisions only but a small produce was realised. Most of the American cotton was purchased for Government at a fair price, but only a very small quantity of native cotton was procured by me, owing to the unwillingness of the ryots to agree to give me clean picked cotton.	<i>C. lbs.</i> 16 670	None	<i>C. lbs.</i> 16 670	<i>C. lbs.</i> 6 667 The ryots would not agree to give clean picked cotton, and therefore only 6 candies and 667 lbs. purchased.	The whole	None	The whole	<i>C. lbs.</i> 106 27

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1455

No. 2.—Cotton Planter's Reports from 1 June to 30 November 1852, in the Belgaum Collectorate—continued.

TALOOKAS.	G I N S.															
	In Use.			Out of Use.			In Use.			Out of Use.			Being Made.			
	Belonging to Government.			Belonging to Government.			Belonging to Private Individuals.			Belonging to Private Individuals.			For Government.	For Private Individuals.		
	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Where.	Number of Saws.	Number.	Number of Saws.	Number Sold.	Number of Saws each.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	
Sumpgaon	2	Hoongoond	25	1	Naginhal	18	1	Abbeghen	14	1	Kulladjee	4	-	None	-	None.
Bagulkote.	1	- ditto	18	1	- ditto	7	1	Moorgode	21	1	Koorundwad	20				
Chickodee.	2	- ditto	20	1	Sounduttee	20	1	Huracombee	15	1	Rubeavie	20				
Badamee.	1	Roan	12	1	Hoongoond	7	1	- ditto	9	1	Modole	20				
Pursghur.	6			1	- ditto	23	1	Sounduttee	18	1	Jamkhundee	20				
Hoongoond.				7	Cummtghee	25	1	- ditto	20	1	Kagwad	20				
Bede.				1	- ditto	7	7	- ditto	7	1	Roan	4				
Pahahpoor.				4	Dharwar	25	-			6	Uthnee	4				
Gokak.				1	- ditto	15	13			11	Hoongoond	4				
Uthnee.				27	- ditto	20				1	Malingapoor	20				
Tasgaon.			1	Roan	7				1	Cummtghee	20					
			46						26							

TALOOKAS.	G I N S.			Profit or Loss to Government, deducting the Cost of European Superintendence.	Total Net Expense on account of Experiment from the Commencement to the Close of the Half-Year preceding that under Report.	Total Expense for the Half-Year under Report.	Prospects of the coming Season.
	Sold for Government during the Half-Year under Report.						
	Number.	Number of Saws.	At what Cost.				
27.	28.	29.	30.	31.	32.	33.	
Sumpgaon	-	None	-	None	Total Expenses Rs. a. p. 29,178 9 11	Total Expenses - 15,125 11 2	The cotton crop of both kinds is, generally, looking well, and promises to yield a fair produce, except in some places in Hoongoond, Bagulkote. The native is somewhat injured by prevalence of east wind, or a disease called by the native "Kurjeghee."
Bagulkote.				" Receipts 260 2 3	" Receipts - 777 13 9		
Chickodee.				Balance - 28,918 7 6	Balance - 14,347 13 5		
Badamee.							
Pursghur.							
Hoongoond.							
Bede.							
Pahahpoor.							
Gokak.							
Uthnee.							
Tasgaon.							

(signed) J. M. Blount,
Superintendent Cotton Experiments, S. M. Country.

III.
Bombay.

YEARLY RETURNS.*

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 25 February 1854.—V. 1911 to 1917.

(No. 5 of 1854.)

From the Secretary to the Chamber of Commerce to Mr. Secretary *Goldsmid*.

Sir,

V. 1911.

WITH reference to the numerous papers of statistics of the cotton crop, for which the Chamber of Commerce is so much obliged to Government, I am instructed by the committee to forward the accompanying form which, after mature consideration, they have resolved on submitting to the Right honourable the Governor in Council, as a model for such returns to be ordered in future from the different collectorates and political agencies in Western India.

2. Such returns would come, in time, to be very valuable, and it is of importance, I am instructed to say, that they should be got up on a uniform system, carefully compiled, and procured from all the great cotton fields, not only in this Presidency, but throughout India, for which this Chamber doubts not the co-operation of all the Governments of India will be as available as that of the Right honourable the Governor in Council of Bombay, when respectfully solicited, as I am now instructed through you to do.

3. It is possible, I am to add, that it may not be convenient in every case to supply all the information required, but generally there should be no difficulty in filling up the whole of this form.

4. Should it, however, be found impossible to supply accurately all the information the Chamber asks for past years, the respective Collectors and others might be called upon to state at least their general impressions in reply to each point of inquiry.

5. The Chamber takes for granted that there will be no difficulty in supplying full details in regard to the present season, and they hope it will be possible to furnish some means of comparison therewith in regard to past seasons.

6. I have been farther instructed to suggest that it should be an order to state how the returns are made up, that parties may be better enabled to judge of their reliability.

7. And the Chamber is very desirous of being furnished with all the returns for the present season as soon as possible, from the general anxiety naturally felt to ascertain to what extent the present crop is really short. The committee observe that Mr. Mansfield estimates the deficiency in Khandeish at nine per cent. as compared with last year, whereas they are assured by well informed parties that it will really not be less than 25 per cent.

Bombay Chamber of Commerce,
25 January 1854.

I have, &c.
(signed) *John Connon*,
Secretary.

V. 1912. COTTON RETURN for the Collectorate of

DISTRICT.	Land Cultivated.			Uncleaned Cotton produced.			Yield of Cleaned Cotton.			Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay per Candy of 784 lbs.	Extent of Land capable of Producing Cotton, in Acres
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.								
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.						
SEASON 1852-53:																	
TOTAL - -																	
SEASON 1853-54:																	
TOTAL - -																	
Estimated Average of the last Five Years - -																	

* These statements have been arranged from the full returns for two years, furnished by the Collectors for the purpose of comparison from year to year, and generally containing the averages of the five years preceding each return; which are retained, when furnished, in these statements. Those received during the printing of this Return to the Order of the Honourable the House of Commons, since its date, has been included.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1457

III.
Bombay.

(No. 901 of 1854.)

From Mr. Secretary *Goldsmid* to the Secretary to the Chamber of Commerce.

Sir,

I AM directed by the Right honourable the Governor in Council to request that you will inform the Chamber of Commerce that copies of your letter of the 25th ultimo, and of its accompanying form, have been sent to the collectors and political officers of this Presidency, with instructions to furnish so much of the information required by the Chamber as it is possible for them to obtain with any degree of accuracy.

V. 1913.

The returns will be sent to Mr. Green, who has consented to prepare them for the Chamber, and to place himself in direct communication with the local officers and yourself on the subject.

The returns for the present season, which are being furnished according to the form hitherto in use, will be sent to you as received, and the attention of the Collectors and political officers who have not yet sent in their returns has been directed to the necessity of their being placed before the Chamber as soon as possible.

The observation at close of your letter under acknowledgment, has been brought to Mr. Mansfield's notice for any explanation he may be able to offer.

Bombay Castle,
16 February 1854.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 16 March 1854.—V. 2777 and 2778.

(No. 379 of 1854.)

From *S. Mansfield*, Esq., Collector of Khandeish, to Mr. Secretary *Goldsmid*, Bombay.

Sir,

I HAVE the honour to acknowledge the receipt of your memo., No. 913, of 10th ultimo, forwarding copies of a correspondence between yourself and the secretary of the Chamber of Commerce; and with reference to the letter of the latter, and the 7th para., beg to state that all estimates of the yield of any description of agricultural produce grown in this country must be most vague and uncertain, owing to the entire absence of the machinery required to obtain trustworthy statistics; that the estimate of the deficiency of the cotton crop made by me is correct I cannot confidently assert, but I have travelled very leisurely through the whole of the cotton districts of Khandeish this year. I have conversed with all descriptions of persons on the subject, and I have had the benefit of the estimates of all the native revenue officers (which are based on the reports of the best informed individuals in their respective districts), and therefore I am respectfully of opinion that I am in a better position to know the real state of the case than any other person, and that I am more likely to be correct than the "well-informed parties" alluded to in Mr. Cannon's letter.

V. 2777.

Khandeish Collector's Camp,
Shada, 1 March 1854.

I have, &c.
(signed) *S. Mansfield*,
Collector.

✓
AHMEDABAD.

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LANDS CULTIVATED.						UNCLEANED COTTON PRODUCED.						YIELD OF								
	Native.		Exotic.		TOTAL.		Native.		Exotic.		TOTAL.		Native.								
	Acres.		Acres.		Acres.		Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.								
AHMEDABAD COLLECTORATE:																					
	<i>Acres</i>	<i>g.</i>	<i>a.</i>	<i>Acres</i>	<i>g.</i>	<i>a.</i>	<i>Cds.</i>	<i>lbs.</i>	<i>grs.</i>	<i>Cds.</i>	<i>lbs.</i>	<i>grs.</i>	<i>Cds.</i>	<i>lbs.</i>	<i>grs.</i>						
Season 1853-54	2,24,485	2	0	29	23	0	2,24,514	25	0	46,674	324	0	0	712	0	46,675	252	0	12,781	26	0
Season 1854-55	1,20,186	12	0	254	10	0	1,20,440	22	0	32,071	185	0	10	709	0	32,082	110	0	7,917	13	0
Estimated average of the last five years, taken from the returns forwarded -	1,54,019	32	0	123	24	0	1,54,143	16	0	37,550	497	0	6	998	0	37,557	111	0	9,945	410	0
Season 1855-56	1,46,314	0	12	57	23	13	1,46,371	29	9	46,089	36	0	0	494	2,000	46,089	530	2,000	11,217	537	5,000
Estimated average of the last five years, taken from the returns forwarded -	1,71,079	21	0	112	24	7	1,71,192	5	7	40,400	228	2,900	5	523	0	40,405	751	2,900	10,348	49	3,823
Season 1856-57	1,20,721	9	3	-	-	-	1,20,721	9	3	35,972	505	6,750	-	-	-	35,972	505	6,750	9,335	671	2,923
Estimated average of the last five years -	1,51,325	9	13	129	10	7	1,51,454	14	4	37,941	397	510	6	132	2,000	37,947	529	2,510	9,982	110	6,146

* The yield in this collectorate is mostly of the kind called kalla, picked with the pod; when taken from the pod it is called kupas, and it

KAIRA.

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT or TALOOKA.	LAND CULTIVATED.						UNCLEANED COTTON PRODUCED.						YIELD OF				
	Native.		Exotic.		TOTAL.		Native.		Exotic.		TOTAL.		Native.				
	Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.		Candies of 784 lbs.				
SEASON 1854-55.																	
	<i>Bgs.</i>	<i>w.</i>	<i>w.</i>	<i>Bgs.</i>	<i>w.</i>	<i>w.</i>	<i>Bgs.</i>	<i>w.</i>	<i>w.</i>								
Matur	626	3	10	-	-	-	626	3	10	146	-	-	-	146	36 ½		
Muhoonda	957	15	0	-	-	-	957	15	0	225	-	-	-	225	60		
Neriad	7,568	13	0	-	-	-	7,568	13	0	1,939 ½	-	-	-	1,939 ½	485		
Borsud	96	3	15	-	-	-	96	3	15	13 ½	-	-	-	13 ½	3 ½		
Napar	1,729	0	0	-	-	-	1,729	0	0	383 ½	-	-	-	383 ½	95		
Thasra	1,575	9	5	-	-	-	1,575	9	5	365 ½	-	-	-	365 ½	91		
Kuppurwunj	169	13	10	-	-	-	169	13	10	35	-	-	-	35	9		
TOTAL	12,722	18	0	-	-	-	12,722	18	0	3,108	-	-	-	3,108	780		
SEASON 1855-56:																	
Matur	690	10	0	-	-	-	690	10	0	119	490	-	-	119	490	29	588
Neriad	8,267	0	0	-	-	-	8,267	0	0	2,066	588	-	-	2,066	588	516	539
Kuppurwunj	456	15	0	-	-	-	456	15	0	108	275	-	-	108	275	27	681
Muhoonda	1,009	5	0	-	-	-	1,009	5	0	378	294	-	-	378	294	104	49
Napar	1,637	5	0	-	-	-	1,637	5	0	348	0	-	-	348	0	87	0
Borsud	121	13	15	-	-	-	121	13	15	16	392	-	-	16	392	4	98
Thasra	1,573	6	12	-	-	-	1,573	6	12	1,244	294	-	-	1,244	294	310	490
TOTAL	13,755	15	7	-	-	-	13,755	15	7	4,281	765	-	-	4,281	765	1,080	93

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1459

AHMEDABAD.

EXOTIC COTTON, with other Particulars, for the District of Ahmedabad.

CLEANED COTTON.			Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton, in Acres.	
Exotic	TOTAL.										
Candies of 784 lbs.	Candies of 784 lbs.										
Cds. lbs. grs.	Cds. lbs. grs.	Cds. lbs. grs.	Cds. lbs. grs.	Cds. lbs. grs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Acres g.		
0 224 0	12,781 250 0	1,905 297 0	10,875 737 0	2 8 9	3 6 7	- -	76 13 6	7 7 7	3,12,129	18	
3 487 0	7,920 500 0	1,494 610 0	6,425 674 0	2 8 9	3 6 7	- -	76 13 6	7 7 7	3,12,129	18	
2 24 0	9,947 434 0	1,679 593 0	8,267 625 0	2 8 9	3 6 7	- -	76 13 6	7 7 7	3,12,129	18	
0 164 2,571	11,217 702 571	1,599 748 5,464	9,617 737 2,107	2 12 1	3 16 7	- -	75 1 8	7 7 7	3,12,129	18	
1 620 0	10,347 669 3,828	1,743 686 8,635	8,603 766 4,193	2 12 1	3 16 7	- -	75 1 8	7 7 7	3,12,129	18	
- - -	9,335 671 2,928	1,515 743 785	7,819 712 2,143	2 12 1	3 6 7	- -	99 11 5	7 7 7	3,12,129	11	
1 750 2,571	9,984 77 1,717	1,751 116 6,668	8,232 744 2,049	2 12 1	3 6 7	- -	99 11 5	7 7 7	3,12,129	11	

is then cleaned by country churka, when it is called rooe or pure cotton. The average cost of cleaning it is estimated at Rs. 5. 11. 11.

KAIRA.

EXOTIC COTTON, with other Particulars, for the District of Kaira.

CLEANED COTTON.		Local Consumption.	Exported.	Rate of Assessment per Beega.	Cost of Cultivation per Beega.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Beegas.	
Exotic.	TOTAL.									
Candies of 784 lbs.	Candies of 784 lbs.									
- -	36½	36½	- -	- - -	- - -	- - -	- - -	- - -	93,566	8 1
- -	60	60	- -	- - -	- - -	- - -	- - -	- - -	1,11,578	1
- -	485	485	- -	- - -	- - -	- - -	- - -	- - -	79,456	18
- -	3½	3½	- -	- - -	- - -	- - -	- - -	- - -	45,131	15
- -	95	95	- -	- - -	- - -	- - -	- - -	- - -	48,644	17
- -	91	91	- -	- - -	- - -	- - -	- - -	- - -	1,09,434	0
- -	9	9	- -	- - -	- - -	- - -	- - -	- - -	1,06,639	9
- -	780	780	- -	- - -	- - -	- - -	- - -	- - -	5,94,451	12
- -	29 588	29 588	- -	- - -	7 - -	2 4 -	74 - -	5 - -	93,566	8
- -	516 539	516 539	- -	- - -	3 6 4	1 11 1	70 - -	- - -	1,11,578	1
- -	27 681	27 681	- -	- - -	5 8 -	3 7 -	65 - -	- - -	79,456	18
- -	104 49	104 49	- -	- - -	2 5 6	1 1 10	70 - -	- - -	45,131	15
- -	87 0	87 0	- -	- - -	1 12 -	4 - -	65 - -	- - -	48,644	17
- -	4 98	4 98	- -	- - -	7 9 3	17 8 -	68 8 -	- - -	1,09,434	0
- -	310 490	310 490	- -	- - -	4 - -	5 - -	60 - -	- - -	1,06,639	9
- -	1,080 93	1,080 93	- -	- - -	- - -	- - -	- - -	- - -	5,94,451	12

The land shown as cultivated with cotton includes all Government salanee and rent-free lands, so that it is impossible to put in the rates, with perfect accuracy, but the Government rates vary from one to eight rupees; vide remark in the statement for last year.

B R O A C H .

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

D I S T R I C T .	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1854-55 :									
Broach - - -	38,232	- - -	38,232	8,957	- - -	8,957	2,985	- - -	2,985
Wagra - - -	47,337	- - -	47,337	9,891	- - -	9,891	3,297	- - -	3,297
Unklesur - -	20,351	- - -	20,351	4,768	- - -	4,768	1,589	- - -	1,589
Hansote - - -	21,236	- - -	21,236	4,975	- - -	4,975	1,658	- - -	1,658
Jumboosur -	29,781	- - -	29,781	6,977	- - -	6,977	2,325	- - -	2,325
Ahmode - - -	29,734	- - -	29,734	6,966	- - -	6,966	2,322	- - -	2,322
TOTAL - - -	1,86,671	- - -	1,86,671	42,534	- - -	42,534	14,176	- - -	14,176
SEASON 1855-56 :									
Broach - - -	39,355	- - -	39,355	13,451	- - -	13,451	4,484	- - -	4,484
Wagra - - -	43,288	- - -	43,288	12,369	- - -	12,369	4,124	- - -	4,124
Unklesur - -	22,944	- - -	22,944	6,722	- - -	6,722	2,240	- - -	2,240
Hansote - - -	21,653	- - -	21,653	8,459	- - -	8,459	2,564	- - -	2,564
Jumboosur -	43,376	- - -	43,376	9,448	- - -	9,448	2,624	- - -	2,624
Ahmode - - -	30,420	- - -	30,420	6,842	- - -	6,842	1,993	- - -	1,993
TOTAL - - -	2,06,036	- - -	2,06,036	57,291	- - -	57,291	18,029	- - -	18,029

S U R A T .

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

D I S T R I C T .	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1852-53 :									
	<i>Acres. yds. ft.</i>	<i>Acres. yds. ft.</i>	<i>Acres. yds. ft.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>
Oolpar - - -	6,544 4,800 0	113 3,302 2	6,658 3,262 2	2,496 321	7 356	2,503 677	832 107	2 380	834 487
Khoorsud - -	22,789 1,981 3	90 3,404 4	22,880 545 7	8,089 874	7 134	8,097 24	2,696 486	2 306	2,699 8
Chowrassee -	8,177 1,343 1	34 2,515 5	8,211 3,858 6	3,311 700	3 9	3,314 709	1,103 756	1 3	1,104 759
Kurode - - -	1,602 3,475 5	- - -	1,602 3,475 5	818 10	- -	818 10	272 526	- -	272 520
Wakre - - -	965 1,151 1	0 3,555 5	965 4,706 6	375 276	0 6	375 282	125 92	0 2	125 94
Surbhone - -	1,073 2,235 5	- - -	1,073 2,235 5	301 242	- -	301 242	100 342	- -	100 342
Soopa - - -	2,080 3,342 2	1 1,133 3	2,081 4,475 5	745 395	0 198	745 593	248 393	0 66	248 459

* Mode of Cleaning the Cotton.—Uncleaned cotton is, in the first place, exposed to the heat of the sun, is beaten

B R O A C H.

EXOTIC COTTON, with other Particulars, for the District of *Broach*.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton, in Acres.
185 597 89 158 125 72	2,800 2,700 1,500 1,500 2,200 2,250	- - - - - - 4 4 - - - - - - - - - -	- - - - - - 2 4 - - - - - - - - - -	- - - - - - 11 - - - - - - - - - - -	- - - - - - 90 - - - - - - - - - - -	- - - - - - 2 8 - - - - - - - - - -	76,875 56,375 58,224 47,482 1,38,321 86,909
1,226	12,950	4 4 -	2 4 -	11 - -	90 - -	2 8 -	4,64,186
200 719 100 100 125 172	4,284 3,405 2,140 2,464 2,499 1,821	- - - - - - 4 4 - - - - - - - - - -	- - - - - - 2 4 - - - - - - - - - -	- - - - - - 11 - - - - - - - - - - -	- - - - - - 90 - - - - - - - - - - -	- - - - - - 2 8 - - - - - - - - - -	76,875 56,375 58,224 47,482 1,38,321 86,909
1,416	16,613	4 4 -	2 4 -	11 - -	90 - -	2 8 -	4,64,186

S U R A T.

EXOTIC COTTON, with other Particulars, for the District of *Surat*.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton, in Acres.
Candies of 784 lbs.	Candies of 784 lbs.						
<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a.</i>	<i>Rs. a.</i>	<i>Acres. yds. ft.</i>
62 220	772 267	From 2 2 - to 13 9 9½	3 15 6	10 8 -	85 -	8 -	17,824 2,168 8
93 203	2,605 589	From 2 8 10 to 10 10 2	3 1 4	8 - -	91 8	10 8	75,960 2,901 3
138 94	966 665	From 2 8 10 to 9 12 7	4 3 4	18 - -	85 -	3 -	7,155 22 2
68 168	204 358	From 3 6 5 to 6 12 10	5 1 8	- - -	- - -	- - -	1,452 1,966 2
11 718	113 160	From 2 7 2 to 5 15 3	3 6 6	6 12 -	80 -	12 -	1,484 2,506 6
30 0	70 342	From 2 15 8 to 7 1 6	6 2 8	9 - -	90 -	- - -	2,350 3,777 7
11 284	237 175	From 2 15 8 to 6 6 1	4 11 9	3 8 -	80 -	9 8	7,434 2,906 6

with a stick, so as to cause the leaves and particles of dust to fall down, and is then cleaned by the native churka.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.					
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.			
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.			
SEASON 1852-53—continued.												
	Acres.	yds. ft.	Acres.	yds. ft.	Acres.	yds. ft.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.		
Parchole - -	1,260	2,560 0	7	4,022 2	1,268	1,742 2	459 351	1 326	460 677	153 117	0 370	153 487
Chicklee - -	1	2,306 6	-	- - -	1	2,306 6	0 375	- - -	0 375	0 125	- - -	0 125
Bulsar - -	-	- - -	2	4,542 2	2	4,542 2	- - -	0 393	0 393	- - -	0 131	0 131
Parnera - -	-	- - -	-	- - -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Bugwara - -	-	- - -	-	- - -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Mandvie - -	912	0 0	1	2,128 8	913	2,128 8	578 49	0 3	578 52	192 539	0 1	192 540
TOTAL - - -	45,407	3,835 5	253	404 4	45,660	4,240 0	17,176 257	19 641	17,196 114	5,725 347	6 475	5,732 38
SEASON 1853-54 :												
Oolpar - -	5,018	1,982 2	8	960 0	5,026	2,942 2	1,465 388	0 484	1,466 88	488 391	0 161	488 552
Khoorsud - -	26,495	2,244 4	14	2,995 5	26,510	400 0	9,147 205	0 532	9,147 737	3,049 68	0 177	3,049 245
Chowrassee - -	7,254	4,833 7	16	2,417 7	7,271	2,411 5	1,763 419	- - -	1,763 419	587 662	- - -	587 662
Kurode - -	1,420	3,360 0	-	- - -	1,420	3,360 0	419 606½	- - -	419 606½	136 340½	- - -	136 340½
Walore - -	592	3,875 5	-	- - -	592	3,875 5	186 123	- - -	186 123	62 41	- - -	62 41
Surbhone - -	700	1,333 3	0	1,422 2	700	2,755 5	210 -	0 37½	210 37½	73 771½	0 12½	74 0
Soopa - -	1,638	3,208 8	-	- - -	1,638	3,208 8	575 46	- - -	575 46	172 405	- - -	172 405
Parchole - -	1,582	1,555 5	-	- - -	1,582	1,555 5	641 43	- - -	641 43	192 246	- - -	192 246
Chicklee - -	7	111 1	-	- - -	7	111 1	2 216	- - -	2 216	1 0	- - -	1 0
Bulsar - -	-	- - -	-	- - -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Parnera - -	-	- - -	-	- - -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Bugwara - -	-	- - -	-	- - -	-	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Mandvie - -	924	3,893 3	-	- - -	924	3,893 3	271 136	- - -	271 136	67 622	- - -	67 622
TOTAL - - -	45,635	2,198 2	39	2,955 5	45,675	913 7	14,681 614½	1 269½	14,683 99½	4,831 411	0 350½	4,831 761½
Estimated Average of the last Five Years -	33,660	893 1	61	1,805 3	33,721	2,698 4	9,910 614	5 716	9,916 546	1,709 481½	1 488	1,711 185½

* Mode of Cleaning the Cotton.—Uncleaned Cotton is, in the first place, exposed to the heat of the sun, is beaten

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1463

Exotic Cotton, with other Particulars, for the District of *Surat*—continued.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.
Candies of 784 lbs.	Candies of 784 lbs.						
<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a.</i>	<i>Rs. a.</i>	<i>Acres. yds. t.</i>
- - - -	153 487	{ From 2 8 10 to 4 10 10 }	6 12 11	5 9 3	80 -	1 8	3,164 728 8
0 125	- - - -	{ From 4 - 8 to 5 10 2 }	8 8 1	7 14 -	84 -	- - -	5 1,684 4
- - - -	0 181	{ From 4 10 10 to 23 13 2 }	4 8 -	-	-	-	-
- - - -	- - - -	-	-	-	-	-	-
20 0	172 540	{ From 3 14 11 to 4 10 10 }	10 3 4	- - -	81 -	10 -	1,821 4,137 7
435 244	5,296 578	- - -	- - -	- - -	- - -	- - -	118,653 3,440 8
25 0	463 552	{ From 2 2 - to 13 9 9½ }	3 15 6	10 8 -	86 -	8 -	17,824 2,168 8
150 0	2,899 245	{ From 2 8 10 to 10 10 2 }	3 1 4	8 - -	87 -	10 8	75,960 2,901 3
73 376	614 286	{ From 2 8 10 to 9 12 7 }	4 3 4	18 - -	85 -	3 -	7,155 22 2
50 181	86 149½	{ From 3 6 5 to 6 12 10 }	5 1 8	- - -	- - -	- - -	1,452 1,966 2
5 709	56 116	{ From 2 7 2 to 5 15 3 }	3 6 6	6 12 -	80 -	12 -	1,484 2,506 6
40 0	34 0	{ From 2 15 8 to 7 1 6 }	6 2 8	9 - -	80 -	- - -	2,350 3,777 7
172 405	- - - -	{ From 2 15 8 to 6 6 1 }	4 11 9	3 8 -	84 -	9 8	7,434 2,806 6
192 246	- - - -	{ From 2 8 10 to 4 10 10 }	6 12 11	5 9 8	80 -	1 8	3,164 728 8
1 0	- - - -	{ From 4 - 8 to 5 10 2 }	8 8 1	7 14 -	84 -	- - -	5 1,684 4
- - - -	- - - -	-	-	-	-	-	-
- - - -	- - - -	-	-	-	-	-	-
50 0	17 622	{ From 3 14 11 to 4 10 10 }	10 3 4	- - -	60 -	10 -	1,821 4,137 7
760 359	4,071 402½	- - -	- - -	- - -	- - -	- - -	1,18,653 3,440 8
328 17½	1,383 168½	-	-	-	-	-	-

with a stick, so as to cause the leaves and particles of dust to fall down, and is then cleaned by the native churka.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.						UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.											
	Native.		Exotic.		TOTAL.		Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.									
	Acres.		Acres.		Acres.		Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.									
SEASON 1854-55 :																					
	Acres.	yds.	ft.	Acres.	yds.	ft.	Cds.	lbs.	Cds.	lbs.	Cds.	lbs.									
Oolpar - -	5,319	1,604	4	1	4,084	4	5,321	848	8	1,469	772	0	392	1,470	380	489	771	0	130	490	117
Khoorsud - -	25,132	1,297	7	1	848	8	25,133	2,146	6	9,382	532	0	196	9,382	728	3,127	438½	0	65½	3,127	504
Chowrassee - -	8,191	3,369	7	-	-	-	8,191	3,369	7	3,333	427	-	-	3,333	427	1,111	142½	-	-	1,111	142½
Kurode - -	863	3,311	1	-	-	-	863	3,311	1	296	28	-	-	296	28	92	725	-	-	92	725
Walore - -	1,972	3,857	7	-	-	-	1,972	3,857	7	808	780	-	-	808	780	269	521½	-	-	269	521½
Surbhone - -	1,312	1,848	8	-	-	-	1,312	1,848	8	411	392	-	-	411	392	123	719	-	-	123	719
Soopa - -	2,409	671	1	-	-	-	2,409	671	1	976	0	-	-	976	0	325	261	-	-	325	261
Parchole - -	1,886	933	3	-	-	-	1,886	933	3	611	257	-	-	611	257	203	608	-	-	203	608
Chuckle - -	12	408	8	-	-	-	12	408	8	3	719	-	-	3	719	1	498	-	-	1	498
Bulsar - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parnera - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bugwara - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mandvie - -	1,262	506	6	-	-	-	1,262	506	6	547	611	-	-	547	611	176	162½	-	-	176	162½
TOTAL - -	48,361	3,289	7	3	93	3	48,364	3,383	1	17,841	598	0	588	17,842	402	5,922	142½	0	195½	5,922	398
Estimated Average of the last Five Years - -	40,218	140	4	93	1,826	6	40,311	1,967	1	-	-	-	-	-	-	-	-	-	-	-	-
SEASON 1855-56 :																					
Oolpar - -	4,886	826	6	1	3,693	3	4,887	4,520	0	1,650	7	0	392	1,560	399	519	780	0	131	520	127
Khoorsud - -	23,813	3,142	2	-	-	-	23,813	3,142	2	8,626	671½	-	-	8,626	671½	2,875	485	-	-	2,875	485
Chowrassee - -	4,521	763	5	0	106	6	4,521	870	2	1,831	522½	0	2½	1,831	525½	610	435½	0	1	610	436½
Kurode - -	1,048	533	3	-	-	-	1,048	533	3	468	580	-	-	468	580	153	713	-	-	153	713
Walore - -	608	4,835	5	-	-	-	608	4,835	5	206	618½	-	-	206	618½	68	728½	-	-	68	728½
Surbhone - -	586	1,342	2	-	-	-	586	1,342	2	205	196	-	-	205	196	65	119	-	-	65	119
Soopa - -	1,632	924	4	-	-	-	1,632	924	4	554	611	-	-	554	611	179	173½	-	-	179	173½

* Mode of Cleaning the Cotton.—Uncleaned cotton is, in the first place, exposed to the heat of the sun, is beaten

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1465

and Exotic Cotton, with other Particulars, for the District of Surat—continued.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.*	Average Price of Cleaning Cotton	Expense of Transit to Bombay,	Extent of Land, capable of producing Cotton, in Acres.
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.		per Candy of 784 lbs.	per Candy of 784 lbs.	
<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a.</i>	<i>Rs. a.</i>	<i>Acres. yds. ft.</i>
19 543	470 356	From 2 2 - to 13 9 9½	3 15 6	10 8 -	86 -	8 -	17,824 2,168 8
1,005 470½	2,122 33½	From 2 8 10 to 10 10 2	3 1 4	8 - -	87 -	10 8	75,960 2,901 3
138 703	972 223½	From 2 8 10 to 9 12 7	4 3 4	18 - -	85 -	3 -	7,155 22 2
30 666	62 59	From 3 6 5 to 6 12 10	5 1 8	- - -	- - -	- - -	1,452 1,966 2
7 205	262 316½	From 2 7 2 to 5 15 3	3 6 6	6 12 -	80 -	12 -	1,484 2,503 6
42 719	81 0	From 2 15 8 to 7 1 6	6 2 8	9 - -	80 -	- - -	2,350 3,777 7
325 261	- - -	From 2 15 8 to 6 6 1	4 11 9	3 8 -	84 -	9 8	7,434 2,906 6
203 608	- - -	From 2 8 10 to 4 10 10	6 12 11	5 9 3	80 -	1 8	3,164 728 8
1 298	- - -	From 4 - 8 to 5 10 2	8 8 1	7 14 -	84 -	- - -	5 1,684 4
-	-	-	-	-	-	-	-
50 0	126 162½	From 3 14 11 to 4 10 10	10 3 4	- - -	80 -	10 -	1,821 4,137 7
1,825 755½	4,096 366½	- - -	- - -	- - -	- - -	- - -	1,18,653 3,440 8
-	-	-	-	-	-	-	-
21 596	498 315	From 2 2 - to 13 9 9½	3 15 6	10 8 -	80 -	8 -	17,824 2,168 8
663 757	2,211 512	From 2 8 10 to 10 10 2	3 1 4	8 - -	70 -	10 8	75,960 2,901 3
76 263	534 173½	From 2 8 10 to 9 12 7	4 3 4	18 - -	78 -	3 -	7,155 22 2
34 207	119 506	From 3 6 5 to 6 12 10	5 1 8	- - -	60 -	- - -	1,452 1,966 2
52 728½	16 0	From 2 7 2 to 5 15 3	3 6 6	6 12 -	80 -	12 4	1,484 2,506 6
50 119	15 0	From 2 15 8 to 7 1 6	6 2 8	9 - -	90 -	- - -	2,350 3,777 7
179 173½	- - -	From 2 15 8 to 6 6 1	4 11 9	3 8 -	84 -	9 8	7,434 2,906 6

* with a stick, so as to cause the leaves and particles of dust to fall down, and is then cleaned by the native churka.

STATEMENT, showing the Cultivation and Production of Indigenous

DISTRICT.	LAND CULTIVATED.						UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.		Exotic.		TOTAL.		Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.		Acres.		Acres.		Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1855-56—continued.												
	<i>Acres.</i>	<i>yds. ft.</i>	<i>Acres.</i>	<i>yds. ft.</i>	<i>Acres.</i>	<i>yds. ft.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>
Parchole - -	1,373	3,924 4	- - -	- - -	1,373	3,924 4	445 196½	- - -	445 196½	148 326½	- - -	148 326½
Chicklee - -	2	4,542 2	- - -	- - -	2	4,542 2	0 745	- - -	0 745	0 248	- - -	0 248
Bulsar - -	-	-	-	-	-	-	-	-	-	-	-	-
Parnera - -	-	-	-	-	-	-	-	-	-	-	-	-
Bugwara - -	-	-	-	-	-	-	-	-	-	-	-	-
Mandvie - -	777	4,333 3	- - -	- - -	777	4,333 3	398 173	- - -	398 173	115 684	- - -	115 684
TOTAL - -	39,251	968 0	1 3,800 0	- - -	39,252	4,768 0	14,298 401	0 394½	14,299 11½	4,737 773½	0 192	4,738 121½
Estimated Ave- rage of the last Five Years - }	43,604	2,209 7	111 779 5	- - -	43,715	2,989 3	- - -	- - -	- - -	- - -	- - -	- - -
SEASON 1856-57:												
Olpar - -	5,408	1,991 1	- - -	- - -	5,408	1,991 1	1,663 696	- - -	1,663 696	554 493	- - -	554 943
Khoorsud	23,741	2,128 8	- - -	- - -	23,741	2,128 8	8,432 331	- - -	8,432 331	2,799 25	- - -	2,799 25
Chowrassee -	5,849	1,737 7	- - -	- - -	5,849	1,737 7	1,895 638	- - -	1,895 638	631 735½	- - -	631 735½
Kurode - -	965	1,328 8	- - -	- - -	965	1,328 8	330 476	- - -	330 476	109 594	- - -	109 594
Walore - -	1,080	4,657 7	- - -	- - -	1,080	4,657 7	422 504	- - -	422 504	140 60	- - -	140 60
Surbhone - -	616	924 4	- - -	- - -	616	924 4	176 393	- - -	176 393	58 723	- - -	58 723
Soopa - -	1,686	222 2	- - -	- - -	1,686	222 2	571 200½	- - -	571 200½	176 394½	- - -	176 394½
Parchole - -	1,617	3,391 1	- - -	- - -	1,617	3,391 1	524 241½	- - -	524 241½	174 603½	- - -	174 603½
Chicklee - -	1	4,831 1	- - -	- - -	1	4,831 1	0 315	- - -	0 315	0 105	- - -	0 105
Bulsar - -	-	-	-	-	-	-	-	-	-	-	-	-
Parnera - -	-	-	-	-	-	-	-	-	-	-	-	-
Bugwara - -	-	-	-	-	-	-	-	-	-	-	-	-
Mandvie - -	1,131	3,897 7	- - -	- - -	1,131	3,897 7	616 389½	- - -	616 389½	192 598½	- - -	192 598½
TOTAL - -	42,099	911 1	- - -	- - -	42,099	911 1	14,634 265	- - -	14,634 265	4,838 402	- - -	4,838 402
Estimated Ave- rage of the last Five Years - }	8,808	339 5	11 4,054 2	- - -	8,819	4,393 7	- - -	- - -	- - -	- - -	- - -	- - -

* Mode of Cleaning the Cotton.—Uncleaned cotton is, in the first place, exposed to the heat of the sun, is beaten

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1467

and Exotic Cotton, with other Particulars, for the District of Surat.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay per Candy of 784 lbs.	Extent of Land capable of Producing Cotton in Acres.
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.				
<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a.</i>	<i>Rs. a.</i>	<i>Acres. yds. ft.</i>
148 326½	- - - -	From 2 8 10 to 4 10 10	6 12 11	5 9 3	80 -	1 8	3,164 728 8
0 248	- - - -	From 4 - 8 to 5 10 2	8 8 1	7 14 -	84 -	- - -	5 1,684 4
-	-	-	-	-	-	-	-
50 0	65 684	From 3 14 11 to 6 10 10	10 3 4	- - -	80 -	10 -	1,821 4,137 7
1,277 282½	3,460 622½	- - -	- - -	- - -	- - -	- - -	1,18,653 3,440 8
-	-	-	-	-	-	-	-
29 168	525 325	From 2 2 - to 13 9 9½	3 15 6	10 8 -	82 -	8 -	17,824 2,168 8
768 315	2,030 494	From 2 8 10 to 10 10 2	3 1 4	8 - -	90 -	10 8	75,960 2,901 3
78 778	552 41½	From 2 8 10 to 9 12 7	4 3 4	18 - -	90 -	3 -	7,155 22 2
36 459	73 135	From 3 6 5 to 6 12 10	5 1 8	- - -	60 -	- - -	1,452 1,966 2
69 307	70 537	From 2 7 2 to 5 15 3	3 6 6	6 12 -	80 -	1 -	1,484 2,506 6
45 723	13 0	From 2 15 8 to 7 1 6	6 2 8	9 0 0	100 -	- - -	2,950 3,777 7
176 394½	- - - -	From 2 15 8 to 6 6 1	4 11 9	3 8 -	84 -	9 8	7,434 2,906 6
174 603½	- - - -	From 2 8 10 to 4 10 10	6 12 11	5 9 3	80 -	1 8	3,164 728 8
0 105	- - - -	From 4 - 8 to 5 10 2	8 8 1	7 14 -	80 -	- - -	5 1,684 4
-	-	-	-	-	-	-	-
50 0	142 598½	From 3 14 11 to 4 10 10	10 3 4	- - -	80 -	10 -	1,821 4,137 7
1,429 717	3,407 563	- - -	- - -	- - -	- - -	- - -	1,18,653 4,440 8
-	-	-	-	-	-	-	-

with a stick so as to cause the leaves and particles of dust to fall down, and is then cleaned by the native churka.

K H A N D E I S H.

STATEMENT, showing the Cultivation and Production of INDIGENOUS

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
				Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1853-54 :									
	Bgs. pds.	Bgs. pds.	Bgs. pds.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.
Dhoolia	13,856 17½	26 7	13,883 4½	1,274 178	1 539	1,275 711	946 503	0 329	947 48
Amulnair	21,930 15	-	21,930 15	2,704 35	-	2,704 35	821 389	-	821 389
Erundole	21,520 7	74 15½	24,595 2½	1,876 481	8 150	1,884 581	469 107	2 38	471 145
Bhurgaum	51,355 6½	-	51 55 6½	4,448 068	-	4,448 068	1,105 150	-	1,105 150
Challeesgaum	8,452 13	75 5	8,527 18	967 213	8 715	976 144	241 641	2 179	244 36
Malligaum	1,800 0	-	300 0	90 0	-	90 0	22 392	-	22 392
Baglan	589 9½	-	589 9½	10 587	-	10 587	2 538	-	2 538
Pimpulnair	1,947 16½	24 5	1,972 1½	160 0	1 656	6,161 656	40 186	0 413	40 599
Nundoorbar	12,922 10½	454 19½	13,377 15½	2,572 412	46 336	2,618 748	643 69	15 373	658 442
Sooltanpoor	4,128 10	28 8½	4,156 18½	1,263 648	8 553	1,272 417	315 0	2 138	317 138
Thalnair	3,588 4½	-	3,588 4½	248 250	-	248 250	80 0	-	80 0
Chopra	13,558 0	96 15 0	13,654 15	2,256 0	1 0	2,257 0	681 0	0 240	681 240
Yawul	10,624 5½	461 0	11,085 5½	2,170 0	6 0	2,176 0	542 392	1 392	544 0
Sowda	9,995 7½	-	9,995 7½	2,186 198	-	2,186 198	546 441	-	546 441
Nusseerabad	14,251 1½	196 6	14,447 7½	10,536 302	18 588	10,555 196	2,807 392	5 392	2,803 0
Jamnair	52,437 5	258 6	52,695 15	6,466 432	5 84	6,471 516	1,614 294	1 540	1,616 59
TOTAL	2,45,958 15½	1,696 8½	2,47,655 3½	39,231 524	106 479	39,338 219	10,360 580	31 691	10,401 487
SEASON 1854-55:									
Dhoolia	15,673 16½	-	15,673 16½	1,996 552	-	1,996 552	499 93	-	499 93
Amulnair	19,995 0	-	19,995 0	1,147 329	-	1,147 329	286 670	-	286 670
Erundole	30,793 0½	-	30,793 0½	3,664 644	-	3,664 644	910 601	-	910 601
Bhurgaum	50,978 13½	-	50,978 13½	4,400 604	-	4,400 604	1,100 151	-	1,100 151
Challeesgaum	5,343 5	7 0	5,350 5	545 180	0 400	545 580	136 241	0 100	136 341
Malligaum	2,616 18½	-	2,616 18½	236 196	-	236 196	59 49	-	59 49
Baglan	519 14½	-	519 14½	9 271	-	9 27	2 281	-	2 281
Pimpulnair	1,463 0	-	1,463 0	167 334	-	167 334	41 658	-	41 658
Nundoorbar	16,653	5 0	16,658 1½	3,398 448	1 16	3,399 464	849 504	0 267	849 771
Sooltanpoor	3,800	-	3,800 0	775 400	-	775 400	193 688	-	193 688
Thalnair	5,357	-	5,357 11½	829 53	-	829 53	207 209	-	207 209
Chopra	16,497	-	16,497 17	4,043 110	-	4,043 110	1,212 748	-	1,212 748
Yawul	13,827 8)	-	13,827 10	1,382 588	-	1,382 588	414 588	-	414 588
Sowda	12,117 1½	-	12,112 1½	3,707 592	-	3,707 592	926 733	-	926 733
Nusseerabad	17,817 17½	-	17,801 17½	3,876 258	-	3,876 258	969 64	-	969 64
Jamnair	52,437 13	4 5	52,659 18	6,395 0	0 196	6,395 196	1,598 588	-	1,598 637
TOTAL	2,66,857 9 0½	16 5	2,66,105 5½	36,576 71	1 612	36,577 683	9,409 594	0 416	9,410 226
Estimated Average of the last Five Years	9 553 7½	4,174 8½	1,82,727 16	40,574 182	797 116	41,371 298	10,704 169	225 254	10,929 423
SEASON 1855-56									
Dhoolia	10,068 9½	-	10,068 9½	975 551	-	975 551	243 725	-	243 725
Amulnair	15,111 10½	-	15,111 10½	1,014 136	-	1,014 136	317 79	-	317 79
Erundole	18,104 10½	-	18,104 10½	2,289 454	-	2,289 454	572 310	-	572 310
Bhurgaum	34,741 9	-	34,741 9	4,139 387	-	4,139 387	1,123 720	-	1,123 720
Challeesgaum	4,040 15	-	4,040 15	588 635	-	588 635	152 169	-	152 169
Malligaum	1,711 13	-	1,711 13	342 273	-	342 273	85 665	-	85 665
Baglan	97 4½	-	97 4½	8 222	-	8 222	2 77	-	2 77
Pimpulnair	673 18½	-	673 18½	52 194	-	52 194	13 726	-	13 726
Nundoorbar	11,175 14	-	11,175 14	1,673 266	-	1,673 266	421 262	-	421 262
Sooltanpoor	3,064 5	-	3,064 5	116 637	-	116 637	38 708	-	38 708
Thalnair	2,731 17½	-	2,731 17½	257 132	-	257 132	64 229	-	64 229
Chopra	10,804 17	-	10,804 17	2,093 470	-	2,093 470	634 116	-	634 116
Yawul	9,347 7	-	9,347 7	852 304	-	852 304	213 76	-	213 76
Sowda	11,449 12½	-	11,449 12½	293 346	-	293 346	77 667	-	77 667
Nusseerabad	12,532 8½	-	12,532 8½	1,711 483	-	1,711 483	525 566	-	525 566
Jamnair	54,295 4	-	54,295 4	4,828 628	-	4,828 628	1,210 544	-	1,210 544
TOTAL	1,99,950 16	-	1,99,950 16	21,237 530	-	21,237 530	5,697 367	-	5,697 367
Estimated Average of the last Five Years	1,94,221 14	6,123 1½	2,00,344 15½	32,838 283	875 291	33,733 574	8,710 500	263 387	8,974 103

mode of cleaning cotton is by saw-gins and by the native churkas; the motive power employed for the former, is either the steam, cattle, or men, and latter, men are exclusively employed. The average cost of cleaning one candy of cotton of 784 lbs. by saw-gins, propelled by steam power, is Rs. 5 pies; by cattle, 14 annas 9 pies; by men, Rs. 1. 11. 9.; by churka, the cost per candy is Rs. 2. 1.

K H A N D E I S H.

and Exotic Cotton, with other Particulars, for the District of *Khandeish*.

Local Consumption.	Exported.	Rate of Assessment per Beega.	Cost of Cultivation per Beega.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton, per Candy of 784 lbs. †	Expense of Transit to Bombay per Candy of 784 lbs. †	Extent of Land capable of producing Cotton in Beegas.
Candies of 784 lbs.	Candies of 784 lbs.						
<i>Cds. lbs.</i>	<i>Cds. lbs.</i>						<i>Bgs. pds.</i>
75 0	272 48	- 10 8	3 - -	- - -	- - -	- - -	1,21,907 13½
201 00	620 209	1 4 3	3 2 -	- - -	- - -	- - -	83,138 14½
71 45	400 100	1 8 -	5 - -	- - -	- - -	- - -	1,13,443 1½
175 50	930 106	- 14 1	3 2 -	- - -	- - -	- - -	2,00,000 0
63 0	181 36	- 11 2	4 1 5	- - -	- - -	- - -	14,648 10
22 392	- - -	- 11 4	7 8 -	- - -	- - -	- - -	4,937 0
2 538	- - -	- 9 6	3 - -	- - -	- - -	- - -	600 0
40 596	- - -	- 11 3	2 8 -	- - -	- - -	- - -	4,000 0
158 442	500 0	1 4 5	2 9 7	- - -	- - -	- - -	1,01,801 13
115 198	202 0	1 11 6	- 12 -	- - -	- - -	- - -	40,000 0
30 0	50 0	1 10 5	3 - -	- - -	- - -	- - -	5,000 0
181 0	500 240	1 14 9	2 4 -	- - -	- - -	- - -	33,521 18½
83 0	461 0	1 6 4	2 8 -	- - -	- - -	- - -	1,32,637 8½
125 242	421 199	1 13 4	3 8 -	- - -	- - -	- - -	1,75,000 0
432 0	2,471 0	1 7 2	1 4 -	- - -	- - -	- - -	95,812 6¾
402 59	1,214 0	- 13 4	6 9 -	- - -	- - -	- - -	3,13,961 0
2,178 240	8,223 244	- - -	- - -	- - -	- - -	- - -	14,40,409 6¼
150 13	349 80	- 10 8	3 - -	- - -	- - -	- - -	1,21,907 13½
112 10	174 660	1 4 3	3 2 -	- - -	- - -	- - -	83,138 14½
210 501	700 100	1 8 -	5 - -	- - -	- - -	- - -	1,13,443 1½
225 52	875 99	- 14 1	3 2 -	- - -	- - -	- - -	2,00,000 0
36 340	100 1	- 11 2	4 1 5	- - -	- - -	- - -	14,648 10
59 49	- - -	- 11 4	7 8 -	- - -	- - -	- - -	4,937 0
2 281	- - -	- 9 6	3 - -	- - -	- - -	- - -	600 0
41 658	- - -	- 11 3	2 8 -	- - -	- - -	- - -	4,000 0
283 257	566 514	1 4 5	2 9 7	- - -	- - -	- - -	1,01,801 13
94 688	99 0	1 11 6	- 12 -	- - -	- - -	- - -	40,000 0
27 209	180 0	1 10 5	3 - -	- - -	- - -	- - -	5,000 0
402 700	810 48	1 14 9	2 4 -	- - -	- - -	- - -	33,521 18½
114 88	300 500	1 6 4	2 8 -	- - -	- - -	- - -	1,32,637 8½
125 333	801 400	1 13 4	3 8 -	- - -	- - -	- - -	1,75,000 0
175 14	794 50	1 7 2	1 4 -	- - -	- - -	- - -	95,812 6¾
198 38	1,400 599	- 13 4	6 9 -	- - -	- - -	- - -	3,13,961 0
2,258 311	7,151 699	- - -	- - -	- - -	- - -	- - -	14,40,409 6¼
3,199 156	8,730 267	- - -	- - -	- - -	- - -	- - -	- - -
143 725	100 0	- 10 8	3 - -	- - -	- - -	- - -	1,21,907 13½
84 403	232 460	1 4 3	3 2 -	- - -	- - -	- - -	83,138 14½
60 310	512 0	1 8 -	5 - -	- - -	- - -	- - -	1,13,443 1½
211 196	912 524	- 14 1	3 2 -	- - -	- - -	- - -	2,00,000 0
38 75	114 94	- 11 2	4 1 5	- - -	- - -	- - -	14,648 10
85 665	- - -	- 11 4	7 8 -	- - -	- - -	- - -	4,937 0
2 77	- - -	- 9 6	3 - -	- - -	- - -	- - -	600 0
13 726	- - -	- 11 3	2 8 -	- - -	- - -	- - -	4,000 0
114 450	306 596	1 4 5	2 9 7	- - -	- - -	- - -	1,01,801 13
27 159	11 549	1 11 6	- 12 -	- - -	- - -	- - -	40,000 0
21 338	42 675	1 10 5	3 - -	- - -	- - -	- - -	5,000 0
79 210	554 690	1 14 9	2 4 -	- - -	- - -	- - -	33,521 18½
27 0	183 76	1 6 4	2 8 -	- - -	- - -	- - -	1,32,637 8½
18 667	59 0	1 13 4	3 8 -	- - -	- - -	- - -	1,75,000 0
115 526	410 240	1 7 2	1 4 -	- - -	- - -	- - -	95,812 6¾
256 307	954 237	- 13 4	6 9 -	- - -	- - -	- - -	3,13,961 0
1,300 146	4,397 221	- - -	- - -	- - -	- - -	- - -	14,40,409 6¼
3,186 51	6,788 52	- - -	- - -	- - -	- - -	- - -	- - -

† Average price of cleaned cotton per candy of 784 lbs is Rs. 66. 3. 1.
‡ Average expense of transit to Bombay per candy of 784 lbs. is Rs. 9. 13. 9.

STATEMENT, showing the Cultivation and Production of Indigenous

DISTRICTS.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
				Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1856-57:									
	<i>Bgs. pds.</i>	<i>Bgs. pds.</i>	<i>Bgs. pds.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>	<i>Cds. lbs.</i>
Dhoolia - - -	13,173 2	- - -	13,173 2	2,310 390	- - -	2,310 390	577 489	- - -	577 489
Amulnair - - -	16,318 18½	- - -	16,318 18½	1,548 88	- - -	1,548 88	472 72	- - -	472 72
Erundole - - -	21,746 14	- - -	21,746 14	2,824 746	- - -	2,824 746	706 186	- - -	706 186
Bhurgaum - - -	44,355 10½	- - -	44,355 10½	8,226 267	- - -	8,226 267	2,061 458½	- - -	2,061 458½
Chaleesgaum - - -	3,941 5	- - -	3,941 5	623 32	- - -	623 32	155 596	- - -	155 596
Malligaum - - -	1,510 10	- - -	1,510 10	261 156	- - -	231 156	57 627	- - -	57 627
Baglan - - -	191 7	- - -	191 7	8 159½	- - -	8 159½	2 288	- - -	2 288
Pimpulnair - - -	1,713 0	- - -	1,713 0	186 216	- - -	186 216	49 344	- - -	49 344
Nundoorbar - - -	9,221 13½	- - -	9,221 13½	2,150 634	- - -	2,150 634	537 550½	- - -	537 550½
Sooltanpoor - - -	3,473 4½	- - -	3,473 4½	420 503	- - -	420 503	184 418	- - -	184 418
Thalnair - - -	3,639 13	- - -	3,639 13	735 47½	- - -	735 47½	183 602½	- - -	183 602½
Chopra - - -	12,357 13	- - -	12,357 13	3,707 192	- - -	3,707 192	1,112 320	- - -	1,112 320
Yawul - - -	14,292 10	- - -	14,292 10	2,844 198	- - -	2,844 198	711 50	- - -	711 50
Sowdah - - -	11,030 12	- - -	11,030 12	1,720 393	- - -	1,720 393	417 712	- - -	417 712
Nuseerabad - - -	16,527 19½	- - -	16,527 19½	3,092 329½	- - -	3,092 329½	773 82½	- - -	773 82½
Jamnair - - -	49,882 15½	- - -	49,882 15½	6,392 676	- - -	6,392 676	1,603 121	- - -	1,603 121
TOTAL - - -	2,23,376 8	- - -	2,23,376 8	37,022 323½	- - -	37,022 323½	9,606 428½	- - -	9,606 428½
Estimated Average of the last Five Years	2,33,176 15½	5,276 18	2,38,453 13½	35,881 349	627 632½	36,509 197½	9,817 78	105 576	10,012 654
SEASON 1857-58:									
Dhoolia - - -	12,842 10	- - -	12,842 10	1,684 48	- - -	1,684 48	421 12	- - -	421 12
Amulnair - - -	19,228 9	- - -	19,228 9	1,682 736	- - -	1,682 736	540 772	- - -	540 772
Erundole - - -	18,680 4½	- - -	18,680 4½	3,503 392	- - -	3,503 392	875 686	- - -	875 686
Bhurgaum - - -	40,540 12½	- - -	40,540 12½	7,500 249	- - -	7,500 249	1,875 61½	- - -	1,875 61½
Chaleesgaum - - -	3,585 14½	- - -	3,585 14½	637 100	- - -	637 100	159 221	- - -	159 221
Malligaum - - -	922 11	- - -	922 11	229 254	- - -	229 254	57 259	- - -	57 259
Baglan - - -	101 4½	- - -	101 4½	3 659	- - -	3 659	0 702½	- - -	0 702½
Pimpulnair - - -	1,070 13	- - -	1,070 13	97 425	- - -	97 425	24 302½	- - -	24 302½
Nundoorbar - - -	10,142 1	- - -	10,142 1	959 38	- - -	959 38	304 312½	- - -	304 312½
Sooltanpoor - - -	2,619 12	- - -	2,619 12	384 517	- - -	384 517	128 137	- - -	128 137
Thalnair - - -	3,608 19½	- - -	3,608 19½	447 75	- - -	447 75	111 607	- - -	111 607
Chopra - - -	4,266 5	- - -	4,266 5	326 416	- - -	326 416	108 661	- - -	108 661
Yawul - - -	10,461 0	- - -	10,461 0	1,233 540	- - -	1,233 540	308 331	- - -	308 331
Sowdah - - -	14,509 10	- - -	14,509 10	1,516 611	- - -	1,516 611	379 99	- - -	379 99
Nuseerabad - - -	9,837 4	- - -	9,837 4	441 338	- - -	441 338	167 304	- - -	167 304
Jamnair - - -	45,540 18	- - -	45,540 18	4,018 166½	- - -	4,018 166½	1,005 180	- - -	1,005 180
TOTAL - - -	1,97,957 8½	- - -	1,97,957 8½	24,666 76½	- - -	24,666 76½	6,468 159½	- - -	6,468 159½
Estimated Average of the last Five Years	2,50,660 12½	4,521 11	2,55,182 3½	39,017 564½	436 107½	39,453 671½	10,339 451	146 225½	10,485 677

* The mode of cleaning cotton is by saw-gins and by the native churkas, the motive power employed for the former is either the steam, cattle, or men, and for the latter, men are exclusively employed. The average cost of cleaning one candy of cotton of 784 lbs. by saw-gin, propelled by steam power, is 12 annas 5 pies, by cattle, 14 annas 9 pies; by men, Rs. 1 11. 9.; by churka, the cost per candy is Rs. 2. 1.

P O O N A H.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 16 June 1854.—V. 6051 and 52.

V. 6051.

(No. 652 of 1854).

From the Collector of Poona to Mr. Acting Chief Secretary Goldsmid.

Sir,

I HAVE the honour to transmit the return of cotton produced in this collectorate, prepared agreeably to the form received with your endorsement, No. 907, of the 16th February last, and to make the following remarks:

2. I cannot speak very confidently of the accuracy of these returns, but since the mam-luddars report that the information they contain is derived from the cultivators and dealers, it is the best that is available.

3. You are aware that it is not in general the practice to cultivate entire fields with cotton, which being planted in strips along with jowarree and kurdye, makes it difficult to ascertain

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1471

and Exotic Cotton, with other Particulars, for the District of *Khandeish*—continued.

Local Consumption.	Exported.	Rate of Assessment per Beega.	Cost of Cultivation per Beega.	Mode and Cost of Cleansing.*	Average Price of Cleaned Cotton per Candy of 784 lbs.†	Expense of Transit to Bombay per Candy of 784 lbs.‡	Extent of Land capable of producing Cotton in Beegas.
Candies of 784 lbs.	Candies of 784 lbs.						
<i>Cds. lbs.</i>	<i>Cds. lbs.</i>						<i>Bgs. pds.</i>
288 036	288 637	- 10 8	3 - -	- - -	- - -	- - -	1,21,907 13½
129 8	343 64	1 4 3	3 2 -	- - -	- - -	- - -	83,138 14½
83 186	623 0	1 8 -	5 - -	- - -	- - -	- - -	1,13,443 1½
141 469	1,919 773½	- 14 1	3 2 -	- - -	- - -	- - -	2,00,000 0
42 225	113 371	- 11 2	4 1 5	- - -	- - -	- - -	14,648 10
67 627	- - -	- 11 4	7 8 -	- - -	- - -	- - -	4,937 0
2 288	- - -	- 9 6	3 - -	- - -	- - -	- - -	600 0
49 344	- - -	- 11 3	2 8 -	- - -	- - -	- - -	4,000 0
134 333½	403 216½	1 4 5	2 9 7	- - -	- - -	- - -	1,01,801 13
150 375	34 43	1 11 6	- 12 -	- - -	- - -	- - -	40,000 0
100 500	83 102½	1 10 5	5 - -	- - -	- - -	- - -	5,000 0
139 40	973 230	1 14 9	2 4 -	- - -	- - -	- - -	33,521 18½
88 692	622 142	1 6 4	2 8 -	- - -	- - -	- - -	1,32,637 8½
110 398	307 314	1 13 4	3 8 -	- - -	- - -	- - -	1,75,000 0
122 333½	650 533	1 7 2	1 4 -	- - -	- - -	- - -	95,812 6½
446 396	1,156 509	- 13 4	6 9 -	- - -	- - -	- - -	3,13,961 0
2,087 363	7,519 65½	- - -	- - -	- - -	- - -	- - -	14,40,409 6½
2,210 253½	7,802 400½	- - -	- - -	- - -	- - -	- - -	- - -
210 398	210 398	- 12 10	3 - -	- - -	- - -	- - -	1,21,907 13½
180 261	360 511	1 4 6	3 2 -	- - -	- - -	- - -	83,138 14½
90 490	785 196	1 - 11	5 - -	- - -	- - -	- - -	1,13,443 1½
172 337½	1,702 508½	- 15 3	3 2 -	- - -	- - -	- - -	2,00,000 0
41 0	118 221	- 11 7	4 1 5	- - -	- - -	- - -	14,648 10
57 259	- - -	- 8 9	7 8 -	- - -	- - -	- - -	4,937 0
0 702½	- - -	- 11 11	3 - -	- - -	- - -	- - -	600 0
24 302½	- - -	- 12 -	2 8 -	- - -	- - -	- - -	4,000 0
109 68½	195 224½	1 4 5	2 9 7	- - -	- - -	- - -	1,01,801 13
73 137	55 0	1 11 6	- 12 -	- - -	- - -	- - -	40,000 0
37 202	74 405	1 13 10	3 - -	- - -	- - -	- - -	5,000 0
25 26	83 635	1 2 -	2 4 -	- - -	- - -	- - -	33,521 18½
60 0	248 331	- 12 2	2 8 -	- - -	- - -	- - -	1,32,637 8½
135 502	243 381	1 - 1	3 8 -	- - -	- - -	- - -	1,75,000 0
32 765	134 328	1 3 7	1 4 -	- - -	- - -	- - -	95,812 6½
287 180	718 0	1 4 -	6 9 -	- - -	- - -	- - -	3,13,961 0
1,537 730½	4,930 219½	- - -	- - -	- - -	- - -	- - -	14,40,409 6½
2,249 356	8,236 321	- - -	- - -	- - -	- - -	- - -	- - -

† Average price of cleaned cotton per candy of 784 lbs. is Rs. 08. 3. 1.
‡ Average expense of transit to Bombay per candy of 784 lbs. is Rs. 9. 13. 9.

ascertain the exact space occupied by cotton in any given piece of land; the Judapoor mamlutdar remarks that about five per cent. of all the cultivated land is sown with cotton.

4. As regards the quantity of cotton produced, an examination of the statement will show that in each instance embraced in the two years, the proportion is one candy to ten acres. In the return sent in November last, half this was given, the reason being that it was made on an estimate, before it was known that the crops were so good as they turned out to be.

5. The quantity of cotton shown as cleaned, in column 11, is not to be understood to be that which has actually been cleaned, in excess of the uncleaned shown in column 8, but is merely entered to show the usual proportion which cleaned cotton bears to uncleaned, viz., one quarter.

6. You will observe that in the last column almost every available acre of land in Judapoor is planted with cotton, that in Bheemthurry only about 136 out of 6,000 are so cultivated, and that there are only six acres in all Joonere available. I cannot believe this to be quite correct, and yet I have no means of altering the return from any official sources. I will endeavour to have these matters better understood by the district officers before the next report is sent in.

24 April 1854.

I have, &c.
(signed) E. C. Jones, Collector.

STATEMENT, showing the Cultivation and Production of INDIGENOUS

DISTRICT.	LAND CULTIVATED.						UNCLEAN COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.		Exotic.	TOTAL.		Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	
	Acres.		Acres.	Acres.		Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	
SEASON 1852-53 :	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	
Sewnere - - -	0 12 0	- - -	0 12 0	0 2 0	- - -	0 2 0	- - -	0 2 0	- - -	- - -	- - -	
Judapoor - - -	6,147 28 0	- - -	6,147 28 0	581 0 0	- - -	581 0 0	- - -	145 0 0	- - -	145 0 0	- - -	
Bheenthurry - - -	60 27 10	- - -	60 27 10	6 0 0	- - -	6 0 0	- - -	1 10 0	- - -	1 10 0	- - -	
TOTAL - - -	6,208 27 10	- - -	6,208 27 10	587 2 0	- - -	587 2 0	- - -	146 10 0	- - -	146 10 0	- - -	
SEASON 1853-54 :												
Sewnere - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
Judapoor - - -	6,938 10 0	- - -	6,938 10 0	696 0 0	- - -	696 0 0	- - -	174 0 0	- - -	174 0 0	- - -	
Bheenthurry - - -	136 13 8	- - -	136 13 8	13 0 0	- - -	13 0 0	- - -	3 5 0	- - -	3 5 0	- - -	
TOTAL - - -	7,074 23 8	- - -	7,074 23 8	709 0 0	- - -	709 0 0	- - -	177 5 0	- - -	177 5 0	- - -	
Estimated Average of the last Five Years - - -	4,536 9 0	- - -	4,536 9 -	614 5 63	- - -	614 5 63	- - -	153 10 37	- - -	153 10 37	- - -	
SEASON 1854-55 :				<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	
Sewnere - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
Judapoor - - -	4,250 7 0	- - -	4,250 7 0	256 135	- - -	256 135	- - -	64 33	- - -	64 33	- - -	
Bheenthurry - - -	84 14 4	- - -	84 14 4	9 569	- - -	9 569	- - -	2 398	- - -	2 398	- - -	
TOTAL - - -	4,334 21 4	- - -	4,334 21 4	265 704	- - -	265 704	- - -	66 371	- - -	66 371	- - -	
Estimated Average of the last Five Years - - -	4,966 34 5	- - -	4,966 34 5	694 131	- - -	694 131	- - -	145 573	- - -	145 573	- - -	
SEASON 1855-56 :												
Sewnere - - -	0 20 0	- - -	0 20 0	0 80	- - -	0 80	- - -	0 20	- - -	0 20	- - -	
Judapoor - - -	626 5 0	- - -	626 5 0	240 602	- - -	240 602	- - -	60 150½	- - -	60 150½	- - -	
Bheenthurry - - -	25 23 0	- - -	25 23 0	7 216	- - -	7 216	- - -	1 642	- - -	1 642	- - -	
TOTAL - - -	652 8 0	- - -	652 8 0	248 114	- - -	248 114	- - -	62 28½	- - -	62 28½	- - -	
Estimated Average of the last Five Years - - -	6,060 7 15½	- - -	6,060 7 15½	691 650½	- - -	691 650½	- - -	172 750½	- - -	172 750½	- - -	

* By means of a churuk, at a cost of 6 rupees per candy.

Exotic Cotton, with other Particulars, for the District of *Poonah*.

Local Consumption.	EXPORTED.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay per Candy of 724 lbs.	Extent of Land capable of producing Cotton in Acres.
Candies of 784 lbs.	Candies of 784 lbs.						
<i>C. m. lbs.</i>	<i>C. m. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>A. g. a.</i>
0 2 0	- - -	1 8 6	3 - -	- - -	- - -	- - -	6 0 0
6 0 0	139 0 0	{ From - 9 - to - 14 - }	8 8 -	- - -	60 - -	10 - -	7,000 0 0
1 5 0	0 5 0	{ From - 1 11 to 1 1 1 }	6 8 -	- - -	60 - -	8 8 -	6,000 0 0
7 7 0	139 5 0	- - -	- - -	- - -	- - -	- - -	13,006 0 0
- - -	- - -	- - -	- - -	- - -	- - -	- - -	6 0 0
43 0 0	131 0 0	{ From - 9 - to - 14 - }	8 8 -	- - -	60 - -	10 - -	7,000 0 0
2 10 0	0 15 0	{ From - 1 11 to 1 1 1 }	6 8 -	- - -	60 - -	8 8 -	6,000 0 0
45 10 0	131 15 0	- - -	- - -	- - -	- - -	- - -	13,006 0 0
64 5 0	89 10 0	-	-	-	-	-	-
<i>C. lbs.</i>	<i>C. lbs.</i>						
- - -	- - -	- - -	- - -	- - -	- - -	- - -	6 0 0
15 588	58 229	{ From - 9 - to - 14 - }	8 8 -	- - -	60 - -	10 - -	7,000 0 0
1 656	0 466	{ From - 1 11 to - 13 10 }	6 8 -	- - -	60 - -	8 8 -	6,000 0 0
17 460	58 695	- - -	- - -	- - -	- - -	- - -	13,006 0 0
156 678	99 80	-	-	-	-	-	-
0 20	- - -	1 6 -	- † - -	- - -	60 - -	10 - -	6 0 0
21 482	38 452½	{ From - 9 - to - 14 - }	- † - -	- - -	60 - -	10 - -	7,000 0 0
1 306	0 336	{ From - 2 - to - 13 - }	- † - -	- - -	60 - -	8 8 -	6,000 0 0
23 24	39 4½	- - -	- - -	- - -	- - -	- - -	13,006 0 0
49 432½	132 318	-	-	-	-	-	-

† Cannot be ascertained, as the lands cultivated with cotton also contain other crops.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1856-57:	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>
Sewnere - - -	1 0 0	- -	1 0 0	0 160	- -	0 160	0 40	- -	- 40
Judapoor - - -	2,664 19 0	- -	2,664 19 0	490 723	- -	490 723	122 572½	- -	122 572½
Bheemthurry - -	21 22 0	- -	21 22 0	6 183	- -	6 183	1 437½	- -	1 437½
TOTAL - - -	2,687 1 0	- -	2,687 1 0	497 282	- -	497 282	124 266½	- -	124 266½
Estimated average of the last five years - -	4,978 23 15½	- -	4,978 23 15½	603 18½	- -	603 18½	150 606	- -	150 606
SEASON 1857-58:									
Sewnere - - -	- - -	- -	- - -	- - -	- -	- - -	- - -	- -	- - -
Judapoor - - -	3,111 8 0	- -	3,111 8 0	1,107 408	- -	1,107 408	276 690	- -	276 690
Bheemthurry - -	- 12 0	- -	0 12 0	0 48	- -	0 48	0 12	- -	0 12
TOTAL - - -	3,111 20 0	- -	3,111 20 -	1,107 456	- -	1,107 456	276 702	- -	276 702
Estimated average of the last five years - -	4,113 12 12½	- -	4,113 12 12½	532 122	- -	532 122	133 104	- -	133 104

* Cannot be ascertained, as the land cultivated with cotton also contains other crops.

AHMEDNUGGUR. - - - - -

STATEMENT, *showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1853-54:	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>
Ahmedneggur - -	45 21 0	- -	45 21 0	6 759	- -	6 759	1 581½	- -	1 581½
Ankolla - - -	16 19 12	- -	16 19 12	2 411½	- -	2 411½	0 494½	- -	0 494½
Jankhar - - -	1,583 21 0	- -	1,583 21 0	242 295	- -	242 295	60 465½	- -	60 465½
Kurda - - -	40 31 12	- -	40 31 12	6 191½	- -	6 191½	1 439½	- -	1 439½
Koartee - - -	1,878 8 0	- -	1,878 8 0	287 376	- -	287 376	71 682	- -	71 682
Neywassa - - -	445 26 0	- -	445 26 0	68 166	- -	68 166	17 41½	- -	17 41½
Patoda - - -	80 10 0	- -	80 10 0	12 222	- -	12 222	3 55½	- -	3 55½
Sangumnair - - -	21 28 0	- -	21 28 0	3 252	- -	3 252	0 651	- -	0 651
Rahoor - - -	50 10 0	- -	50 10 0	7 542	- -	7 542	1 723½	- -	1 723½
Shewgaon - - -	391 37 0	- -	391 37 0	59 775	- -	59 775	14 781½	- -	14 781½
Sinnur - - -	13 15 0	- -	13 15 0	2 37	- -	2 37	0 401½	- -	0 401½
Wann-Dindoory -	- - -	- -	- - -	- - -	- -	- - -	- - -	- -	- - -
TOTAL - - -	4,567 27 8	- -	4,567 27 8	699 106½	- -	699 106½	174 614½	- -	174 614½

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1475

Exotic Cotton, with other Particulars, for the District of *Poonah*—continued.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.†	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton, in Acres.
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.*				
<i>C. lbs.</i>	<i>C. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>A. g. a.</i>
0 40	- - -	1 6 - From	- - -	- - -	60 - -	10 - -	6 0 0
44 732½	77 624	- 9 - to	- - -	- - -	60 - -	10 - -	7,000 0 0
1 136½	0 301½	- 14 - From	- - -	- - -	60 - -	8 8 -	6,000 0 0
46 124½	78 141½	- 2 - to	- - -	- - -	- - -	- - -	13,006 0 0
		- 13 -					
44 194	106 412	- - -	- - -	- - -	- - -	- - -	-
- - -	- - -	- - -	- - -	- - -	- - -	- - -	6 0 0
79 4	197 686	From	8 9 6	- - -	60 - -	10 - -	7,000 0 0
0 12	- - -	- 9 - to	6 10 -	- - -	60 - -	8 2 8	6,000 0 0
79 16	197 686	- 14 - From	- - -	- - -	- - -	- - -	13,006 0 0
		- 13 4					
40 3½	93 100½	- - -	- - -	- - -	- - -	- - -	-

† By means of churruck, at a cost of six rupees per candy.

AHMEDNUGGUR.

Exotic Cotton, with other Particulars, for the District of *Ahmednuggur*.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton, in Acres.	REMARKS.
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.					
<i>C. lbs.</i>	<i>C. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>A. g. a.</i>	
1 581½	- - -	- 10 -	7 12 -	15 - -	98 - -	7 - -	12,225 0 0	
0 494½	- - -	1 - -	3 - -	12 8 -	78 6 4	15 - -	200 0 0	
60 465½	- - -	- 10 -	5 - -	10 - -	100 - -	30 - -	17,000 0 0	
1 439½	- - -	From	5 - -	8 - -	80 - -	10 - -	8,000 0 0	
		- 3 - to						
		- 12 -						
71 682	- - -	- 4 6	4 - -	10 - -	60 - -	10 - -	10,000 0 0	
17 41½	- - -	- 12 -	5 - -	6 - -	58 - -	5 - -	30,000 0 0	
3 55½	- - -	- 11 1	6 3 2	4 2 -	78 6 5	15 - -	2,888 0 0	
0 651	- - -	- 12 -	5 - -	14 - -	68 4 -	6 - -	5,000 0 0	
1 723½	- - -	- 9 7	3 11 6	19 - -	80 - -	20 - -	2,000 0 0	
		From						
		- 8 - to						
14 781½	- - -	1 - -	15 - -	5 - -	65 - -	15 - -	7,498 0 0	
		From						
		- 8 - to						
0 401½	- - -	2 13 -	4 1 -	12 8 -	135 - -	15 - -	22 20 0	
		- - -						
		- - -						
		- - -						
174 614½	- - -	- - -	- - -	- - -	- - -	- - -	95,233 20 0	

STATEMENT showing the Cultivation and Production of Indigenous and

DISTRICTS.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1854-55:	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>A. g. a.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>
Ahmednuggur - - -	27 28 0	- - -	27 28 0	3 392	- - -	3 392	0 705	- - -	0 705
Ankolla - - -	9 0 12	- - -	9 0 12	2 563	- - -	2 563	0 523½	- - -	0 523½
Jamkhair - - -	1,534 0 0	- - -	1,534 0 0	383 392	- - -	383 392	95 686	- - -	95 686
Kurda - - -	9 17 0	- - -	9 17 0	0 392	- - -	0 392	0 117	- - -	0 117
Koartee - - -	1,549 37 0	- - -	1,549 37 0	237 192	- - -	237 192	59 244	- - -	59 244
Neywassa - - -	375 10 0	- - -	375 10 0	54 0	- - -	54 0	12 392	- - -	12 392
Patoda - - -	47 19 0	- - -	47 19 0	4 734	- - -	4 734	1 183½	- - -	1 183½
Sungumnair - - -	31 26 0	- - -	31 26 0	6 438	- - -	6 438	1 502	- - -	1 502
Rahoory - - -	50 37 0	- - -	50 37 0	2 528	- - -	2 528	0 524	- - -	0 524
Shewgaon - - -	420 19 0	- - -	420 19 0	96 421	- - -	96 421	24 106	- - -	24 106
Sinnur - - -	4 29 0	- - -	4 29 0	0 423	- - -	0 423	0 211	- - -	0 211
Wunn-Dindooree - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TOTAL - - -	4,060 22 12	- - -	4,060 22 12	792 555	- - -	792 555	197 283½	- - -	197 283½
Average for Five Years:									
Ahmednuggur - - -	52 24 0	- - -	52 24 0	1 764	- - -	1 764	0 385	- - -	0 385
Ankolla - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Jamkhair - - -	821 38 0	- - -	821 38 0	205 385½	- - -	205 385½	51 292½	- - -	51 292½
Kurda - - -	40 10 0	- - -	40 10 0	2 480	- - -	2 480	0 616	- - -	0 616
Koartee - - -	1,042 32 0	- - -	1,042 32 0	97 146	- - -	97 146	24 262	- - -	24 262
Neywassa - - -	507 14 0	- - -	507 14 0	73 7	- - -	73 7	18 197	- - -	18 197
Patoda - - -	58 12 0	- - -	58 12 0	2 350½	- - -	2 350½	0 479½	- - -	0 479½
Sungumnair - - -	17 36 12	- - -	17 36 12	3 392	- - -	3 392	1 196	- - -	1 196
Rahoory - - -	62 20 0	- - -	62 20 0	4 240	- - -	4 240	1 60	- - -	1 60
Shewgaon - - -	808 25 0	- - -	805 25 0	144 149	- - -	144 149	35 757	- - -	35 757
Sinnur - - -	9 2 0	- - -	9 2 0	1 26	- - -	1 26	0 405	- - -	0 405
Wunn-Dindooree - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TOTAL - - -	3,421 13 12	- - -	3,421 13 12	535 588	- - -	535 588	134 513½	- - -	134 513½
SEASON 1855-56:									
Ahmednuggur - - -	4 22 0	- - -	4 22 0	0 392	- - -	0 392	0 101	- - -	0 101
Ankolla - - -	3 5 0	- - -	3 5 0	0 738½	- - -	0 738½	0 185½	- - -	0 185½
Jamkhair - - -	996 31 0	- - -	996 31 0	249 152	- - -	249 152	62 234	- - -	62 234
Kurda - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Koartee - - -	628 15 0	- - -	628 15 0	96 132	- - -	96 132	24 33	- - -	24 33
Neywassa - - -	103 20 0	- - -	103 20 0	10 268	- - -	10 268	2 259	- - -	2 259
Patoda - - -	1 21 0	- - -	1 21 0	0 122	- - -	0 122	0 30½	- - -	0 30½
Sungumnair - - -	5 26 0	- - -	5 26 0	1 0	- - -	1 0	0 196	- - -	0 196
Rahoory - - -	3 29 0	- - -	3 29 0	0 154	- - -	0 154	0 38½	- - -	0 38½
Sheogaon - - -	307 23 0	- - -	307 23 0	70 483	- - -	70 483	17 512½	- - -	17 512½
Sinnur - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Wunn-Dindooree - - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TOTAL - - -	2,054 32 0	- - -	2,054 32 0	429 89½	- - -	429 89½	107 21½ and ½ shil.	- - -	107 21½ and ½ shil.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

Exotic Cotton, with other Particulars, for the District of Ahmednuggur—continued.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.	REMARKS.
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.					
C. lbs.	C. lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	A. g. a.	
0 705	- - -	- 10 -	7 12 -	15 - -	93 - -	7 - -	12,225 0 0	
0 532½	- - -	1 - -	3 - -	12 8 -	78 6 4	15 - -	200 0 0	
95 686	- - -	- 10 -	5 - -	10 - -	100 - -	30 - -	17,000 0 0	
0 117	- - -	From 3 6 to 12 -	5 - -	8 - -	80 - -	10 - -	8,000 0 0	
59 244	- - -	- 4 6	4 - -	10 - -	60 - -	10 - -	10,000 0 0	
5 392	7 0	- 12 -	5 - -	6 - -	58 - -	5 - -	30,000 0 0	
1 183½	- - -	- 11 1	6 3 2	4 2 -	78 6 5	15 - -	2,888 0 0	
1 502	- - -	- 12 -	5 - -	21 - -	102 6 -	6 - -	5,000 0 0	
0 524	- - -	- 14 7	3 11 6	19 - -	80 - -	20 - -	2,000 0 0	
24 106	- - -	From 8 - to 1 -	15 - -	5 - -	65 - -	15 - -	7,498 0 0	
0 211	- - -	From 11 - to 3 5 -	4 1 -	12 8 -	135 - -	15 - -	22 20 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	400 0 0	
190 283½	7 0	- - -	- - -	- - -	- - -	- - -	95,233 20 0	
0 385	- - -	- 10 -	7 12 -	15 - -	98 - -	7 - -	12,225 0 0	There was no cultivation for the last two years in this talooka; the average of three years is therefore given.
- - -	- - -	- - -	- - -	- - -	- - -	- - -	200 0 0	There has been no cultivation for the past five years, no average is given.
51 292½	- - -	- 10 -	5 - -	10 - -	100 - -	30 - -	17,000 0 0	Average of five years is given.
0 616	- - -	From 3 - to 12 -	5 - -	8 - -	80 - -	10 - -	8,000 0 0	- - Ditto.
24 262	- - -	- 4 6	4 - -	10 - -	60 - -	10 - -	10,000 0 0	- - Ditto.
18 197	- - -	- 12 -	5 - -	6 - -	58 - -	5 - -	30,000 0 0	- - Ditto.
0 479½	- - -	- 11 1	6 3 2	4 2 -	78 6 5	15 - -	2,888 0 0	There was no cultivation for the past two years in the talooks, the average of three years is therefore given.
1 196	- - -	- 12 -	5 - -	10 - -	45 - -	6 - -	5,000 0 0	Average of five years is given.
1 60	- - -	- 13 -	3 11 6	19 - -	80 - -	20 - -	2,000 0 0	- - Ditto.
35 757	- - -	From 8 - to 1 -	15 - -	5 - -	65 - -	15 - -	7,498 0 0	- - Ditto.
0 405	- - -	From 8 - to 3 5 -	4 1 -	12 8 -	135 - -	15 - -	22 20 0	- - Ditto.
- - -	- - -	- - -	- - -	- - -	- - -	- - -	400 0 0	There has been no cultivation for the past five years, no average is therefore given.
134 513½	- - -	- - -	- - -	- - -	- - -	- - -	95,233 20 0	
0 101	- - -	- 10 -	7 12 -	15 - -	100 - -	8 - -	12,225 0 0	
0 185½	- - -	1 - -	3 - -	12 8 -	78 6 4	15 - -	200 0 0	
62 234	- - -	- 10 -	5 - -	10 - -	100 - -	30 - -	17,000 0 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	8,000 0 0	
24 33	- - -	- 4 6	4 - -	1 - -	60 - -	10 - -	10,000 0 0	
1 259	1 - -	- 12 -	5 - -	6 - -	58 - -	5 - -	30,000 0 0	
0 30½	- - -	- 11 1	6 3 2	4 2 -	65 5 4	15 - -	2,888 0 0	
0 196	- - -	- 14 -	5 - -	13 4 -	78 6 5	6 - -	5,000 0 0	
0 38½	- - -	- 11 -	3 11 6	19 - -	85 - -	25 - -	2,000 0 0	
0 512½	- - -	From 8 - to 1 -	15 - -	5 - -	65 - -	15 - -	7,498 0 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	22 20 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	400 0 0	
106 21½ and ½ shil.	1 - -	- - -	- - -	- - -	- - -	- - -	95,233 20 0	

STATEMENT showing the Cultivation and Production of Indigenous and

DISTRICTS.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
Average for Five Years :									
Ahmednuggur	A. g. a. 50 33 6	A. g. a. - - -	A. g. a. 50 33 6	C. lbs. 3 174 $\frac{1}{2}$	C. lbs. - - -	C. lbs. 3 174 $\frac{1}{2}$	C. lbs. 0 630 $\frac{1}{2}$	C. lbs. - - -	C. lbs. 0 630 $\frac{1}{2}$
Ankolla	16 19 12	- - -	16 19 12	2 411 $\frac{1}{2}$	- - -	2 411 $\frac{1}{2}$	0 494 $\frac{1}{2}$	- - -	0 494 $\frac{1}{2}$
Jamkhair	992 7 0	- - -	992 7 0	248 34	- - -	248 34	62 8 $\frac{1}{2}$	- - -	62 8 $\frac{1}{2}$
Kurda	34 31 0	- - -	34 31 0	2 115	- - -	2 115	0 505	- - -	0 505
Koartee	1,218 17 0	- - -	1,218 17 0	124 175	- - -	124 175	31 44	- - -	31 44
Neywassa	521 19 0	- - -	521 19 0	75 667	- - -	75 667	18 754	- - -	18 754
Patoda	60 21 0	- - -	60 21 0	4 699	- - -	4 699	1 175	- - -	1 175
Sungumnair	22 17 0	- - -	22 17 0	4 292	- - -	4 292	1 73	- - -	1 73
Rahoory	62 25 0	- - -	62 25 0	9 237	- - -	9 237	0 647 $\frac{1}{2}$	- - -	0 647 $\frac{1}{2}$
Sheogaon	387 34 0	- - -	387 34 0	78 737	- - -	78 737	19 576 $\frac{1}{2}$	- - -	19 576 $\frac{1}{2}$
Sinnur	4 29 0	- - -	4 29 0	0 423	- - -	0 423	0 211	- - -	0 211
Wunn-Dindooree	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TOTAL	3,372 13 2	- - -	3,372 13 2	548 45	- - -	548 45	137 199 $\frac{1}{2}$	- - -	137 199 $\frac{1}{2}$
SEASON 1856-57:									
Ahmednuggur	13 10 0	- - -	13 10 0	1 360	- - -	1 360	0 305	- - -	0 305
Ankolla	3 3 8	- - -	3 3 8	0 729 $\frac{1}{2}$	- - -	0 729 $\frac{1}{2}$	0 182 $\frac{1}{2}$	- - -	0 182 $\frac{1}{2}$
Jamkhair	1,545 34 0	- - -	1,545 34 0	386 363	- - -	386 363	96 483	- - -	96 483
Kurda	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Koartee	1,641 23 0	- - -	1,641 23 0	251 136	- - -	251 136	62 622	- - -	62 622
Neywassa	303 4 8	- - -	303 4 8	52 129	- - -	52 129	13 298	- - -	13 298
Patoda	23 19 0	- - -	23 19 0	2 310	- - -	2 310	0 469 $\frac{1}{2}$	- - -	0 469 $\frac{1}{2}$
Sungumnair	4 15 0	- - -	4 15 0	0 588	- - -	0 588	0 588	- - -	0 588
Rughoory	46 7 0	- - -	46 7 0	2 588	- - -	2 588	0 539	- - -	0 539
Shewgaon	434 30 0	- - -	434 30 0	99 639	- - -	99 639	24 747 $\frac{1}{2}$	- - -	24 747 $\frac{1}{2}$
Sinnur	1 6 0	- - -	1 6 0	0 106	- - -	0 106	0 53	- - -	0 53
Wunn-Dindooree	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TOTAL	4,016 32 0	- - -	4,016 32 0	798 28 $\frac{1}{2}$	- - -	798 28 $\frac{1}{2}$	200 367 $\frac{1}{2}$	- - -	200 367 $\frac{1}{2}$
Average for Five Years:									
Ahmednuggur	a. g. a. p. 41 23 1 6	- - -	a. g. a. p. 41 23 1 6	2 531 $\frac{1}{2}$	- - -	2 531 $\frac{1}{2}$	0 645	- - -	0 645
Ankolla	12 30 4 -	- - -	12 30 4 -	2 487	- - -	2 487	0 513 $\frac{1}{2}$	- - -	0 513 $\frac{1}{2}$
Jamkhair	1,167 29 - -	- - -	1,167 29 - -	291 730	- - -	291 730	72 771	- - -	72 771
Kurda	34 31 - -	- - -	34 31 - -	2 115	- - -	2 115	0 505	- - -	0 505
Koartee	1,368 17 - -	- - -	1,368 17 - -	166 263	- - -	166 263	41 457	- - -	41 457
Neywassa	521 21 6 -	- - -	521 21 6 -	75 664	- - -	75 664	18 596	- - -	18 596
Patoda	57 39 - -	- - -	57 39 - -	3 716	- - -	3 716	1 13	- - -	1 13
Sungumnair	15 30 - -	- - -	15 30 - -	2 711	- - -	2 711	1 67	- - -	1 67
Rahoory	68 12 - -	- - -	68 12 - -	3 490	- - -	3 490	0 710 $\frac{1}{2}$	- - -	0 710 $\frac{1}{2}$
Shewgaon	386 3 - -	- - -	386 3 - -	78 426	- - -	78 426	19 493 $\frac{1}{2}$	- - -	19 493 $\frac{1}{2}$
Sinnur	3 25 - -	- - -	3 25 - -	0 324	- - -	0 324	0 162	- - -	0 162
Wun-Dindooree	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TOTAL	3,678 20 11 6	- - -	3,678 20 11 6	630 753 $\frac{1}{2}$	- - -	630 753 $\frac{1}{2}$	158 234 $\frac{1}{2}$	- - -	158 234 $\frac{1}{2}$

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1479

Exotic Cotton, with other Particulars, for the District of Ahmednuggur—continued.

Local Consumption	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.	REMARKS.
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.		per Candy of 784 lbs.			
C. lbs.	C. lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	A. g. a.	
0 630 ½	- - -	- 10 -	7 12 -	15 - - -	98 - - -	7 - - -	12,225 0 0	There was no cultivation for the past one year in this talooka; the average of four years is therefore given.
0 494 ½	- - -	1 - - -	3 - - -	12 8 - -	78 6 4	15 - - -	200 0 0	There was no cultivation for the past four years in this talooka; the average of one year is therefore given.
62 8 ½	- - -	- 10 -	5 - - -	10 - - -	100 - - -	30 - - -	17,000 0 0	
0 505	- - -	{ From 3 - - to - 12 - - }	5 - - -	8 - - -	80 - - -	10 - - -	8,000 0 0	
31 44	- - -	- 4 6	4 - - -	10 - - -	60 - - -	10 - - -	10,000 0 0	
18 754	- - -	- 12 -	5 - - -	6 - - -	58 - - -	5 - - -	30,000 0 0	
1 175	- - -	- 11 1	6 3 2	4 2 - -	71 13 10	15 - - -	2,888 0 0	
1 78	- - -	- 12 -	5 - - -	14 - - -	39 4 - -	6 - - -	5,000 0 0	
0 647 ½	- - -	- 14 -	3 11 6	19 - - -	80 - - -	20 - - -	2,000 0 0	
19 576 ½	- - -	{ From 8 - - to 1 - - - }	15 - - -	5 - - -	65 - - -	15 - - -	7,498 0 0	
0 211	- - -	{ From 11 - - to 3 5 - - }	4 1 - -	12 8 - -	135 - - -	15 - - -	22 20 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	400 0 0	There was no cultivation for the past five years.
137 199 ½	- - -	- - -	- - -	- - -	- - -	- - -	95,233 20 0	
0 305	- - -	- 10 -	7 12 -	15 - - -	125 - - -	7 - - -	12,225 0 0	
0 182 ½	- - -	1 - - -	3 - - -	12 8 - -	78 6 4	15 - - -	200 0 0	
96 483	- - -	- 10 -	5 - - -	10 - - -	100 - - -	30 - - -	17,000 0 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	8,000 - - -	
62 622	- - -	- 4 6	4 - - -	10 - - -	60 - - -	10 - - -	10,000 - - -	
8 298	5 0	- 12 -	5 - - -	6 - - -	58 - - -	5 - - -	30,000 0 0	
0 469 ½	- - -	- 13 11	6 3 2	4 2 - -	65 5 4	15 - - -	2,745 0 0	
0 588	- - -	- 14 -	5 - - -	12 4 - -	78 6 5	6 - - -	5,000 0 0	
0 539	- - -	- 12 -	3 11 6	18 - - -	80 - - -	25 - - -	2,000 0 0	
24 747 ½	- - -	{ From 8 - - to 1 - - - }	15 - - -	5 - - -	65 - - -	15 - - -	8,921 3 0	
0 53	- - -	{ From 8 - - to 1 3 5 }	1 - - -	12 8 - -	135 - - -	15 - - -	22 20 0	
- - -	- - -	- - -	- - -	- - -	- - -	- - -	400 0 0	
195 367 ½	- - -	- - -	- - -	- - -	- - -	- - -	96,513 23 0	
0 645	- - -	- 10 -	7 12 -	15 - - -	125 - - -	7 - - -	12,225 0 0	
0 513 ½	- - -	1 - - -	3 - - -	12 8 - -	78 6 4	15 - - -	200 0 0	There was no cultivation for the past three years in this talooka; the average of two years is therefore given.
72 771	- - -	- 10 -	5 - - -	10 - - -	100 - - -	30 - - -	17,000 0 0	
0 505	- - -	{ From 3 - - to - 12 - - }	5 - - -	8 - - -	80 - - -	10 - - -	8,000 0 0	
41 457	- - -	- 12 -	4 - - -	10 - - -	60 - - -	10 - - -	10,000 0 0	
17 283	1 313	- 12 -	5 - - -	6 - - -	58 - - -	5 - - -	30,000 0 0	
1 13	- - -	- 13 11	6 3 2	4 2 - -	65 14 -	15 - - -	2,745 0 0	
1 67	- - -	- 14 -	5 - - -	14 4 - -	81 13 8	6 - - -	5,000 0 0	
0 710 ½	- - -	- 13 -	3 12 -	19 - - -	80 - - -	20 - - -	2,000 0 0	There was no cultivation for the past year in this talooka; the average of four years is therefore given.
19 498 ½	- - -	{ From 8 - - to 1 - - - }	15 - - -	5 - - -	65 - - -	15 - - -	8,921 3 -	
0 162	- - -	{ From 11 - - to 3 5 - - }	1 10 -	12 8 - -	135 - - -	- - -	22 20 0	- - - ditto.
- - -	- - -	- - -	- - -	- - -	- - -	- - -	400 0 0	There was no cultivation during the past five years.
156 705 ½	1 313	- - -	- - -	- - -	- - -	- - -	96,513 23 0	

SHOLAPOOR.

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

T A L O O K A.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1853-54 :									
	A. g.	A. g.	A. g.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.	Cds. lbs.
Sholapoor - - -	6,616 26	- -	6,616 26	756 0	- -	756 0	189 0	- -	189 0
Indee - - -	13,884 27	7 30	13,892 17	425 92	0 186	425 218	106 204	0 62	106 266
Hyperga - - -	26,678 3	- -	26,678 3	1,131 342	- -	1,131 342	282 673½	- -	282 673½
Moodebehall - - -	27,727 1	- -	27,727 1	848 116	- -	848 116	212 29	- -	212 29
Mungolee - - -	19,961 35	- -	19,961 35	3,055 305	- -	3,055 305	763 664½	- -	763 664½
Mohole - - -	5,098 29	1 25	5,100 14	178 98	- -	178 98	44 416½	- -	44 416½
Marah - - -	13,260 21	- -	13,260 21	2,029 0	- -	2,029 0	507 196	- -	507 196
Barsee - - -	3,254 3	- -	3,254 3	162 554	- -	162 554	40 530½	- -	40 530½
Kurmulla - - -	7,185 3	0 20	7,185 23	824 641	0 45	824 641	206 160½	0 15	206 175½
TOTAL - - -	1,23,666 28	9 35	1,23,676 23	9,410 520	0 231	9,410 751	2,352 522	0 77	2,352 599
SEASON 1854-55 :									
Sholapoor - - -	9,894 10	- -	9,894 10	1,236 519½	- -	1,236 519½	309 129½	- -	309 129½
Indee - - -	8,264 2	- -	8,264 2	318 28	- -	318 28	79 399	- -	79 399
Hyperga - - -	14,008 37	- -	14,008 37	984 295½	- -	984 295½	246 73½	- -	246 73½
Moodebehall - - -	17,640 6	- -	17,640 6	700 486	- -	700 486	175 121½	- -	175 121½
Mungolee - - -	12,823 16	- -	12,823 16	1,570 166½	- -	1,570 166½	392 433½	- -	392 433½
Mohole - - -	6,702 5	- -	6,702 5	74 661½	- -	74 661½	18 557½	- -	18 557½
Marah - - -	12,797 39	- -	12,797 39	704 700½	- -	704 700½	176 175½	- -	176 175½
Barsee - - -	3,453 2	- -	3,453 2	172 514½	- -	172 514½	43 128½	- -	43 128½
Kurmulla - - -	6,743 15	- -	6,743 15	126 489½	- -	126 489½	31 514½	- -	31 514½
TOTAL - - -	92,327 12	- -	92,327 12	5,888 725½	- -	5,888 725½	1,472 181½	- -	1,472 181½
Estimated Average of the last Five Years, viz. 1848-49 to 1852-53 :									
Sholapoor - - -	9,963 16	28 8	9,991 24	502 513½	2 442	505 171½	125 520½	0 670	126 406½
Indee - - -	20,057 13	35 23	20,092 36	619 628	1 70	614 699	153 353	0 284½	153 637½
Hyperga - - -	29,987 1	230 29	30,217 30	2,327 560	4 712	2,332 488	581 723	1 498½	583 442½
Moodebehall - - -	28,560 9	161 28	28,721 37	1,969 650½	2 507½	1,972 374½	492 358½	0 691½	493 266½
Mungolee - - -	19,535 19	149 11	19,686 30	2,990 337	0 493½	2,990 770½	747 476½	0 144½	747 620½
Mohole - - -	4,403 12	3 19	4,406 31	149 268	0 93	149 361	37 263	0 31	37 294
Marah - - -	8,976 36	- -	8,976 36	2,362 246	- -	2,362 246	1,590 453½	- -	590 453½
Barsee - - -	2,813 2	- -	2,813 2	140 513½	- -	140 513½	35 128½	- -	35 128½
Kurmulla - - -	5,874 12	11 9	5,885 21	660 673	1 206	662 95	165 168½	0 330	165 498½
TOTAL - - -	1,30,173 0	620 7	1,30,793 7	11,717 469½	13 112½	11,730 582	2,929 313½	4 298½	2,933 612½
SEASON 1855-56 :									
Sholapoor - - -	1,045 38	- -	1,045 38	13 698	- -	13 698	3 370½	- -	3 370½
Indee - - -	2,771 28	- -	2,771 28	- -	- -	- -	- -	- -	- -
Hyperga - - -	9,794 32	- -	9,794 32	259 380	- -	259 380	64 683	- -	64 683
Moodebehall - - -	15,619 1	- -	15,619 1	194 280½	- -	194 280½	48 464½	- -	48 464½
Mungolee - - -	6,068 2	- -	6,068 2	371 402½	- -	371 402½	92 688½	- -	92 688½
Mohole - - -	189 4	- -	189 4	4 649	- -	4 659	1 162½	- -	1 162½
Marah - - -	703 14	- -	703 14	- -	- -	- -	- -	- -	- -
Barsee - - -	1,482 24	- -	1,482 24	74 102	- -	74 102	18 417½	- -	18 417½
Kurmulla - - -	1,601 2	- -	1,601 2	15 327	- -	15 327	3 669½	- -	3 669½
TOTAL - - -	39,275 25	- -	39,275 25	933 495½	- -	933 495½	233 319½	- -	233 319½
Estimated Average of the last Five Years, from 1849-50 to 1853-54 :									
Sholapoor - - -	9,300 22	28 8	9,328 30	498 190	2 442	500 632	124 439½	0 670	125 325½
Indee - - -	18,069 7	37 5	18,069 12	569 321½	1 107½	570 428½	142 276½	0 297	142 573½
Hyperga - - -	29,859 17	230 29	30,090 6	2,088 359½	4 712	2,093 287½	522 89½	1 498½	523 588½
Moodebehall - - -	28,393 23	129 15	28,522 38	1,745 387	2 92½	1,747 479½	436 293	0 553½	437 62½
Mungolee - - -	18,612 10	149 11	18,761 21	2,469 33	0 434	2,469 467	617 204½	0 144½	617 349
Mohole - - -	4,793 5	3 32	4,796 37	155 64½	- -	155 74½	38 604	0 3½	38 607½
Marah - - -	10,937 29	- -	10,937 29	2,581 708	- -	2,581 708	645 373	- -	645 373
Barsee - - -	2,937 5	- -	2,937 5	146 671	- -	146 671	36 559½	- -	36 559½
Kurmulla - - -	6,684 4	11 13	6,695 17	753 645½	1 215½	755 76½	188 357½	0 333½	188 690½
TOTAL - - -	1,29,587 2	589 33	1,30,176 35	11,008 243½	12 445	11,020 688½	2,752 61	4 148½	2,756 209½

* The native mode of cleaning is—A roller of iron is made to revolve by the foot upon a

SHOLAPOOR.

EXOTIC COTTON, with other Particulars, for the District of *Sholapoor*.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton, in Acres.
Candies of 784 lbs.	Candies of 784 lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	A. g. a.
189 0	- - -	- - -	- - -	- - -	71 7 4	9 - -	10,000 0 0
26 470	79 580	- - -	- - -	- - -	65 5 4	15 - -	81,000 0 0
164 343	118 330½	- - -	- - -	- - -	65 5 4	16 - -	86,471 30 0
212 29	- - -	- - -	- - -	- - -	57 2 8	17 - -	53,379 27 0
381 724½	381 724	From 6 annas to 1 rupee and 4 annas -	About 2½ rupees	- - -	65 5 4	16 8 -	58,734 38 0
44 416½	- - -	- - -	- - -	- - -	69 6 8	8 2 -	17,816 1 0
507 196	- - -	- - -	- - -	- - -	65 5 4	7 8 -	44,324 9 0
40 530½	- - -	- - -	- - -	- - -	67 6 -	8 2 -	50,000 0 0
181 175½	25 0	- - -	- - -	- - -	81 10 8	8 4 -	70,000 0 0
1,747 532½	605 66½	- - -	- - -	- - -	608 6 5	105 8 -	4,73,723 25 0
309 129½	- - -	- - -	- - -	- - -	81 10 8	9 - -	10,000 0 0
19 725	59 458	- - -	- - -	- - -	73 8 -	15 - -	81,000 0 0
221 436½	24 421	- - -	- - -	- - -	60 - -	16 - -	86,471 30 0
175 121½	- - -	- - -	- - -	- - -	73 8 -	17 - -	55,379 27 0
196 216½	196 216½	From 6 annas to 1 rupee and 4 annas -	About 2½ rupees	- - -	65 5 4	16 8 -	58,734 38 0
18 557½	- - -	- - -	- - -	- - -	80 - -	8 2 -	17,816 1 0
176 175½	- - -	- - -	- - -	- - -	80 - -	7 8 -	44,324 9 0
43 128½	- - -	- - -	- - -	- - -	75 - -	8 2 -	50,000 0 0
31 514½	- - -	- - -	- - -	- - -	82 8 -	8 4 -	70,000 0 0
1,191 653½	280 311½	- - -	- - -	- - -	671 8 -	105 8 -	4,73,726 25 0
126 406½	- - -	- - -	- - -	- - -	68 13 7	9 - -	10,000 0 0
38 409	115 228½	- - -	- - -	- - -	58 12 10	15 - -	81,000 0 0
251 264½	392 178	- - -	- - -	- - -	79 3 5	16 - -	86,471 30 0
493 266½	- - -	- - -	- - -	- - -	60 7 -	17 - -	55,379 27 0
373 684½	373 720½	From 6 annas to 1 rupee and 4 annas -	About 2½ rupees	- - -	68 9 7	16 8 -	58,734 38 0
37 294	- - -	- - -	- - -	- - -	79 11 7	8 2 -	17,816 1 0
590 453½	- - -	- - -	- - -	- - -	70 3 9	7 8 -	44,324 9 0
35 128½	- - -	- - -	- - -	- - -	73 14 6	8 2 -	50,000 0 0
145 498½	20 0	- - -	- - -	- - -	93 1 7	8 4 -	70,000 0 0
2,002 268½	841 343½	- - -	- - -	- - -	652 13 10	105 8 -	4,73,726 25 0
3 370½	- - -	1 4 -	3 - -	- - -	81 10 8	9 - -	10,000 0 0
- - -	- - -	- 7 -	1 - -	- - -	98 - -	15 - -	81,000 0 0
43 386	21 297	- 9 5	1 - -	- - -	75 - -	16 - -	86,471 30 0
48 464½	- - -	- 10 9	1 - -	- - -	81 10 8	17 - -	55,379 27 0
92 688½	- - -	- 9 -	- 5 -	- - -	78 6 4	16 8 -	58,734 38 0
1 162½	- - -	- 6 -	1 6 -	- - -	98 - -	8 - -	17,816 1 0
- - -	- - -	- 5 5	6 - -	- - -	86 15 -	7 8 -	44,324 9 0
18 417½	- - -	- 8 4	3 10 -	- - -	66 10 -	8 2 -	50,000 0 0
3 669½	- - -	- 10 -	2 - -	- - -	82 8 -	8 4 -	70,000 0 0
212 22½	21 297	- - -	- - -	- - -	748 12 8	105 8 -	4,73,726 25 0
125 325½	- - -	1 4 -	3 - -	- - -	68 13 7	9 - -	10,000 0 0
35 516½	107 56½	- 7 4	1 - -	- - -	62 1 1	15 - -	81,000 0 0
234 223	289 365½	- 9 5	- 12 -	- - -	76 6 9	16 - -	86,471 30 0
437 62½	- - -	- 9 8	1 - -	- - -	73 8 -	17 - -	55,379 27 0
308 548½	308 584½	- 9 8	- 5 -	- - -	78 6 4	16 8 -	58,734 38 0
38 607½	- - -	- 6 4	1 6 -	- - -	98 - -	8 2 -	17,816 1 0
645 373	- - -	- 6 6	6 - -	- - -	70 3 9	7 8 -	44,324 9 0
36 559½	- - -	- 8 8	3 10 -	- - -	66 10 -	8 2 -	50,000 0 0
167 690½	21 0	- 10 -	2 - -	- - -	73 1 7	8 4 -	70,000 0 0
2,029 771	726 222½	- - -	- - -	- - -	687 3 1	105 13 14	4,73,726 25 0

flat semi-circular stone (the cotton between the two); the cost is 2 rupees a candy.

STATEMENT, showing the Cultivation and Production of Indigenous

T A L O O K A.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.											
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.									
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.									
SEASON 1856-57:																		
Sholapoor - - -	5,160	12	-	5,160	12	256	547	64	136½	64	136½							
Indee - - -	9,871	17	-	9,871	17	313	89	78	218½	78	218½							
Hyperga - - -	23,404	8	-	23,404	8	1,378	651	344	554½	344	554½							
Moodebehall - - -	24,901	32	-	24,901	32	311	196	77	637	77	637							
Mungolee - - -	15,183	4	-	15,183	4	1,394	287	348	463½	348	463½							
Mohole - - -	1,950	36	-	1,950	36	51	726	12	769½	12	769½							
Marah - - -	6,920	37	-	6,920	37	735	616½	183	742½	183	742½							
Barsee - - -	2,279	12	-	2,279	12	113	756	28	385	28	385							
Kurnulla - - -	5,065	31	-	5,065	31	106	81	26	412½	26	412½							
TOTAL - - -	94,737	29	-	94,737	29	4,662	29½	1,165	399½	1,165	399½							
Estimated Average of the last Five Years, from 1850-51 to 1854-55:																		
Sholapoor - - -	9,081	29	28	8	9,109	37	451	602	1	315	453	133	112	738½	0	366½	113	320½
Indee - - -	16,860	24	37	5	16,897	29	528	699½	1	107½	530	22½	132	175	0	297	132	472
Hyperga - - -	26,748	20	230	29	26,979	9	1,867	508½	4	713	1,872	431½	466	713½	1	498½	468	428½
Moodebehall - - -	26,202	23	97	1	26,306	24	1,491	510½	1	461½	1,493	188½	372	715½	0	415½	373	347
Mungolee - - -	17,898	5	149	11	18,047	16	2,281	176½	0	434	2,281	610½	570	240	0	144½	570	384½
Mohole - - -	5,334	11	3	32	5,338	3	140	155	0	9½	140	164½	35	38½	0	3½	35	42
Marah - - -	11,266	39	-	-	11,266	39	2,185	213	-	-	2,185	213	546	249½	-	-	546	249½
Barsee - - -	2,948	23	-	-	2,948	23	147	335	-	-	147	335	36	671½	-	-	36	671½
Kurnulla - - -	6,918	4	11	13	6,929	17	600	434½	0	556½	601	206½	150	108½	0	185½	150	293½
TOTAL - - -	1,23,266	18	557	19	1,23,823	37	9,694	493½	10	243½	9,704	737	2,423	515½	3	342½	2,427	74½

* The native mode of cleaning is, a roller of iron is made to revolve by the foot upon a

B E L G A U M.

STATEMENT, showing the Cultivation and Production of INDIGENOUS

D I S T R I C T.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF										
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.										
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.										
SEASON 1852-53:																	
Padshapoor - - -	2,484	35	2	2,484	35	2	1,011	493½	252	711½							
Sumpgaum - - -	12,438	24	10½	12,478	24	10½	2,665	327½	666	277½							
Beedee - - -	89	21	0	89	21	0	24	100	6	25							
Chickoree - - -	9,729	33	12½	9,734	39	7	1,936	627½	1,937	636½							
Pursghur - - -	31,213	2	0	31,275	31	0	8,918	0	22	308							
Bagulkote - - -	22,458	6	0	22,836	29	0	2,807	392	23	588							
Badamee - - -	27,600	1	0	28,260	5	0	7,747	392	92	399							
Hoongoond - - -	29,661	0	0	30,487	0	0	3,380	0	93	0							
Gokak - - -	12,819	7	0	12,819	7	0	907	47	907	47							
Uthnee - - -	15,043	33	2	15,043	33	2	2,878	221	2,878	221							
Tosgaum - - -	4,889	8	12	4,906	13	12	488	591½	1	396½							
TOTAL - - -	1,63,427	12	7	1,949	26	10½	1,70,376	39	1½	32,765	55½	234	125	32,999	188½	8,191	209½
SEASON 1853-54:																	
Padshapoor - - -	2,622	28	11	2,622	28	11	1,070	389½	267	489½							
Sumpgaum - - -	12,042	33	0	12,042	23	0	3,993	622½	998	351½							
Beedee - - -	99	14	8	99	14	8	18	268	4	459							
Chickoree - - -	8,858	2	14½	8,858	2	14½	1,762	447½	1,762	447½							
Pursghur - - -	36,432	12	0	36,445	12	0	10,409	178	4	504							
Bagulkote - - -	29,786	19	0	29,793	14	0	3,647	253½	0	660							
Badamee - - -	32,878	28	4	33,840	18	4	9,058	176	134	769½							
Hoongoond - - -	32,776	32	0	33,180	31	0	6,019	704	24	528							
Gokak - - -	16,632	22	0	16,632	22	0	3,303	708	3,308	708							
Uthnee - - -	15,954	35	8	15,954	35	8	2,549	648	2,543	648							
Tosgaum - - -	4,199	8	0	4,199	8	0	419	591½	419	591½							
TOTAL - - -	1,92,283	35	13½	1,985	24	0	1,93,609	19	13½	42,252	282½	165	109½	42,417	39		
Estimated Average of the last Five Years:																	
	1,29,587	7	7	2,747	2	2½	1,49,389	9	10½	30,483	522½	646	718½	31,130	4		

* The native cotton is cleaned by women, by means of a foot-roller, at an average c.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1483

and Exotic Cotton, with other Particulars, for the District of *Sholapoor*—continued.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of Producing Cotton in Acres.
Candies of 784 lbs.	Candies of 784 lbs.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	A. g. a.
<i>Cds. lbs.</i> 64 136½	- - - -	1 4 -	8 - -	- - -	96 - -	9 - -	10,000 0 0
22 21½	56 197	- 7 -	1 - -	- - -	81 11 -	15 - -	81,000 0 0
161 709	162 629½	- 9 5	1 - -	- - -	100 - -	16 - -	86,471 30 0
77 637	- - - -	- 10 9	1 - -	- - -	65 5 4	17 - -	55,379 27 0
174 231½	174 232	- 9 -	- 5 -	- - -	65 5 4	18 8 -	58,734 38 0
12 769½	- - - -	- 6 -	1 6 -	- - -	80 - -	8 2 -	17,816 1 0
183 742½	- - - -	- 5 5	6 - -	- - -	65 5 4	7 8 -	44,324 9 0
28 385	- - - -	- 8 4	3 10 -	- - -	87 12 -	8 2 -	50,000 0 0
26 412½	- - - -	- 10 -	2 - -	- - -	92 3 6	8 4 -	70,000 0 0
772 124½	393 274½	- - -	- - -	- - -	- - -	- - -	4,73,726 25 0
113 320½	- - - -	1 4 -	8 - -	- - -	96 - -	9 - -	10,000 0 0
33 118	99 354	- 7 -	1 - -	- - -	66 15 5	15 - -	81,000 0 0
231 579½	236 633	- 9 5	1 - -	- - -	73 2 3	16 - -	86,471 30 0
373 347	- - - -	- 10 9	1 - -	- - -	73 8 -	17 - -	55,379 27 0
285 192½	285 192½	- 9 -	- 5 -	- - -	78 6 4	16 8 -	58,734 38 0
35 42	- - - -	- 6 -	1 6 -	- - -	80 - -	8 2 -	17,816 1 0
546 249½	- - - -	- 5 5	6 - -	- - -	72 5 7	7 8 -	44,324 9 0
36 671½	- - - -	- 8 4	3 10 -	- - -	87 12 -	8 2 -	50,000 0 0
133 293½	17 0	- 10 -	2 - -	- - -	82 8 -	8 4 -	70,000 0 0
1,788 462½	638 395½	- - -	- - -	- - -	- - -	- - -	4,73,726 25 0

flat semi-circular stone (the cotton between the two); the cost is two rupees a candy.

BELGAUM.

and Exotic Cotton, with other Particulars, for the District of *Belgaum*.

CLEANED COTTON.		Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of Producing Cotton, in Acres.
Exotic.	TOTAL.	Candies of 784 lbs.	Candies of 784 lbs.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	
9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	
- - -	252 711½	252 711½	- - -	- - -	- - -	- - -	- - -	- - -	10,500
- - -	666 277½	516 277½	150 0	- - -	- - -	- - -	- - -	- - -	47,652
- - -	6 25	6 25	- - -	- - -	- - -	- - -	- - -	- - -	75
0 264½	484 421	259 421	225 0	- - -	- - -	- - -	- - -	- - -	50,300
7 364	2,236 756	743 130½	1,493 625½	{ average	{ average	- - -	- - -	- - -	88,000
7 718½	709 620½	526 282	183 338½	{ 1 2 7	{ 2 - -	- - -	64 7 6	13 14 8	35,000
30 653½	1,967 555½	490 0	1,477 555½	- - -	- - -	- - -	- - -	- - -	40,000
31 0	876 0	275 0	601 0	- - -	- - -	- - -	- - -	- - -	40,000
- - -	226 599½	68 588	158 11½	- - -	- - -	- - -	- - -	- - -	30,000
- - -	719 447½	69 741½	629 489½	- - -	- - -	- - -	- - -	- - -	169,125
0 393½	122 541½	103 672	18 653½	- - -	- - -	- - -	- - -	- - -	68,294
78 41½	8,269 251½	3,331 713½	4,937 322	1 2 7	2 - -	- - -	64 7 6	13 14 8	5,78,946
- - -	267 489½	267 489½	- - -	- - -	- - -	- - -	- - -	- - -	10,500
- - -	998 351½	499 175½	499 175½	- - -	- - -	- - -	- - -	- - -	47,652
- - -	4 459	4 459	- - -	- - -	- - -	- - -	- - -	- - -	75
- - -	440 503½	220 251½	220 252	- - -	- - -	- - -	- - -	- - -	50,300
1 429	2,603 660	650 755½	1,953 698½	{ average	{ average	- - -	64 7 6	13 14 8	88,000
0 220	912 87½	684 65½	228 22	{ 1 2 7	{ 2 - -	- - -	- - -	- - -	35,000
44 779	2,300 431	585 431	1,724 0	- - -	- - -	- - -	- - -	- - -	40,000
8 176	1,513 156	378 235	1,134 705	- - -	- - -	- - -	- - -	- - -	40,000
- - -	829 177	250 0	577 177	- - -	- - -	- - -	- - -	- - -	30,000
- - -	635 750	317 767	317 767	- - -	- - -	- - -	- - -	- - -	169,125
- - -	104 735½	54 735½	50 0	- - -	- - -	- - -	- - -	- - -	68,294
55 36	10,618 106½	3,913 445½	6,704 445	1 2 7	2 - -	- - -	64 7 6	13 14 8	5,78,946
215 471½	7,834 406	2,771 416	5,062 774	1 2 7	2 - -	- - -	64 7 6	13 14 8	5,78,946

Rs. 3. 6 2. per candy. The exotic cotton is cleaned by means of the cotton-cleaning machine.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF	
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	
1.	2.	3.	4.	5.	6.	7.	8.	
SEASON 1854-55 :								
Padshapoor	2,270 35 7½	- - -	2,270 35 7½	926 599½	- - -	926 599½	231	541½
Sumpgaum	10,106 18 0	- - -	10,106 18 0	3,350 127½	- - -	3,350 127½	837	423½
Beedee	45 13 0	- - -	45 13 0	11 196	- - -	11 196	2	649
Chickoree	11,838 38 0	- - -	11,838 38 0	2,265 82½	- - -	2,265 82½	566	216½
Pursghur	31,146 0 0	- - -	31,146 0 0	8,898 672	- - -	8,898 672	2,224	560
Bagalkote	22,208 38 0	- - -	22,208 38 0	2,719 363	- - -	2,719 363	679	678½
Badamee	32,887 38 0	1,911 10 0	34,798 8 0	9,058 207½	268 769½	9,327 192½	2,264	445
Hoongoond	23,834 21 15	- - -	23,834 21 15	4,377 528	- - -	4,377 528	1,094	328
Gokak	15,057 38 0	- - -	15,057 38 0	3,000 773	- - -	3,000 773	750	193½
Uthnee	13,431 27 8	- - -	13,431 27 8	2,141 416½	- - -	2,141 416½	535	300
Tasgaum	4,488 18 -	- - -	4,488 18 0	448 589	- - -	448 589	112	4
TOTAL	1,67,317 5 14½	1,911 10 0	1,69,228 15 14½	37,198 634½	268 769½	37,467 620	9,299	420
SEASON 1855-56 : †								
Padshapoor	2,351 22 4	- - -	2,351 22 4	937 313½	- - -	937 313½	234	274½
Sumpgaum	9,600 34 0	- - -	9,600 34 0	3,183 749	- - -	3,183 749	795	775½
Beedee	30 0 0	- - -	30 0 0	3 392	- - -	3 392	0	686
Chickoree	7,794 25 0	- - -	7,794 25 0	1,550 761½	- - -	1,550 761½	387	582½
Pursghur	24,310 8 0	- - -	24,310 8 0	6,945 604	- - -	6,945 604	1,736	347
Bagalkote	14,252 7 0	- - -	14,252 7 0	1,745 128½	- - -	1,745 128½	436	228
Badamee	23,040 20 5	1,728 16 0	24,768 36 5	6,345 588	476 555	6,822 359	1,586	343
Hoongoond	20,760 3 0	- - -	20,760 3 0	3,813 58½	- - -	3,813 58½	953	210½
Gokak	13,801 30 0	- - -	13,801 30 0	1,373 104½	- - -	1,373 104½	343	222
Uthnee	4,737 26 0	- - -	4,737 26 0	755 283	- - -	755 283	188	658½
Tasgaum	4,208 26 0	- - -	4,208 26 0	85 604	- - -	85 604	21	347
TOTAL	1,24,888 1 9	1,728 16 0	1,26,616 17 9	26,739 667½	476 555	27,216 438½	6,634	754½
SEASON 1856-57 : †								
Padshapoor	2,116 21 3	- - -	2,116 21 3	460 486	- - -	460 486	115	121½
Sumpgaum	10,038 23 0	- - -	10,038 23 0	3,329 93½	- - -	3,329 93½	832	219½
Beedee	54 10 0	- - -	54 10 0	7 0	- - -	7 0	1	588
Chickoree	12,213 13 8	- - -	12,213 13 8	1,620 107	- - -	1,620 107	405	26½
Pursghur	31,888 0 0	- - -	31,888 0 0	9,110 594	- - -	9,110 594	2,277	540½
Bagalkote	22,328 7 10	- - -	22,328 7 10	1,397 505	- - -	1,397 505	349	322
Badamee	29,661 14 6	4,461 6 14	34,122 21 4	8,307 167	1,230 411½	9,537 578½	2,076	629½
Hoongoond	31,908 19 0	- - -	31,908 19 0	5,860 584	- - -	5,860 584	1,465	146
Gokak	18,749 5 4	- - -	18,749 5 4	2,487 101	- - -	2,487 101	621	613
Uthnee	17,704 3 0	- - -	17,704 3 0	3,793 572	- - -	3,793 572	948	339
Tasgaum	5,929 19 0	- - -	5,929 19 0	754 308	- - -	754 308	188	469
TOTAL	1,83,091 15 15	4,461 6 14	1,87,552 22 13	37,123 381½	1,230 411½	38,359 9	9,282	94½

* The native cotton is cleaned by women, by means of a foot-roller, at an average
† With the exception of the data in columns 2, 3, 4, 13 and 18, which have been procured from the Government books,

D H A R W A R .

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF	
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	
SEASON 1854-55 :								
Dharwar	11,454 20	22 27	11,477 7	3,506 376	5 161½	3,511 537½	876	486
Nowkoonnd	78,174 0	4,088 8	82,262 8	23,930 640	938 484	24,869 340	5,982	552
Dumbul	67,257 15	8,948 33	76,206 8	20,588 778	2,054 452½	22,643 446½	5,147	194½
Bunkapoor	9,721 34	29,557 24	39,279 18	2,976 60	6,786 144	9,762 204	744	15
Hangul	4,857 19	5,651 22	10,509 1	1,486 770	1,297 431	2,784 417	371	584½
Hoollee	14,969 7	4,492 22	19,461 29	4,582 314	1,031 355	5,613 669	1,145	470½
Ranebednoor	16,817 27	9,328 2	26,145 29	5,148 210	2,141 505	7,289 715	1,287	52½
Kode	7,008 19	1,209 3	8,217 22	2,145 354	277 465½	2,423 35½	536	284½
TOTAL	2,10,260 21	63,298 21	2,73,559 2	64,365 366	14,532 646½	78,898 228½	16,091	27½

* New Orleans cotton is cleaned by the saw-gin, and the cost of working a saw-gin to clean a candy of 784 lbs.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1485

Exotic Cotton, with other Particulars, for the District of Belgaum—continued.

CLEANED COTTON.		Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode, and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of Producing Cotton in Acres.
Exotic.	TOTAL.								
Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.	15.*	per Candy of 784 lbs.	per Candy of 784 lbs.	in Acres.
9.	10.	11.	12.	13.	14.	15.*	16.	17.	18.
C. lbs.	C. lbs.	C. lbs.	C. lbs.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	
- - -	231 541½	231 541½	- - -	1 - -	2 13 -	- - -	79 - -	10 - -	10,610
- - -	837 423½	418 603½	418 604	1 6 9	3 2 6	- - -	60 - -	8 - -	47,652
- - -	2 649	2 649	- - -	- 14 -	- 12 -	- - -	65 - -	- - -	75
- - -	566 216½	283 108½	283 108	1 12 -	- 12 -	- - -	60 - -	18 12 -	75,500
- - -	2,224 560	556 140	1,668 420	1 - -	- 1 13 -	- - -	63 - -	9 3 -	88,000
- - -	679 678½	509 705½	169 757½	1 12 -	2 - -	- - -	65 - -	15 13 9	35,000
89 517½	2,354 178½	595 244½	1,758 718½	- 14 6	1 8 -	- - -	65 - -	15 - -	40,000
- - -	1,094 328	273 474	820 638	- 9 -	1 6 -	- - -	65 - -	13 9 9	40,000
- - -	750 193½	500 0	250 193½	1 13 -	- 8 -	- - -	60 - -	15 - -	58,000
- - -	535 300	133 663	401 421	- 7 3	1 8 -	- - -	65 - -	24 - -	1,69,125
- - -	112 4	92 74	20 0	1 4 -	1 2 -	- - -	120 - -	9 12 10	78,047
89 517½	9,889 153½	3,597 213½	5,791 724	1 2 7	1 9 1	- - -	69 11 7	13 14 8	6,41,979
- - -	294 274½	234 274½	- - -	1 4 -	2 13 -	- - -	67 8 -	10 - -	10,610
- - -	795 775½	397 779½	397 779½	1 7 1	3 2 6	- - -	67 13 6	8 - -	47,652
- - -	0 686	0 686	- - -	1 - -	- 12 -	- - -	60 - -	- - -	75
- - -	387 582½	193 683½	193 683	1 12 -	- 12 -	- - -	60 5 -	18 12 -	75,500
- - -	1,786 347	434 0	1,302 347	1 - -	1 13 -	- - -	70 - -	9 3 -	88,000
- - -	436 228	327 171	109 57	- 12 -	1 - -	- - -	73 8 -	15 13 9	35,000
158 707	1,745 266	745 266	1,000 0	- 10 -	1 8 -	- - -	75 - -	15 - -	40,000
- - -	953 210½	348 52½	605 157½	- 9 7	1 6 -	- - -	65 5 3	13 9 9	75,000
- - -	343 222	228 222	115 0	- 9 5	- 8 -	- - -	60 - -	15 - -	58,000
- - -	188 658½	47 164½	141 494½	- 7 3	1 8 -	- - -	65 5 4	24 - -	171,861
- - -	21 347	21 347	- - -	1 4 4	1 2 -	- - -	65 - -	9 12 10	679,745
158 707	6,843 677½	2,978 500½	3,865 166½	- 15 7	1 8 -	- - -	66 5 6	12 10 6	6,79,745
- - -	115 121½	115 121½	- - -	1 6 -	2 13 -	- - -	64 12 -	10 - -	10,610
- - -	832 119½	416 109½	416 109½	1 6 7	3 2 6	- - -	75 6 2	8 - -	47,652
- - -	1 588	1 588	- - -	1 - -	- 12 -	- - -	70 - -	- - -	75
- - -	405 26½	202 405½	202 405	1 12 -	- 12 -	- - -	82 14 10	18 12 -	75,500
- - -	2,277 540½	569 0	1,708 540½	1 - -	1 13 -	- - -	77 - -	9 3 -	88,000
- - -	349 322	262 46	87 276	- 12 -	1 - -	- - -	73 8 -	15 13 9	35,000
410 137	2,486 766½	1,143 766½	1,343 0	- 10 -	1 8 -	- - -	75 - -	15 - -	40,000
- - -	1,465 146	366 232½	1,038 697½	- 9 10	1 6 -	- - -	85 12 -	13 9 9	75,000
- - -	621 613	410 613	211 0	- 10 -	- 8 -	- - -	60 - -	15 - -	58,000
- - -	948 339	237 84	711 255	- 10 -	1 8 -	- - -	81 10 8	24 - -	171,861
- - -	188 469	188 469	- - -	1 10 6	1 2 -	- - -	68 - -	9 12 10	78,047
410 137	9,092 231½	3,913 300	5,778 715½	1 - 7	1 8 -	- - -	73 15 11	12 10 6	6,79,745

expense of Rs. 3. 6. 2. per candy. The exotic cotton is cleaned by machine. the rest of the information in this return has been derived from inquiries made of cultivators and traders.

D H A R W A R.

Exotic Cotton, with other Particulars, for the District of Dharwar.

CLEANED COTTON.		Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode, and Cost of Cleaning.*	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.
Exotic.	TOTAL.								
Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.		per Candy of 784 lbs.	per Candy of 784 lbs.	in Acres.
1 576½	878 278½	200	678 278½	1 9 9	2 - -	- - -	- - -	- - -	37,679 33
312 684	6,236 452	945	5,350 452	- 14 -	2 - -	- - -	- - -	- - -	1,11,544 19
684 673½	5,832 84	1,500	4,332 84	- 9 6	2 - -	- - -	- - -	- - -	1,04,453 3
2,262 48	3,006 63	655	2,351 63	1 - 3	2 - -	- - -	- - -	- - -	68,899 32
432 405	804 205½	125	679 205½	1 2 -	2 - -	- - -	- - -	- - -	17,461
343 641	1,489 327½	300	1,189 327½	- 15 7	2 - -	- - -	- - -	- - -	35,945
713 691	2,000 743½	214	1,786 743½	- 15 10	2 - -	- - -	- - -	- - -	58,19
92 416½	628 701	180	468 701	- 15 8	2 - -	- - -	- - -	- - -	22 2/4 A.
4,844 215½	20,955 503	4,099	16,836 503	- - -	- - -	- - -	- - -	- - -	12 1
									68 0 0

is Rs. 1. 6. The native cotton is cleaned by means of the foot-roller, and costs Rs. 2. 8. per candy.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.			UNCLEAN COTTON PRODUCED.			YIELD O.
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1855-56:							
Dharwar - - -	8,003 18	17 12	8,020 30	2,450 28	3 762	2,454 6	612 399
Nowgound - - -	64,136 6	2,653 3	66,789 9	19,633 404	609 97½	20,242 501½	4,908 207
Dumbul - - -	61,028 14	9,118 23	70,146 37	18,682 116	2,093 431½	20,775 547½	4,670 421
Bunkapoor - - -	17,277 3	20,146 11	37,423 14	5,288 706	4,625 329½	9,914 251½	1,322 176½
Hangul - - -	5,925 28	4,445 32	10,371 20	1,813 776	1,020 564	2,834 556	453 390
Hooblee - - -	8,922 3	3,981 31	12,903 34	2,731 194	914 143½	3,645 397	682 636½
Ranebednoor - - -	18,749 2	9,618 37	28,367 39	5,739 396	2,208 334½	7,947 730½	1,434 687
Kode - - -	7,154 10	821 7	7,975 17	2,190 60	188 419½	2,378 479½	547 407
TOTAL - - -	1,91,196 4	50,802 36	2,41,999 0	58,529 328	11,663 790	70,193 274	14,632 278
Estimated Average of the last Five Years	2,34,759 11	31,860 27	2,66,619 38	71,864 610	7,314 745½	79,179 571½	17,966 152½

* New Orleans cotton is cleaned by the saw-gin, and the cost of working a saw-gin to clean a candy of 784 lbs.

SATTARAH.

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

TALOOKAS.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.
	B. p. k.	B. p. k.	B. p. k.	C. lbs.	C. lbs.	C. lbs.	C. lbs.
SEASON 1855-56:							
Sattara - - -	-	-	-	-	-	-	-
Jaolee - - -	-	-	-	-	-	-	-
Targaom - - -	-	-	-	-	-	-	-
Kurrad - - -	21 3 0	-	21 3 0	5 668	-	5 668	1 363
Walwa - - -	6,394 0 10	0 10 0	6,394 10 10	2,628 529½	0 160	2,628 689½	667 132½
Khuttao - - -	20 0 0	-	20 0 0	0 260	-	0 260	0 65
Khanapoor - - -	-	-	-	-	-	-	-
Wae - - -	-	-	-	-	-	-	-
Koregaom - - -	-	-	-	-	-	-	-
Punderpoor - - -	50 13 0	-	50 13 0	0 553	-	0 553	0 138½
Beejapoor - - -	A. g. a. 3,625 0 0	-	A. g. a. 3,625 0 0	723 0	-	723 0	180 588
TOTAL - - -	B. p. k. 6,485 18 10 A. g. a. 3,625 0 0	0 10 0	B. p. k. 6,486 6 10 A. g. a. 3,625 0 0	3,358 442½	0 160	3,358 602½	899 502½
SEASON 1856-57:							
Sattara - - -	-	-	-	-	-	-	-
Jaolee - - -	-	-	-	-	-	-	-
Targaom - - -	1 4 0	-	1 4 0	0 586	-	0 586	0 146
Kurrad - - -	33 17 5	-	33 17 5	6 783	-	6 783	1 587
Walwa - - -	6,502 3 4	0 10 0	6,502 13 4	2,682 226½	0 160	2,682 386½	670 448½
Khuttao - - -	324 18 16	-	324 18 16	9 512½	-	9 512½	2 324
Khanapoor - - -	296 14 0	-	296 14 0	10 668	-	10 668	2 559
Wae - - -	-	-	-	-	-	-	-
Koregaom - - -	-	-	-	-	-	-	-
Punderpoor - - -	5,091 9 16	-	5,091 9 16	295 523	-	295 523	73 718½
Beejapoor - - -	A. g. a. 1,673 27 0 5,725 0 0	-	A. g. a. 1,673 27 0 5,725 0 0	1,140 0	-	1,140 0	285 0
TOTAL - - -	B. p. k. 12,250 7 1 A. g. a. 7,393 27 0	0 10 0	B. p. k. 12,250 17 1 A. g. a. 7,393 27 0	4,146 162½	0 160	4,146 322½	1,036 431½
Hc. Rans. Kode } Average for Five Years	B. p. k. 3,567 0 12½ A. g. a. 6,433 0 0	99 12 18½ 49 0 0	B. p. k. 3,666 13 11 A. g. a. 6,482 0 0	1,753 245	19 455½	1,772 700½	498 257

* The cotton produced in this talooka being for local consumption only, is cleaned

Exotic Cotton, with other Particulars, for the District of *Dharwar*—continued.

CLEANED COTTON.		Local Consumption	Exported	Rate of Assessment	Cost of Cultivation	Mode, and Cost of Cleaning.*	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.
Exotic.	TOTAL								
Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre				
1 254	613 653	200 0	413 653	1 10 -	2 - -	- - -	- - -	- - -	37,670 33
203 32½	5,111 329½	945 0	4,166 329½	- 14 3	2 - -	- - -	- - -	- - -	1,11,544 19
697 666½	5,368 303½	1,500 0	3,868 303½	- 9 9	2 - -	- - -	- - -	- - -	1,04,453 3
1,541 632½	2,864 25	655 0	2,209 25	1 - 6	2 - -	- - -	- - -	- - -	68,899 32
340 188	793 578	125 0	668 578	1 2 3	2 - -	- - -	- - -	- - -	17,461 10
304 570½	987 423	300 0	687 423	1 2 6	2 - -	- - -	- - -	- - -	35,945 24
736 111½	2,171 14½	214 0	1,957 14½	- 15 10	2 - -	- - -	- - -	- - -	53,198 13
62 662½	610 285½	160 0	450 285½	1 - -	2 - -	- - -	- - -	- - -	22,053 13
3,887 166	18,520 260	4,099 0	14,421 260	- - -	- - -	- - -	- - -	- - -	4,56,235 27
2,438 248½	20,404 401	3,118 0	17,286 401	2 - -	- - -	- - -	- - -	- - -	4,56,235 27

is Rs. 1 6. The native cotton is cleaned by means of the foot-roller, and costs Rs. 2. 8 per candy.

SATTARAH.

Exotic Cotton, with other Particulars, for the District of *Sattarah*.

CLEANED COTTON		Local Consumption	Exported	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning *	Average Price of Cleaned Cotton per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton
Exotic.	TOTAL								
Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Rs. a p. Per Beega.	Rs. a p. Per Beega				
- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
- - -	1 363	1 363	- - -	3 3 10	2 8 -	- - -	98 - -	19 8 -	129 13 0
0 40	657 172½	629 646½	27 310	Rs. 1 to 9	4 5 -	- - -	78 6 4	30 2 6	16,110 0 0
- - -	0 65	0 65	- - -	- 12 -	1 4 -	- - -	60 10 -	4 - -	1,000 0 0
- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
- - -	0 138½	0 138½	- - -	- 8 5	1 - -	- - -	48 8 6	16 - -	9,719 0 0
- - -	180 588	180 588	- - -	Per Acre 12 to 14	5 - -	- - -	40 - -	20 - -	7,800 0 0
0 40	839 542½	812 232½	27 310	- - -	- - -	- - -	- - -	- - -	B. p. k. 26,958 13 0
- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	A. g. a. 7,800 0 0
- - -	0 146	0 146	- - -	3 4 -	- - -	- - -	60 - -	- - -	4 - -
- - -	1 587	1 587	- - -	2 14 -	2 8 -	Foot roller, cost.—	98 - -	19 8 -	129 13 0
0 40	670 488½	641 180½	29 308	Rs. 1 to 9	4 5 -	Rs. 4 - - per candy	78 6 4	30 2 6	16,110 0 0
- - -	2 324	2 324	- - -	- 7 6	1 4 -	4 14 6 ditto	60 10 -	14 - -	1,000 0 0
- - -	2 559	2 559	- - -	- 12 -	1 - -	24 8 - ditto	90 - -	15 - -	3,227 0 0
- - -	- - -	- - -	- - -	- - -	- - -	18 - - ditto	- - -	- - -	- - -
- - -	73 718½	68 269½	5 449	- 5 -	1 - -	5 - - ditto	- - -	- - -	11,355 0 0
- - -	285 0	285 0	- - -	Per Acre 5 5	1 - -	- - -	80 15 6	16 - -	A. g. a. 10,464 0 0
- - -	- - -	- - -	- - -	a 12 to 14	5 - -	5 - - ditto	60 - -	20 - -	7,600 0 0
0 40	1,036 471½	1,001 498½	34 757	- - -	- - -	- - -	- - -	- - -	B. p. k. 32,325 13 0
- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	A. g. a. 18,064 0 0
4 747½	443 220½	436 694½	5 615½	- - -	- - -	- - -	- - -	- - -	B. p. k. 17,205 12 1
- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	A. g. a. 1,868 0 0

by its consumers by their own hands, and not by means of any machinery.

UPPER SIND.

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICTS.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.						
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.				
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.				
SEASON 1852-53:													
Mehur Deputy Collectorate	522	5	527	62	0½	62½	20	-	20				
Larkana - ditto	7,948	15	7,963	2,326	-	2,326	582	-	582				
Left Bank - ditto	4,896	21	4,857	606	4	610	163	-	163				
Shikarpoor - ditto	6,648	14	6,662	1,650	-	1,650	374	-	374				
TOTAL - - -	19,954	55	20,009	4,644	4½	4,648½	1,139	-	1,139				
SEASON 1853-54:													
Mehur Deputy Collectorate	893	6	899	258 0	-	258 0	62 0	-	62 0				
Larkana - ditto	4,969	15	4,984	1,803 0	-	1,803 0	451 0	-	451 0				
Left Bank - ditto	3,946	10	3,956	531 0	4 0	535 0	189 0	2 0	191 0				
Shikarpoor - ditto	4,721	19	4,740	535 0	1 0	536 0	133 0	-	133 0				
TOTAL - - -	14,529	50	14,579	3,127 0	5 0	3,132 0	835 0	2 0	837 0				
SEASON 1854-55:													
Mehur Deputy Collectorate	1,945	43	1,988	294 77	0 750	295 43	69 603½	0 193½	70 13				
Larkana - ditto	8,361½	65½	8,427½	1,289 0	0 240	1,289 240	317 0	0 63	317 63				
Left Bank - ditto	5,804	75½	5,679½	982 32	2 352	984 384	245 700	0 480	246 396				
Shikarpoor - ditto	4,250	40	4,290	804 367	1 146	805 513	198 375	0 297	198 612				
TOTAL - - -	20,160½	224½	20,385	3,369 476	4 704	3,374 396	831 110½	1 189½	832 300				
SEASON 1855-56:													
Larkana	3,313	80	3,319	3,540	522 442	0 42	522 484	130 353	0 11	130 364			
Mehur	2,581	3,710	9	565	2,590	4,275	348 185	0 130	348 315	77 760	0 30	78 6	
Shikarpoor	4,458	6,780	30	1,425	4,488	3,205	894 443	0 254	894 697	223 466	0 63	223 529	
Rohree	6,380	1,675	27	4,695	6,408	1,530	1,257 204	1 50	1,258 254	316 487	0 211	316 698	
TOTAL - - -	16,733	2,405	74	465	16,807	2,870	3,022 490	1 476	3,024 182	748 498	0 315	749 29	
SEASON 1856-57:													
Larkana	5,062	2,420	-	-	5,062	2,420	769 588	-	-	769 588	192 343	-	192 343
Mehur	1,584	3,315	-	-	1,584	3,315	282 682	-	-	282 682	58 463	-	58 463
Shikarpoor	3,217	1,220	-	-	3,217	1,220	541 486½	-	-	541 486½	129 278	-	129 278
Rohree	4,648	1,430	1	535	4,649	1,965	871 452	-	-	871 452	215 548	-	215 548
TOTAL - - -	14,512	3,545	1	535	14,513	408	2,465 640½	-	-	2,465 640½	596 64	-	596 64

BOORDIKA AND KUSMORE.

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.					
	Sindhee.	Foreign.	TOTAL.	Sindhee.	Foreign.	TOTAL.	Sindhee.	Foreign.	TOTAL.			
				Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.			
SEASON 1852-53:												
Boordika	B	b.	B.	b.	B.	b.	C.	lbs.	C.	lbs.	C.	lbs.
Boordika	1,663	4	1	1	1,663	5	495	502	-	-	495	502
Kusmore	117	0	0	3	117	3	6	277	-	-	6	277
TOTAL - - -	1,780	4	1	4	1,780	8	501	779	-	-	501	779
SEASON 1853-54:												
Boordika	430	17	10	16	441	13	101	296	0	546	102	58
Kusmore	296	18	2	2	299	0	10	466	0	122	10	588
TOTAL - - -	727	15	12	18	740	13	111	762	0	668	112	646

The estimated average for two years only has been taken, the period during

UPPER SIND.

EXOTIC COTTON, with other Particulars, for the District of *Upper Sind*.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Cost and Mode of Cleaning	Average Price of Cleaned Cotton	Expense of Transit to Bombay	Extent of Land capable of producing Cotton
Candies of 784 lbs.	Candies of 784 lbs.	per Acre.	per Acre.	per Candy.	per Candy of 784 lbs.	per Candy of 784 lbs.	in Acres.
		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Acres.</i>
20 336 133 185	- 246 30 189	2 - -	6 4 - on boosee land. 8 12 - on churka or well land	11 - -	90 - -	13 - -	72,304 (Seventy-two thousand three hundred and four)
674	465	-	-	-	-	-	-
<i>C. lbs.</i> 62 0 224 0 89 0 66 0	<i>C. lbs.</i> - 227 0 102 0 67 0	2 - -	4 11 3 boosee land. 7 6 9 cheerka or well land.	10 13 10	96 3 6	11 8 -	63,724 (Sixty-three thousand seven hundred and twenty-four)
441 0	396 0	-	-	-	-	-	-
70 0 268 63 118 506 168 612	- 49 0 127 672 30 0	2 - -	4 11 3 boosee land 7 6 9 cheerka or well land	10 13 10	96 3 6	11 8 -	63,724 (Sixty-three thousand seven hundred and twenty-four)
625 397	206 672	-	-	-	-	-	-
107 364 78 6 163 229 178 694	23 0 - 60 0 138 4	2 3 3	basee land - 3 12 9 charka land 6 3 4	12 6 6	93 3 3	15 10 -	42,204
527 509	221 4	-	-	-	-	-	-
176 343 56 80 129 287 163 258	16 0 2 383 - 52 290	2 3 3 2 8 - 1 15 5 2 4 2	moke land 1 15 - charka - 3 6 4 basee - 2 6 - churka - 4 12 6 basee - 5 4 - charka - 6 12 - basee - 5 2 3 charka - 7 8 10	12 12 - 12 13 9 6 3 4 13 10 -	96 - 6 103 3 3 94 13 4 94 - 4	15 6 -	Acres. yards. 28,599 1,929
525 175	70 673	-	-	-	-	-	-

BOORDIKA AND KUSMORE.

EXOTIC COTTON, with other Particulars, for the Districts of *Boordika* and *Kusmore*.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton	Expense of Transit to Bombay	Extent of Land capable of producing Cotton
Candies of 784 lbs.	Candies of 784 lbs.	per Beegah.	per Beegah.		per Candy of 784 lbs.	per Candy of 784 lbs.	in Beegahs.
<i>C. lbs.</i>	<i>C. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	
111 713 1 456	12 0 -	1 6 2 - 8 -	3 3 4 3 8 -	12 - - 12 - -	98 - - 98 - -	- - - - - -	24,731 ⁷ / ₁₆ 2,286 ¹¹ / ₁₆
113 385	12 0	<i>Rs. 1.6.2. & 8 as.</i>	<i>Rs. 3.3.4. & Rs. 3.8.</i>	12 - -	98 - -	- - -	27,018 ⁵ / ₁₆
19 417 2 549	6 0 -	1 4 - 1 4 -	2 13 6 3 8 -	12 - - 12 - -	98 - - 98 - -	- - - - - -	24,301 1,930
22 182	6 0	1 4 -	<i>Rs. 2.13.6. & Rs. 3.8.</i>	12 - -	98 - -	- - -	26,291

which the district of Boordika has been under the British Government.

HYDRABAD (SINDE).

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEAN COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
SEASON 1852-53*:									
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>M. lbs.</i>	<i>M. lbs.</i>	<i>M. lbs.</i>	<i>M. lbs.</i>	<i>M. lbs.</i>	<i>M. lbs.</i>
Doaba - - -	1,145	25	1,170	4,581 0	12 0	4,593 0	916 0	4 0	920 0
Mahomed Khan's Tanda	890	1	891	2,893 0	- - -	2,893 0	500 0	- -	500 0
Halla - - -	5,966	32	5,998	11,954 0	3 12½	11,957 12½	3,000 0	1 29½	3,001 29½
Nowshera - -	3,257	38	3,295	13,011 37	- - -	13,011 37	2,817 40	- -	2,817 40
TOTAL - -	11,258	96	11,354	32,439 37	15 12½	32,454 49½	7,233 40	5 29½	7,238 69½
SEASON 1853-54*:									
Doaba - - -	1,085	12	1,097	4,055 0	1 0	4,056 0	811 0	0 8	811 8
Mahomed Khan's Tanda	814	17	831	3,359 0	0 46½	3,359 46½	625 0	0 11½	625 11½
Halla - - -	5,657	13	5,670	7,147 0	1 25½	7,148 25½	2,050 0	1 8	2,051 8
Nowshera - -	1,339	16	1,355	6,727 56	3 21½	6,730 77½	1,494 40	1 20	1,495 60
TOTAL - -	8,895	58	8,953	21,288 56	6 13½	21,294 69½	4,980 40	2 47½	4,983 7½
SEASON 1854-55:									
				<i>Candies of 784 lbs.</i>	<i>Candies.</i>	<i>Candies.</i>	<i>Candies.</i>	<i>Candies.</i>	<i>Candies.</i>
Hydrabad - -	366	13	379	299	2	301	74	- -	74
Nowshera - -	2,553	69	2,622	1,202	- -	1,202	295	- -	295
Halla - - -	2,702	64	2,766	1,147	3	1,150	293	1	294
Meerpoor - -	2,488	-	2,488	1,394	- -	1,394	349	- -	349
Md. K.'s Tanda - -	770	20	790	261	- -	261	74	- -	74
TOTAL - -	8,879	166	9,045	4,303	5	4,308	1,085	1	1,086
SEASON 1855-56:									
Hydrabad - -	499	-	499	408	- -	408	102	- -	102
Alyar Ka Tanda - -	1,524	-	1,524	1,927	- -	1,927	482	- -	482
Meerpoor - -	152	-	152	149	- -	149	37	- -	37
Narra - - -	782	-	782	571	- -	571	156	- -	156
Oomercote - -	-	-	-	-	- -	-	-	- -	-
Tooda - - -	340	-	340	506	- -	506	126	- -	126
Goonee - - -	251	-	251	151	- -	151	39	- -	39
Buddem - - -	36	-	36	52	- -	52	13	- -	13
Baja Ka Tanda - -	142	-	142	84	- -	84	28	- -	28
Mohbut Dhera - -	250	-	250	51	- -	51	15	- -	15
Halla - - -	1,730	16	1,746	597	- -	597	149	- -	149
Shahdadpoor - -	1,078	7	1,085	557	- -	557	149	- -	149
Sukkurund - -	336	4	340	100	- -	100	25	- -	25
Nowshera - -	3,043	8	3,056	1,088	- -	1,088	281	- -	281
Mora - - -	193	5	198	58	- -	58	14	- -	14
TOTAL - -	10,361	40	10,401	6,199	- -	6,199	1,616	- -	1,616

* The quantity of cotton produced in the Meerpoor district is very insignificant, and no return is therefore submitted

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1491

HYDRABAD (SINDE).

EXOTIC COTTON, with other Particulars, for the District of *Hydrabad (Sinde)*.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton, per Maund of 80 lbs.	Expense of Transit to Bombay, per Maund of 80 lbs.	Extent of Land capable of Producing Cotton, in Acres.	Remarks.
<i>M. lbs.</i>	<i>M. lbs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		
820 0	- - -	2 14 8	13 - -	By hand, and a small cleaning instrument called "arthee," at a cost of 6 annas per maund. By churka, costing about Rs. 2. 8. per maund. By churka, costing about 2 rupees per maund. By churka, costing about 1 rupee per maund.	10 - -	1 - -	1,375	The estimated average produce of the past five years is not ascertainable.
All produce	- - -	2 14 8	10 - -		10 - -	- - -	1,750	
1,802 0½	1,199 29½	2 14 8	10 - -		10 - -	- - -	6,384	
2,817 40	- - -	2 14 8	9 9 4		10 8 2	- - -	Almost any part of the district is capable of producing cotton.	
5,539 40½	1,199 29½	- - -	- - -	- - -	- - -	9,509		
811 8	- - -	2 14 8	13 - -	By hand, and a small cleaning instrument, called "arthee," at a cost of 6 annas per maund. By churka, costing about Rs. 2. 8. per maund. By churka, costing about 2 rupees per maund. By churka, costing about 1 rupee per maund.	10 - -	1 - -	1,265	
All produce	- - -	2 14 8	10 - -		10 - -	- - -	1,750	
1,215 8	836 0	2 14 8	10 - -		10 - -	- - -	6,604	
1,803 16	- - -	2 14 8	9 9 4		10 8 2	- - -	Almost any part of the district is capable of producing cotton.	
3,829 32	836 0	- - -	- - -	- - -	- - -	9,619		
<i>Candies.</i>	<i>Candies.</i>			<i>Per Candy.</i>	<i>Per Candy.</i>	<i>Per Candy.</i>		
				<i>Rs.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>		
74	None	3 - -	15 - -	18	81 - -	- - -	Almost any part of these districts.	
235	- - -	2 14 8	12 - -	9	103 - -	- - -		6,390
174	120	1 7 4	10 - -	5	81 - -	- - -		73,693
334	15	2 14 8	10 - -	24	114 - -	- - -		1,354
74	- - -	1 7 4	8 - -	5	99 - -	- - -		81,437
951	135	- - -	- - -	- - -	- - -	- - -		
				<i>Rs. a. p.</i>				
102	- - -	3 - -	15 - -	18	80 - -	- - -	32,000	
433	48	3 - -	4 15 7	6 15 5	70 15 8	10 6 4	7,504	
37	- - -	3 - -	6 - -	9 12 -	88 3 -	20 - -	63,976	
105	51	3 - -	5 12 -	9 5 -	72 4 4	30 9 7	5,100	
126	- - -	3 - -	4 - -	4 14 4	84 8 -	10 - -	575	
39	- - -	3 - -	9 0 -	4 14 4	80 - -	- - -	527	
42	- - -	3 - -	2 11 -	4 14 4	79 14 -	- - -	457	
28	- - -	3 - -	3 12 -	4 14 4	76 - -	- - -	415	
13	- - -	3 - -	4 - -	4 14 4	72 - -	- - -	400	
124	25	3 - -	6 - -	3 5 -	76 8 -	- - -	6,000	
87	61	3 - -	7 12 -	2 10 4	71 10 -	- - -	2,202	
25	- - -	3 - -	4 - -	4 - -	81 - -	- - -	685	
231	- - -	1 10 -	6 - 1	9 8 -	98 - -	- - -	Almost any portion of these districts.	
14	- - -	1 8 -	5 - -	9 8 -	98 - -	- - -		
1,456	185	- - -	- - -	- - -	- - -	- - -	109,821	

from that quarter. This return is to be considered as an approximation rather than an accurate return.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies.	Candies.	Candies.	Candies.	Candies.	Candies.
SEASON 1856-57:									
Hydrabad	608	1	607	474	1	475	119	$\frac{1}{8}$	119 $\frac{1}{8}$
Goonee	274	-	274	144	-	144	37	-	37
Buddeena	82	-	82	65	-	65	21	-	21
Mohobut Dhera	300	-	300	120	-	120	30	-	30
Bajake Tanda	232	-	232	186	-	186	47	-	47
Alyar Ke Tanda	1,368	-	1,368	1,032	-	1,032	275	-	275
Meerpoor	192	-	192	78	-	78	19	-	19
Jooda	307	-	307	250	-	250	62	-	62
Oomercote	-	-	-	-	-	-	-	-	-
Narra	-	-	-	116	-	116	43	-	43
Halla	877	-	877	82	-	82	20	-	20
Shadadpoor	319	-	319	397	-	397	145	-	145
Sukkurund	1,158	-	1,158	1,073	-	1,073	256	-	256
Nowsherah	3,458	-	3,458	31	-	31	8	-	8
Mora	308	-	308	-	-	-	-	-	-
TOTAL	9,481	1	9,482	4,048	1	4,049	1,082	$\frac{1}{8}$	1,082 $\frac{1}{8}$

KURRACHEE. - - - - -

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Beegahs.	Beegahs.	Beegahs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1852-53:									
DEPUTY COLLECTORATE OF JURRUCK:									
Ghorrabaree	-	46	46	The whole having been destroyed by the inundation			-	-	-
Sakra	-	26	26	-	0 6	0 6	-	-	-
Tatta	-	7	7	-	-	-	-	-	-
Jurruck	20	10	30	6 176	0 16	6 192	2 32	0 6	2 38
TOTAL	20	89	109	6 176	0 22	6 198	2 32	0 6	2 38
SEASON 1853-54:									
Ghorrabaree	-	21	21	The whole having been destroyed by the inundation			-	-	-
Sakra	-	12	12	-	0 22	0 22	-	-	-
Tatta	-	7	7	-	0 17	0 17	-	0 10	0 10
Jurruck	27	21	48	8 548	0 24	8 572	2 706	0 8 $\frac{1}{2}$	2 714 $\frac{1}{2}$
TOTAL	27	61	88	8 548	0 63	8 611	2 706	0 18 $\frac{1}{2}$	2 724 $\frac{1}{2}$
SEASON 1852-53:									
DEPUTY COLLECTORATE OF SHAH BUNDER:									
Meerpoor Buttora	27 15	2 11	30 6	4 766	0 66	5 48	1 556	0 19	1 575
Beyla	19 18	2 10	22 8	0 742	0 36 $\frac{1}{2}$	0 778	0 185	0 13	0 198
Jatee	-	-	-	-	-	-	-	-	-
Mootnee	-	-	-	-	-	-	-	-	-
Shah Bunder	9 11	46 4	55 15	0 160	-	0 160	-	0 60	0 60
Sojaul	-	-	-	-	-	-	-	-	-
TOTAL	57 4	51 5	108 9	6 100	0 102 $\frac{1}{2}$	6 202 $\frac{1}{2}$	2 17	0 92	2 49
SEASON 1853-54:									
Meerpoor Buttora	19 10	6 10	26 0	5 600	-	5 600	1 728	-	1 728
Beyla	32 13	1 10	34 3	2 262	-	2 262	0 457 $\frac{1}{2}$	-	0 457 $\frac{1}{2}$
Shah Bunder	8 1	4 19	13 0	1 496	0 5	1 501	0 320	0 1	0 321
Jatee	-	-	-	-	-	-	-	-	-
Mootnee	-	-	-	-	-	-	-	-	-
Sojaul	-	-	-	-	-	-	-	-	-
TOTAL	60 4	12 19	73 3	9 574	0 5	9 579	2 721 $\frac{1}{2}$	0 1	2 722 $\frac{1}{2}$

Exotic Cotton, with other Particulars, for the District of *Hydrabad*—continued.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode of Cleaning, and Average Cost per Candy.	Average Cost of Clean Cotton, per Candy.	Expense of Transit to Bombay, per Candy.	Extent of Land capable of producing Cotton in Acres.	Remarks.	
Candies.	Candies.	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Amount.</i>		
103	16½	3 - -	12 - -	Cleansed by the common Sindhee wheel	18 - -	95 - -	22,000		
37	-	3 - -	8 - -		12 - -	100 - -	650		
21	-	3 - -	8 8 -		10 - -	100 - -	175	unknown	
30	-	3 - -	7 4 -		11 - -	90 - -	400		
47	-	3 - -	10 - -		10 - -	88 - -	415		
265	10	3 - -	6 - -		18 - -	80 - -	11 - -	2,100	
19	-	3 - -	6 - -		18 - -	74 - -	19 9 -	15,000	
62	-	3 - -	6 - -		29 - -	78 - -	10 - -	325	
-	-	-	-		-	-	-	-	
38	5	3 - -	8 8 -		20 - -	90 - -	-	1,750	
19	1	3 - -	7 8 -		13 - -	99 - -	-	850	
103	42	3 - -	9 14 -		16 - -	90 - -	-	850	unknown
256	-	3 4 -	9 12 -		18 - -	95 - -	-	-	
8	-	3 - -	8 - -		18 - -	98 - -	-	-	any part.
1,008	74	-	-		-	-	-	-	

KURRACHEE.

EXOTIC COTTON, with other Particulars, for the District of *Kurrachee*.

Local Consumption	Exported.	Rate of Assessment per Beegah.	Cost of Cultivation per Beegah.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Beegahs.	REMARKS.
Candies of 784 lbs.	Candies of 784 lbs.	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>	<i>Rs. a. y.</i>	<i>Rs. a. p.</i>	<i>As estimated by hardars.</i>	
0 6	-	1 7 4	-	The quantity produced being too small to form any estimate from -	-	-	200	The extent of land capable of producing cotton in this district, as estimated by the kardars, is far too low; thousands of beegahs might be cultivated by wheel, but whether this mode of cultivation would on a large scale pay, has yet to be proved; I do not think it would in comparison to other crops. (signed) <i>W. T. Cole,</i> Deputy Collector.
8 230	-	1 7 4	-		-	-	50	
8 236	-	2 14 8	-		-	-	250	
0 22	-	1 7 4	-	The quantity produced being too small to form an estimate from -	-	-	100	
0 27	-	1 7 4	-		-	-	700	
4 502½	-	1 7 4	-		-	-	290	
11 551½	-	4 6 -	-	-	-	-	1,090	
1 575	1 0	1 7 4	4 - -	9 12 -	122 8 -	-	50	
0 198	-	1 7 4	4 - -	9 12 -	107 12 -	8 - -	30	
0 60	-	1 7 4	4 - -	6 12 -	122 8 -	-	500	
2 49	1 0	1 7 4	4 - -	8 12 -	117 3 4	-	580	
1 728	-	1 7 4	4 - -	9 12 -	122 - 8	-	50	
0 457½	-	1 7 4	4 - -	9 12 -	107 12 8	-	30	
0 321	-	1 7 4	4 - -	6 12 -	122 - 8	-	500	
2 722½	-	1 7 4 (average)	4 - - (average)	8 12 - (average)	117 3 4 (average)	-	580	

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICTS.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEAN COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Beegahs.	Beegahs.	Beegahs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1852-53:									
DEPUTY COLLECTORATE OF SEHWAN:									
Sehwan - - -	1,389	23	1,412	1,196	- -	1,196	299	- -	299
SEASON 1853-54:									
Sehwan - - -	1,616	10	1,626	1,085	- -	1,085	271½	- -	271½
SEASON 1854-55: Acres.									
Jerruck - - -	7	67	74	4 324	0 119	4 443	1 81	0 30	1 111
Shah Bunder - - -	18½	- -	18½	6 172	- -	6 172	2 373	- -	2 373
Sehwan - - -	3,092½	38½	3,130½	554 432	2 16	556 448	122 619½	0 409½	123 245
TOTAL - - -	3,117½	105½	3,223	565 144	2 135	567 279	126 289½	0 439½	126 729
SEASON 1855-56:									
Jerruck - - -	14	101	115	8 0	0 320	8 320	2 0	0 80	2 80
Shah Bunder - - -	28½	10½	38½	9 308	0 233	9 541	4 179	0 155	4 334
Sehwan - - -	1,562½	11½	1,574½	1,382 387	0 616	1,383 219	255 621	0 147½	255 768½
TOTAL - - -	1,605½	123	1,628½	1,399 695	1 385	1,401 296	262 16	0 382½	263 298½
SEASON 1856-57: A. r. p.									
Sehwan - - -	176 3 9	- -	176 3 9	63 527	- -	63 527	15 720	- -	15 720
Bhan - - -	15 3 1	- -	15 3 1	6 216	- -	6 216	1 446	- -	1 446
Jobee - - -	135 0 30	- -	135 0 30	187 28	- -	187 28	32 573	- -	32 573
Dadoo - - -	193 3 25	- -	193 3 25	229 768	- -	229 768	76 484	- -	76 484
Mahjanda - - -	78 1 8	- -	78 1 8	33 683	- -	33 683	8 367	- -	8 367
Kotree - - -	103 0 0	- -	103 0 0	28 0	- -	28 0	7 0	- -	7 0
TOTAL - - -	703 0 3	- -	703 0 3	548 654	- -	548 654	142 238	- -	142 238
Result of 1855-56	1,562 3 15 2½ yards	11 3 22 17½ yards	1,574 2 7 20 yards.	1,382 387	0 616	1,383 219	255 621	0 147½	255 768½

SOUTHERN MAHRATTA COUNTRY. - - - -

STATEMENT, showing the Cultivation and Production of INDIGENOUS and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF
	Native.	Exotic.	TOTAL.	Native	Exotic.	TOTAL.	Native.
	Begas.	Begas.	Begas.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
SEASON 1853-54:							
Sanglee - - -	15,028 5 0	1,591 5 0	16,619 10 0	2,933 85½	811 530½	3,744 616	733 217½
Jumkhundee - - -	28,912 0 0	1,735 0 0	30,647 0 0	2,599 680	239 4	2,838 684	649 758
Koorundwar - - -	2,367 15 3½	- -	2,367 15 3½	480 466½	- -	480 466½	120 119
Shedbol - - -	3,646 0 0	- -	3,646 0 0	618 586	- -	618 586	154 538½
Meeruj - - -	7,352 19 5	1,152 0 0	8,504 19 5	173 394	13 176	186 570	43 294½
Meeruj - - -	4,708 2 0	2,864 0 0	7,572 2 0	533 217	460 0	1,002 217	133 250½
Moodhole - - -	30,433 0 0	- -	30,433 0 0	1,006 431	- -	1,006 431	251 501
Ramdroog - - -	7,311 15 0	- -	7,311 15 0	541 626	- -	541 626	135 352½
TOTAL - - -	99,759 16 8½	7,342 5 0	1,07,102 1 8½	8,887 350	1,532 710½	10,420 276½	2,221 679½

* The exotic cotton is cleaned by the means of gins, and the indigenous by

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1495

Exotic Cotton, with other Particulars, for the District of Kurrachee—continued.

Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation per Beegah.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of Producing Cotton in Beegahs.	REMARKS.
Candies of 784 lbs.	Candies of 784 lbs.	per Beegah.	per Beegah.		Rs. a. p.			
- All -	- None -	2 14 11	10 - -	{ By churka, 4 pies per lb. }	103 - -	- None.	- -	Nearly all the cultivable soil of Scinde is capable of producing cotton, if water could be sufficient at the proper season. (signed) A. Young, Deputy Collector.
- All -	- None -	2 14 11	10 - -	{ By churka, 4 pies per lb. }	103 - -	{ None ever sent. }	- -	
C lbs.		Per Acre.	Per Acre.	Rs. a. p.	Rs. a. p.		Acres.	
1 111	- -	2 14 -	12 - -	17 8 -	69 - -	- -	232	
2 373	- -	2 14 6	8 7 6	10 2 -	83 - -	- -	53	
123 245	- -	3 2 -	19 12 2	2 10 -	20 - -	- -	Unknown,	
126 729	- -	2 15 6	13 6 6	10 1 4	57 5 4,	- -	-	
2 80	- -	2 14 -	12 - -	17 8 -	69 - -	- -	224	
4 334	- -	2 14 6	9 6 7	8 1 -	91 12 -	- -	154	
255 768½	- -	2 15 8	10 - 6	9 13 9	82 8 6	- -	6,098	
262 398½	- -	2 12 8	10 8 4	11 12 11	81 1 6	- -	6,476.	
15 720	- -	2 - 6	2 4 4	4 2 9	90 14 -	- -	224	
1 446	- -	3 - 6	3 - -	4 - -	90 - -	- -	120	
32 573	- -	3 - 5	2 7 2	3 8 -	98 - -	- -	5,000	
76 484	- -	2 11 5	5 4 -	2 9 -	98 - -	- -	329	
8 367	- -	2 14 -	3 14 -	20 - -	80 - -	- -	275	
7 0	- -	2 14 5	34 8 -	9 7 -	77 - -	- -	150	
142 238	- -	2 14 10½	8 8 11	7 4 5½	88 15 8	- -	6,098	
255 768½	- -	2 15 8	10 - 6	9 13 9	82 8 6	- -	6,098	

Note.—The mode of cleaning is by the common itaree, or churka.

SOUTHERN MAHRATTA COUNTRY.

EXOTIC COTTON, with other Particulars, for the Southern Mahratta Country.

CLEANED COTTON.		Local Consumption.	Exported.	Rate of Assessment	Cost of Cultivation	Mode and Cost of Cleaning *	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of Producing Cotton in Begas.
Exotic.	TOTAL.	Candies of 784 lbs.	Candies of 784 lbs.	per Bega.	per Bega.		Rs. a. p.	Rs. a. p.	
304 297	1,037 514½	619 201	418 313½	- - -	- - -	- - -	- - -	- - -	16,619 10 0
59 589	709 563	162 385½	547 177½	- - -	- - -	- - -	- - -	- - -	1,46,283 15 0
- - -	120 119	118 595	1 308	From	From	- - -	From	From	2,600 0 0
- - -	154 538½	106 703½	47 618½	- 8 -	- 8 -	- - -	60 - -	9 - -	15,500 0 0
3 240	46 594½	21 539½	24 779½	to	to	- - -	70 - -	12 - -	10,000 0 0
117 196	250 446½	33 250½	217 196	2 - -	2 - -	- - -	- - -	- - -	13,975 0 0
- - -	251 501	62 718	188 567	- - -	- - -	- - -	- - -	- - -	31,000 0 0
- - -	135 352½	55 175½	80 177½	- - -	- - -	- - -	- - -	- - -	20,000 0 0
484 538	2,706 433½	1,180 432	1,526 1½	- - -	- - -	- - -	- - -	- - -	2,55,978 5 0

manual labour. The cost of cleaning a candy of 784 lbs. is about 8½ rupees.

STATEMENT, showing the Cultivation and Production of Indigenous and

DISTRICT.	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF	
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	
	Begas.	Begas.	Begas.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	
SEASON 1854-55 :								
Sauglee - - - -	12,045 10 0	2,087 5 0	14,132 15 0	1,815 561	607 218½	2,422 779½	453 728	
Jumkhundee - - -	19,102 0 0	8,598 15 0	27,700 15 0	1,445 627½	548 305½	1,994 149½	361 353	
Koorundwar - - -	918 5 3½	- - -	918 5 3½	219 537	- - -	219 537	54 722	
Shedbal - - - -	4,811 0 0	- - -	4,811 0 0	357 17	- - -	357 17	89 200½	
Meeruj - - - -	5,559 15 4½	1,212 10 0	6,772 5 4½	390 229	62 390	452 609	97 449	
Meeruj - - - -	2,598 15 3½	2,483 0 0	5,081 15 3½	259 223½	233 238	492 511½	64 644	
Moodhole - - - -	28,140 0 0	- - -	28,140 0 0	1,206 70	- - -	1,206 70	301 409½	
Ramdroog - - - -	6,999 15 0	- - -	6,999 15 0	373 440	- - -	373 440	93 306	
TOTAL - - - -	80,175 0 11	14,381 10 0	94,556 10 11	6,067 353½	1,451 408	7,518 761½	1,516 676½	
Estimated Average of the last Five Years - - -	95,131 19 0	7,571 12 0½	1,02,703 11 0½	8,726 758½	1,398 240	10,125 214½	2,242 639½	
SEASON 1855-56 :								
Sauglee - - - -	6,608 0 0	1,930 0 0	8,538 0 0	1,025 110	386 93	1,411 203	256 223½	
Jumkhundee - - -	14,074 15 0	5,655 10 0	20,630 5 0	1,259 316	480 641	1,740 173	314 667	
Koorundwar - - -	248 0 0	- - -	248 0 0	26 500	- - -	26 500	6 517	
Shedbal - - - -	1,505 10 0	- - -	1,505 10 0	55 593	- - -	55 593	13 736½	
Meeruj - - - -	2,923 15 0	1,018 15 0	3,942 10 0	177 677	50 647	228 540	44 365	
Meeruj - - - -	1,613 19 5	4,148 0 0	5,761 19 5	204 218	727 392	931 610	51 54½	
Moodhole - - - -	12,412 10 0	- - -	12,412 10 0	620 588	- - -	620 588	155 147	
Ramdroog - - - -	4,718 10 0	- - -	4,718 10 0	145 697	- - -	145 697	36 370½	
TOTAL - - - -	45,002 19 5	12,752 5 0	57,755 4 5	3,515 563	1,645 205	5,160 768	878 728½	
Estimated Average of the last Five Years - - -	89,967 8 0	10,861 17 0	1,00,829 5 0	7,477 351½	1,492 167½	8,969 518½	1,869 285½	

* The exotic cotton is cleaned by the means of gins, and indigenous by manual

KOLHAPORE TERRITORY.

STATEMENT, showing the Cultivation and Production of Indigenous and

	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
				Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
	<i>A. g.</i>	<i>A. g.</i>	<i>A. g.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>	<i>C. lbs.</i>
Season 1850-51 -	4,057 10	25 0	4,082 10	2,430 306	1 16	2,431 322	607 468½	0 200	607 668½
Season 1851-52 -	4,063 0	53 0	4,116 0	2,483 68	33 348	2,516 416	620 605	.8 283	629 104
Season 1852-53 -	3,927 35	15 4	3,942 39	1,015 127	1 730	1,017 73	253 619½	0 378½	254 213½
Season 1853-54 -	3,819 37	0 25	3,820 22	1,271 220	0 19	1,271 239	318 447½	0 4½	318 452½
TOTAL - - - -	15,868 2	93 29	15,961 31	7,199 721	36 329	7,236 266	1,800 572½	9 82½	1,809 654½
Estimated Average of the last Four Years	3,967 0	23 17½	3,990 17	1,799 768½	9 82½	1,809 66½	450 143½	2 216½	452 359½

* The cotton cleaner sits on a low bench, about 4 feet by 2 feet, with his feet resting on a soft smooth stone, about 4 feet square, upon this the cotton cleaner (generally a woman), works the roller with her feet, stooping and feeding it with her hands; the seeds are thus forced out in cleans about 10 lbs. per day. The cotton goes through another cleaning by the "kummanee," being whipped by a bow-string upon an instru-
3½ pies per 1 lb.

N.B.—There is no measurement in acres in the Kolhapore State. An average of

Exotic Cotton, with other Particulars, for the Southern Mahratta Country—continued.

CLEANED COTTON.				Local Consumption.	Exported.	Rate of Assessment per Bega.	Cost of Cultivation per Bega.	Mode, and Cost of Cleaning.*	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Begas.
Exotic.	TOTAL.		Candies of 784 lbs.								
Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.			Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	
202 334	656 278	258 258½	400 19½			- - -	- - -	- - -	- - -	- - -	14,132 15 0
182 624	544 103	90 284	453 693			- - -	- - -	- - -	- - -	- - -	1,46,283 15 0
- - -	54 722	54 722	- - -			From	From	- - -	From	From	3,017 0 0
- - -	89 200½	60 483½	28 500½			- 8 -	- 8 -	- - -	60 -	9 -	8,625 0 0
20 640	118 314	67 424	50 674			to	to	- - -	to	to	10,000 0 0
77 619	142 479	28 306	114 83			2 - -	2 - -	- - -	70 - -	12 - -	14,675 0 0
- - -	301 409½	113 55½	188 354			- - -	- - -	- - -	- - -	- - -	1,10,962 10 0
- - -	93 306	82 547½	10 542½			- - -	- - -	- - -	- - -	- - -	62,949 0 0
483 658	2,000 550½	754 35½	1,246 515			- - -	- - -	- - -	- - -	- - -	3,70,645 0 0
452 452½	2,605 314½	948 454½	1,746 643½			- - -	- - -	- - -	- - -	- - -	2,55,978 5 0
128 553½	384 777½	108 20½	276 757			- - -	- - -	- - -	- - -	- - -	14,132 15 0
160 213½	475 96½	104 676½	370 204			- - -	- - -	- - -	- - -	- - -	1,46,283 15 0
- - -	6 517	6 517	- - -			From	From	- - -	From	From	3,017 0 0
- - -	13 736½	13 736½	- - -			- 8 -	- 8 -	- - -	60 -	9 -	8,625 0 0
16 738½	61 319½	51 235	10 84½			to	to	- - -	to	to	10,000 0 0
242 392	293 446½	22 152½	271 294			2 - -	2 - -	- - -	70 - -	12 - -	14,675 0 0
- - -	155 147	97 0	58 147			- - -	- - -	- - -	- - -	- - -	1,10,962 10 0
- - -	36 370½	23 43½	13 326½			- - -	- - -	- - -	- - -	- - -	62,949 0 0
548 329½	1,427 274½	427 29½	1,000 244½			- - -	- - -	- - -	- - -	- - -	3,70,645 0 0
484 206	2,353 491½	967 233½	1,386 258½			2	2	8½	65½	10	3,13,311 10 0

labour. The cost of cleaning a candy of 784 lbs. is about 8½ rupees.

KOLHAPORE TERRITORY.

EXOTIC COTTON, with other Particulars, for the Kolhapore Territory.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Cost of Cultivation per Acre.	Mode, and Cost of Cleaning.*	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.
Candies of 784 lbs.	Candies of 784 lbs.						
The quantity of cotton consumed in this territory is seven-eighths of the produce, and the remaining one-eighth is supposed to be annually exported		The land cultivated with cotton is assessed at from 12 rupees to 36 rupees per acre.	The cost of cultivating one acre of land with cotton is supposed to be from 12 rupees to 14 rupees.	- - -	Cleaned cotton is sold at five pukka seers, or 10 lbs. for a rupee, which gives a total value of one candy at Rs. 78. 6. 5.	The cost of exporting one candy of cotton to Bombay, via Rajapoor or Poona, amounts to about five rupees.	The total amount of land capable of producing cotton is 5,499½ acres.
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

stone a small iron roller is placed, its ends resting and revolving on two bits of wood, about one inch thick, placed at opposite edges of the stone. front, and the cleaned cotton rolled back under the stool. This mode of cleaning is called konna, from the name of the iron roller. A woman ment called kuman; by this mode about 40 lbs. may be cleaned in a day by one person. Cost of cleaning cotton is Rs. 3. 4. 1. per 196 lbs., or

two beegas per acre is taken in this return, which is nearly the average.

STATEMENT, showing the Cultivation and Production of Indigenous and

	LAND CULTIVATED.			UNCLEANED COTTON PRODUCED.			YIELD OF CLEANED COTTON.		
	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
	Acres.	Acres.	Acres.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.	Candies of 784 lbs.
Season 1854-55 †	A. g. 2,992 36½	A. g. - -	A. g. 2,992 36½	C. lbs. 944 722	C. lbs. - -	C. lbs. 944 722	C. lbs. 236 180½	C. lbs. - -	C. lbs. 236 180½
Season 1855-56 †	2,305 11½	8 16	2,313 27½	668 180	3 149	671 279	167 32½	0 625	167 657½
Season 1856-57 †	6,198 25½	- -	6,198 25½	1,143 3,394	- -	1,143 3,394	420 3,200	- -	420 3,200

* The cotton cleaner sits on a low bench, about 4 feet by 2 feet, with his feet resting on a soft, smooth stone, about four feet square. Upon this the cotton cleaner (generally a woman) works the roller with her feet, stooping and feeding it with her hands: the seeds are thus forced out in about 10 lbs. per day. The cotton goes through another cleaning by the "kummanee" being whipped by a bow-string upon an instrument called

† Notes.—1. There is no measurement in acres in the Kolahpore State, an average of two beegas per acre is taken in this return, which is inhabitants, preferring their own cleaning

‡ The Political Superintendent would observe, that in the last return two beegas have been calculated for one acre,

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 7 May 1857.—V. 3244 to 47.

(No. 38 of 1857.)

From the Acting Secretary to the Chamber of Commerce to Mr. Chief Secretary Young.

Sir,

V. 3244.

THE Committee of the Chamber of Commerce has learnt with much satisfaction, as well from your letter, No. 1063 of 1857, dated 5th March, as from other sources, that the cultivation of American cotton has increased, and is increasing largely in the southern division of the Presidency. It has also much pleasure in observing that this cotton is well appreciated in the market, both here and at home.

Under such circumstances it appears desirable that the character which the article now bears should be maintained, and, if possible, raised still higher. It has, however, been brought to the notice of the Chamber, that under the temptation of the high prices now prevailing, the cultivators have in many cases mixed their inferior native kuppas with the American staple, and that in some instances the seeds of the two kinds are mixed in the sowing.

This has already had the effect of depreciating the value of the exotic cotton in the market here, and the effect is likely to be still more prejudicial at home.

To avoid, if possible, a repetition of these mischievous practices, the Committee would respectfully suggest that the officers of Government in the mofussil might be instructed to explain to the cultivators and dealers the injury entailed on their own interests by this system of adulteration, and to impress upon them the substantial advantages of securing a high character for their produce.

Bombay Chamber of Commerce,
13 April 1857.

I have, &c.
(signed) J. Mawson,
Acting Secretary.

RESOLUTION OF GOVERNMENT.

V. 3245.

THE report of the Chamber of Commerce to be communicated to the Revenue Commissioner, Southern Division, who will be good enough to direct the local authorities to adopt such measures as may appear to them advisable to prevent the mixing of indigenous and American cotton in the same packages, and to warn the people of the injurious effect upon their own interest of sowing the two sorts of cotton together.

Bombay Castle, 29 April 1857.

(signed) H. Young,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 31 December 1857.—V. 9847 and 48.

(No. 126 of 1857.)

From the Secretary to the Chamber of Commerce to Mr. Chief Secretary Young.

Sir,

No. 9847.

WHILE acknowledging the receipt of several cotton returns for the current season's cultivation, I have, by direction of the Committee of the Chamber of Commerce, to tender its

Exotic Cotton, with other Particulars, for the Kolhapoor Territory—continued.

Local Consumption.	Exported.	Rate of Assessment per Acre.	Rate of Cultivation per Acre.	Mode, and Cost of Cleaning.*	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay, per Candy of 784 lbs.	Extent of Land capable of producing Cotton in Acres.
Candies of 784 lbs.	Candies of 784 lbs.						
The quantity of cotton consumed in this territory is seven-eighths of the produce, and the remaining one eighth is supposed to be annually exported.		The land cultivated with cotton is assessed at from 12 rupees to 36 rupees per acre.	The cost of cultivating one acre of land with cotton is supposed to be from 12 rupees to 14 rupees.	- - -	Cleaned cotton is sold at 5 pukka seers, or 10 lbs. for one rupee, which gives a total value of one candy, at Rs. 78. 6. 5.	The cost of exporting one candy of cotton to Bombay, via Rajapoor or Poona, amounts to about 5 rupees.	The total amount of land capable of producing cotton is 5,499½ acres.
Seven-eighths of the produce.	One-eighth of the produce.	- Ditto - -	- Ditto - -	- - -	Cleaned cotton is sold at 4 pukka seers, or 8 lbs. for one rupee, which gives a total value of one candy at 98 rupees.	- Ditto - -	The total amount of land capable of producing cotton is 8,799 acres.

stone a small iron roller is placed, its ends resting and revolving on two bits of wood, about one inch thick, placed at opposite edges of the stone. front, and the cleaned cotton rolled back under the stool. This mode of cleaning is called "kunna," from the name of the iron roller. A woman cleans "kuman." By this mode about 40 lbs. may be cleaned in a day by one person. Cost of cleaning cotton is Rs. 3. 4. 1. per 196 lbs., or 3½ pies per 1 lb. nearly the average.—2. There are still one or two American gins existing, but as the cotton is almost wholly used for home consumption, the apparatus, have no interest in using the other. but as it appears that 1¼ beega per acre is more correct, the latter has been adopted in the present return.

its best thanks for the liberality and consideration with which Government has for several years past supplied these reports. At the same time I have to express its regret that they have not, from the extent to which they differ from the actual out-turn, been found of so much value and utility as was anticipated when the Chamber first applied for them.

The Committee is well aware of the difficulty of rendering such returns even approximately correct, and it would respectfully suggest that if it should be found insurmountable, the mofussil officers of Government might, so far as the supply to the Chamber is concerned, be relieved from the trouble of preparing them.

Bombay Chamber of Commerce,
15 December 1857.

I have, &c.
(signed) John Mawson,
Secretary.

(No. 5432 of 1857.)

From Mr. Chief Secretary Young to the Secretary to the Chamber of Commerce.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 126, dated the 15th instant, and to state that the cotton reports therein referred to will not in future be forwarded to the Chamber of Commerce.

V. 9843.

I am, however, desired to add for the information of the Chamber, that the Right honourable the Governor in Council has no reason to doubt the approximative accuracy of these reports, so far as the growth of the Honourable Company's territories is concerned. That the reports do not correspond with the general out-turn, may be accounted for by the fact that a very large proportion of the cotton which reaches Bombay is grown in tributary and independent States.

Bombay Castle, 30 December 1857.

I have, &c.
(signed) H. Young,
Chief Secretary to Government.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 5 February 1851.—V. 2074 to 2077.

(No. 23 of 1851.)

From the Resident at Baroda to Mr. Secretary Goldsmid.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 73, dated 4th instant, with accompanying communication and statement, from the Revenue Commissioner, Northern Division, &c., calling upon me to procure the information required in paragraph 4 of your reply to the Revenue Commissioner.

V. 2074.

In accordance with your request I applied to his Highness the Guicowar for the requisite information, translation of whose yad in reply, dated 22d instant, I have the honour to enclose, which I regret to say is very unsatisfactory, as showing that though the durbar is anxious to supply the statistics called for, there are no means of doing so with any degree of accuracy.

296—Sess. 2.

G L 2

As,

1500 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

As, however, an approximate estimate may in some measure suffice for the purpose intended, I have now requested his Highness to cause such to be prepared, on the best data that can be obtained, which I shall forward as soon as possible.

Baroda Residency, 25 January 1851.

I have, &c.
(signed) *J. Outram*, Resident.

TRANSLATION of a Yad from his Highness the Guicowar to the Resident, dated
19 Rubul awal Soorsun 1251.—(A.D. 22 January 1851.)

V 2075.

A yad was received from the Residency, dated 16th January 1851, No. 52, stating that a letter has been received from Mr. Goldsmid, Secretary to Government in the Revenue Department, and requesting that information regarding the cultivation of cotton in the Guicowar district may be furnished agreeably to form therewith sent. In reply, this Government begs to state that, having taken the subject into consideration, this Government find it difficult to obtain the required information from the mhals, because many of the villages of the mhals, being held in enam jagheer, and leased as well as managed on the "Nerwa" system, again many of the villages pay jumabundy on each holl or plough, consequently the cultivators are unable to keep an account of the cotton produce. They cultivate such kind of crops as they like, therefore it does not appear that detailed information can be obtained agreeably to the form received. This is written for the Resident's information.

(True translation.)

(signed) *J. Outram*, Resident.

(No. 1317 of 1851.)

From Mr. Secretary *Goldsmid* to the Resident at Baroda.

V. 2077.

Sir,
I HAVE been directed by the Right honourable the Governor in Council to acknowledge the receipt of your letter, No. 23, dated the 25th ultimo, with enclosure, regarding the inability of his Highness the Guicowar to furnish the information required in my letter, No. 73, dated the 4th ultimo, and to request you will have the goodness to obtain and forward annually an approximate estimate, as promised in the concluding paragraph of your letter under acknowledgment.

Bombay Castle, 13 February 1851.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

(No. 116 of 1851.)

From Lieutenant-Colonel *J. Outram*, c.B., Resident at Baroda, to *H. E. Goldsmid*, Esq.,
Secretary to Government, Bombay.

Political Depart-
ment.

Sir,
WITH reference to your letter, No. 71, dated 4th January last, forwarding statement from the Revenue Commissioner, Northern Division, with accompaniments, and requesting me to obtain certain information respecting the cotton grown in his Highness the Guicowar's territory, I have the honour to transmit copies of yads received from the darbar on the 17th April and 14th instant, with accompanying statement supplying the required information.

To account for such great delay in complying with your requisition, I beg leave to explain that I could not earlier obtain the returns of the three principal districts, which were only received with his Highness's yad of the 14th instant.

Baroda Residency, 18 November 1851.

I have, &c.
(signed) *J. Outram*, Resident.

TRANSLATE of a Yad from his Highness the Guicowar to the Resident, dated
14 Jummadel Akiur Soorsun 1252.—(17 April 1851.)

IN reply to the Resident's yad, No. 91, 25 January 1851, stating that proper information regarding the cotton grown in the Guicowar territory has not been received as to in how many mhals it is grown, how many churkas (machines) there are for cleaning the cotton, and in what season it is sown and grown, &c., as required by Government, I beg to transmit a statement containing this information prepared from those received from the koomavidars and vyoutdars of the different mhals in which the cotton is grown. A similar statement for the puigunnahs of Umrollie, Kurree, Sowlee and Baroda will be sent when received from those places.

Baroda

STATEMENT, showing the Extent of Land cultivated in the Year 1850-51 with COUNTRY and FOREIGN COTTON, the Number of GINS in Use, and the Prospects of the Seasons, &c. &c., in the Territory of his Highness the Guicowar; furnished under the Orders of Government, dated 9 October 1850, No. 7376.

206—Sess. 2.

913

No.	NAMES OF MAHLS.	Produce of Government Land.		Produce of Alienated Land.		Total Extent of Cultivation	Number of Gins in Use.		Total Gins in Use	Prospect of the Season as regards Cotton Crops.	Period when the Packing of each Description of Crop Commences and Ends.
		Country Cotton.	Foreign Cotton.	Country Cotton.	Foreign Cotton.		By Government.	By Merchant			
1	Prant Surat Uttaveseo	21,362 3 $\frac{1}{2}$	- -	7,232 $\frac{1}{2}$ 3 $\frac{1}{2}$	- -	2,859 $\frac{1}{2}$ 2 $\frac{1}{2}$	- -	1,205	1,205	good, better and best.	From Poush (January) to Vysak (May)
2	Purgunna Seenore	3,713 $\frac{1}{4}$ 0	- -	2,643 0	- -	6,356 $\frac{3}{4}$ 0	227	21	248	best - -	From Mahg (February) to Vysak (May).
3	Peigunna Korul	2,265 $\frac{1}{4}$ 1 $\frac{1}{2}$	- -	1,024 $\frac{1}{4}$ 0	- -	3,289 $\frac{1}{2}$ 1 $\frac{1}{2}$	- -	141	141	better - -	From Poush (January) to Chytru (April).
4	Sirkar's private village	2,630 $\frac{1}{2}$ 0	- -	2,315 $\frac{1}{2}$ 0	- -	5,006 0	- -	130	130	good, and better	From Mahg to Chytru.
5	Thana Padra	555 0	- -	92 0	- -	647 0	- -	204	204	- ditto - -	From ditto - ditto.
6	Purgunna Puttun	92 $\frac{1}{2}$ 2	1 $\frac{1}{2}$ 2	44 $\frac{1}{2}$ 2	- -	139 $\frac{1}{4}$ 1	29	- -	29	good, better and best.	From Falgoon (March) to Vysak (May).
7	Dubboee	6,214 0 $\frac{1}{2}$	- -	4,290 0 $\frac{3}{4}$	- -	10,504 1 $\frac{1}{2}$	- -	625	625	better - -	From Poush to Chytru (January to April).
8	Pitlad	775 1 $\frac{1}{2}$	5 0	378 $\frac{1}{4}$ 3	- -	1,158 $\frac{3}{4}$ 4 $\frac{1}{2}$	- -	64	64	ditto - -	From Falgoon to Jest (March to June).
9	Purgunna Sunkera	76 0	- -	25 0	- -	101 0	- -	20	20	ditto - -	From Mahg to Vysak (February to May)
	TOTAL	37,744 $\frac{1}{2}$ 3 $\frac{1}{2}$	6 $\frac{1}{2}$ 2	1,847 $\frac{1}{2}$ 0	- -	55,798 $\frac{1}{2}$ 4 $\frac{3}{4}$	258	2,410	2,668		
	For 1849-50:										
1	Baroda	22,379 $\frac{1}{4}$ 0	- -	12,727 $\frac{1}{2}$ 0	- -	35,107 $\frac{1}{4}$ 0	911	- -	911	best - -	From Poush to Chytru (January to April).
2	Kurree	222 0	- -	- - -	- -	222 0	- -	- -	- -	better - -	From Falgoon to Vysak. Chuikas are not kept, owing to the produce being little.
3	Umrollee	8,317 0	- -	4,432 0	- -	12,779 0	354	- -	354	better - -	Sown in Lisad (July) and grown in Falgoon (March)
	TOTAL	30,949 $\frac{1}{4}$ 0	- -	17,159 $\frac{1}{2}$ 0	- -	48,108 $\frac{1}{4}$ 0	1,265	- -	1,265		

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1501

III.
Bombay.

III.
Bombay.

TRANSLATE of a Yad from his Highness the Guicowar to the Resident,
dated 20 Mohorum 1252.—(14 November 1851.)

IN reply to the Resident's yad, No. 1311, dated 12 instant, calling for certain information regarding cotton grown in Umreillee, Kurree, Baroda and Sowlee mahals, I beg to state, that from the statements received from these mahals it appears that cotton is not grown in Sowlee mahal. A statement of the remaining mahals is herewith sent.

(True translation.)

(signed) *J. N. Battye,*
Assistant Resident.

STATEMENT, showing the Produce of COTTON in the

No.	DISTRICT.	LAND CULTIVATED.			UNCLEAN COTTON PRODUCE.			Yield of Cleaned Cotton, that is, of Cotton passed through the Churka.		
		Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.	Native.	Exotic.	TOTAL.
		Acres.	Acres.	Acres.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.	Candies of 784 lbs. each.
SEASON 1855-56:										
1	Perguna Baroda - -	23,632	- -	23,632	6,185½	- -	6,185½	2,142	- -	2,142
2	Prant Surat Uthanesee	21,148	- -	21,148	5,754½	- -	5,754½	1,874½	- -	1,874½
3	Purguna Petland - -	620	- -	620	118½	- -	118½	36½	- -	36½
4	Perguna Dubhooe - -	14,116	- -	14,116	2,547½	- -	2,547½	852	- -	852
5	Purguna Korul - -	1,962	- -	1,962	1,052	- -	1,052	347	- -	347
6	Khangeegaon - -	3,316	- -	3,316	1,678	- -	1,678	564	- -	564
7	Thanay Paddray - -	644	- -	644	265	- -	265	88,197	- -	88,197
8	Purguna Savkhair - -	104	- -	104	34½	- -	34½	11½	- -	11½
9	Purguna Umrolee - -	29,842	1,262	31,104	8,624	357	8,981	2,837	121	2,958
10	Perguna Pattun - -	324	- -	324	117	- -	117	34½	- -	34½
11	Purguna Kurree - -	954	- -	954	457½	- -	457½	152½	- -	152½
12	Purguna Sinor - -	6,415	- -	6,415	1,883	- -	1,883	634½	- -	634½
		1,03,077	1,262	1,04,339	28,717½	357	29,074½	95,74,589	121	96,95,589

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 15 November 1851.—V. 18,060 to 63.

(General, No. 402 of 1851.)

From the Political Agent in Kattywar* to Mr. Chief Secretary *Malet.*

Sir,

V. 18,060.

WITH reference to Mr. Secretary Goldsmid's letter of the 4th January last and its several accompaniments, regarding the probable quantity of cotton grown in this province during the season 1850-51, I have the honour to inform you that we have not, as you are aware, the means of obtaining returns of this kind in Kattywar which can be fully depended on, but I have had a statement framed with the assistance of the karbarees of the principal chiefs and others, acquainted with the resources of the different districts in this way, and I beg

* Submitting certain returns regarding the cotton cultivation in this province during last and this year, and explaining the reason for sending it in the form I have adopted.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1503

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 24 November 1856.—V. 8388, 89 and 92.

III.
Bombay.

(No. 1063 of 1856.)

From the Resident at Baroda, to Mr. Officiating Chief Secretary Young.

V. 8388.

Sir,

WITH reference to your letter No. 3959, dated 8th October last, and my reply thereto, dated 13th idem, I have now the honour to transmit, in original, a return of cotton cultivation, for the year 1855-56, received this day from his Highness the Gaikwar.

Translation appended.

I have, &c.
(signed) C. Davidson,

Baroda Residency, 3 November 1856.

Resident.

Districts of the Gaikwar in Sumv. 1912.—(A. D. 1855-56.)

Local Consumption.	Exported.	Rate of Assessment per Beegha.	Cost of Cultivation per Beegha.	Mode and Cost of Cleaning.	Average Price of Cleaned Cotton, per Candy of 784 lbs.	Expense of Transit to Bombay per Candy.	Extent of Land capable of producing Cotton, in Beeghas.
Candies of 784 lbs. each.	Candies of 784 lbs. each.	Average per Beegha.	Average per Beegha.		Average Price per Candy.	Average Price per Candy.	
750	1,392	4½	3	The raw cotton is first beaten with sticks, and is then cleaned by passing it through the churka. The average expense of cleaning cotton per candy, is = 12 rupees	95	17	82,354½
1,314½	560	4½	3½	Ditto - ditto - - 11 rupees	90	11	59,043½
36½	-	4½	3½	Ditto - ditto - - 11 rupees	84	12	1,580½
75	777	5	4	Ditto - ditto - - 11 rupees	95	15	25,917
12	335	5½	4	Ditto - ditto - - 12 rupees	87	8	5,100
72	492	5	4	Ditto - ditto - - 12 rupees	98	17	14,932
11½	77 1 lb.	5½	3	Ditto - ditto - - 12 rupees	100	15	1,210
11½	-	4½	4	Ditto - ditto - - 12 rupees	88	15	1,306
715	2,243	4	3	Ditto - ditto - - 11 rupees	82	10	52,780
34½	-	3½	2½	Ditto - ditto - - 10 rupees	78	15	1,057
152½	-	4	4½	Ditto - ditto - - 12 rupees	90	15	1,788
82	552½	5½	3½	Ditto - ditto - - 11 rupees	88	14	11,750
3,267½	6,428 493						2,58,818½

beg now to submit a translation of it, as in the absence of more correct information, it may answer the purpose intended by Government. The statement lettered B. being apparently furnished as a form to the collectors, on which to frame certain other returns required by the Revenue Commissioner, I have taken the other statement which accompanied Mr. Secretary Goldsmid's letter under reply, and as the information is evidently required with reference to the prospects of the coming season rather than the produce of the past one, I have added a similar return for the year 1851-52, which must however be regarded as a mere estimate, although framed on the best information within my reach.

I have, &c.
(signed) W. Lang,
Political Agent.

Kattywar Political Agency, Camp Mangrole,
11 October 1851.

III.
Bombay.

GENERAL ABSTRACT STATEMENT, showing the Cotton Cultivation in each of the under-mentioned Districts of Kattywar, and the Probable Quantity available in the Market for the Seasons 1850-51, and 1851-52.

No.	DISTRICTS.	Land Planted with Cotton.			Probable Produce, in Candies of 784 lbs.		
		Beegas, Exotic.	Beegas, Indigenous.	TOTAL.	Exotic.	Indigenous.	TOTAL.
SEASON 1850-51: *							
1	Jhalawar - - - -	- -	6,20,000	6,20,000	- -	38,750	38,750
2	Muchoo Kaunta - - - -	- -	1,25,000	1,25,000	- -	7,812½	7,812½
3	Hallar - - - -	- -	2,63,000	2,63,000	- -	16,437½	16,437½
4	Burdah - - - -	- -	42,000	42,000	- -	2,625	2,625
5	Soruth - - - -	- -	2,13,000	2,13,000	- -	13,312½	13,312½
6	Kattywar - - - -	- -	5,40,000	5,40,000	- -	33,750	33,750
7	Gohelwar - - - -	- -	3,30,000	3,30,000	- -	20,625	20,625
8	Oond Surveya - - - -	- -	13,200	13,200	- -	825	825
9	Babriawar - - - -	- -	8,000	8,000	- -	500	500
10	Okha Mundul - - - -	- -	- -	- -	- -	- -	- -
	GRAND TOTAL - - - -	- -	21,54,200	21,54,200	- -	1,34,637½	1,34,637½
SEASON 1851-52:							
1	Jhalawar - - - -	- -	5,50,000	5,50,000	- -	27,500	27,500
2	Muchoo Kaunta - - - -	- -	1,10,000	1,10,000	- -	5,500	5,500
3	Hallar - - - -	- -	2,30,000	2,30,000	- -	11,500	11,500
4	Burda - - - -	- -	40,000	40,000	- -	2,000	2,000
5	Soruth - - - -	- -	1,90,000	1,90,000	- -	9,500	9,500
6	Kattywar - - - -	- -	5,00,000	5,00,000	- -	25,000	25,000
7	Gohelwar - - - -	- -	3,00,000	3,00,000	- -	15,000	15,000
8	Oond Surveya - - - -	- -	13,000	13,000	- -	650	650
9	Babriawar - - - -	- -	7,000	7,000	- -	350	350
10	Okha Mundul - - - -	- -	- -	- -	- -	- -	- -
	GRAND TOTAL - - - -	- -	19,40,000	19,40,000	- -	97,000	97,000

Remarks.—The quantity of land sown with cotton was greater than usual this season, and owing to the late rain, the crop was also abundant.

Kattywar Political Agency, Camp Mangrole,
11 October 1851.

(signed) W. Lang,
Political Agent.

No. 15,798 D.

From the Political Agent in Kattywar* No. 484, with Enclosure.

Sir,
In acknowledging the receipt of your letter of the 20th instant, No. 7534, I have the honour to transmit the most correct estimate I have been able to get framed, with the aid of the several karbarees of the chiefs now present at Rajkote, of the probable quantity of land in this province now under cotton cultivation, and the expected amount of produce during the present season; as before stated, however, too much dependence must not be placed on returns of this description from Kattywar.

Kattywar Political Agency, Rajcote,
25 November 1852.

I have, &c.
(signed) W. Lang,
Political Agent.

* Forwarding return of the cotton cultivation of this province during the current year in the form required by Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1505

ROUGH ESTIMATE of the Extent of Land in Kattywar Cultivated with Cotton in A.D. 1852-53, and of the Prospects of the present Season, &c. &c., furnished under the Orders of Government, dated 9 October 1850, No. 7376.

NAMES of TALOOKAS.	Extent of Cotton Cultivation in A.D. 1852-53.					Number of Gins in Use.			Prospects of the Season as regards Cotton Crops.	Period when the Picking of each description of Crop Commences and Ends.
	Government Land paying Assessment.		Alienated Land.		Total Extent of Cultivation.	Worked by Private Individuals.	By Govern- ment.	Total Gins in Use.		
	Country Cotton.	Foreign Cotton.	Country Cotton.	Foreign Cotton.						
Jhallawar - - - - -	-	-	-	-	5,75,000	-	-	-	Candies. 28,750	Commences from the end of February and ends on the conclusion of March.
Mutchoo Kanta - - - - -	-	-	-	-	1,10,000	-	-	-	5,500	
Hallar - - - - -	-	-	-	-	2,35,000	-	-	-	11,750	
Burda - - - - -	-	-	-	-	40,000	-	-	-	2,000	
Sorut - - - - -	-	-	-	-	2,00,000	-	-	-	10,000	
Kattywar - - - - -	-	-	-	-	5,00,000	-	-	-	25,000	
Gohelwar - - - - -	-	-	-	-	3,15,000	-	-	-	15,750	
Oond Surweya - - - - -	-	-	-	-	13,000	-	-	-	650	
Babriawar - - - - -	-	-	-	-	7,500	-	-	-	375	
Okhamundel - - - - -	-	-	-	-	-	-	-	-	-	
TOTAL - - - - -	-	-	-	-	19,95,500	-	-	-	99,775	

Kattywar Political Agency, Rajcote,
25 November 1852.

(signed) W. Lang, Political Agent.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 3 November 1855.—V. 9284 & 9285.

(No. 247 of 1855.)

From the Acting Political Agent in Kattywar, to Mr. Officiating Chief Secretary Young.

V. 9284.

Sir,

HAVING found it impossible to obtain reliable information from the various native authorities of this province to enable me to frame a return of cotton for the year 1854-55, with all the details required by the form which accompanied the letter from the Secretary to the Chamber of Commerce, No. 5, dated 25th January 1854, I have been obliged to content myself with the accompanying rough estimate,* which I have the honour to forward with reference to Government memorandum No. 916 of the 16th of February 1854.

I have, &c.

(signed) J. T. Barr,

Kattywar Political Agency, Camp Gogo,
23 October 1855.

Acting Political Agent.

ROUGH ESTIMATE of the Produce and Disposal of Cotton in Kattywar, for the Season of 1854-55.

No.	P R A N T S.	Produce of Foreign Cotton Cultivation.	Produce of Country Cotton in Candies of 784 lbs.				Disposal of Cleaned Cotton.	
			Cotton in Pods.	Pods therefrom.	Seeds therefrom.	Cleaned Cotton.	Retained for the Local Consumption of the Country.	Exported to other Countries.
1	Jhalowar - - - - -	-	90,000	22,500	45,000	22,500	5,000	17,500
2	Muchoo Kanta - - - - -	-	15,000	3,750	7,500	3,750	625	3,125
3	Hallar - - - - -	-	30,000	7,500	15,000	7,500	1,700	5,800
4	Burda - - - - -	-	5,000	1,250	2,500	1,250	200	1,050
5	Soruth - - - - -	-	40,000	10,000	20,000	10,000	1,500	8,500
6	Kattywar - - - - -	-	75,000	18,750	37,500	18,750	3,000	15,750
7	Gohelwar - - - - -	-	50,000	12,500	25,000	12,500	2,000	10,500
8	Oond Surweya - - - - -	-	1,500	375	750	375	75	300
9	Babriawar - - - - -	-	1,200	300	600	300	50	250
10	Okhamundel - - - - -	-	-	-	-	-	-	-
	TOTAL - - - - -	-	3,07,700	76,925	1,53,850	76,925	14,150	62,775

Kattywar Political Agency, Camp Gogo,
23 October 1855.

(signed) J. T. Barr,
Acting Political Agent.

* Rough estimate of the produce and disposal of cotton for the season of 1854-55 submitted.

1506 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 31 December 1856.—V. 9571 & 9572.

(No. 185 of 1856.)

V. 9571. From the Political Agent in Kattywar,* to Mr. Officiating Chief Secretary *Young*.

Sir,

WITH reference to your letter of the 8th October last, No. 3960, and its accompaniment, from the Secretary to the Chamber of Commerce, I have the honour to forward herewith a rough estimate of the produce of cotton in this province during the year 1855-56, showing, likewise, the quantity supposed to have been retained for local consumption and that exported to other countries. You are doubtless aware that these statements are framed from very imperfect information; but as the whole of last year's cotton will not be shipped from the different bundurs for another month, or more, it would, I fancy, be too late for the purpose for which they are required, to wait for returns of the quantity actually exported, which would, however, if it could be done, ensure greater accuracy.

I have, &c.
(signed) *W. Lang*,
Political Agent.

Kattywar Political Agency, Camp Buntlee,
13 December 1856.

ROUGH ESTIMATE of the Produce and Disposal of Cotton in Kattywar, for the Season of 1855-56.

No.	P R A N T S.	Produce of Foreign Cotton Cultivation.	Produce of Country Cotton in Candies of 784 lbs.				Disposal of Cleaned Cotton.	
			Cotton in Pods.	Pods therefrom.	Seeds therefrom.	Cleaned Cotton.	Retained for the Local Consumption of the Country.	Exported to other Countries.
1	Jhalawar - - - -	- - - -	1,15,000	28,750	57,500	28,750	5,000	23,750
2	Muchoo Kanta - - - -	- - - -	19,000	4,750	9,500	4,750	650	4,100
3	Halar - - - -	- - - -	37,500	9,375	18,750	9,375	1,700	7,675
4	Burda - - - -	- - - -	6,000	1,500	3,000	1,500	200	1,300
5	Sorut - - - -	- - - -	46,000	11,500	23,000	11,500	1,500	10,000
6	Kattywar - - - -	- - - -	90,000	22,500	45,000	22,500	3,000	19,500
7	Goelwar - - - -	- - - -	62,500	15,625	31,250	15,625	2,000	13,625
8	Oondsurweya - - - -	- - - -	1,900	475	950	475	100	375
9	Babreeawar - - - -	- - - -	1,400	350	700	350	50	300
10	Okhamundel - - - -	- - - -	- - -	- - -	- - -	- - -	- - -	- - -
	TOTAL - - - -	- - - -	3,79,300	94,825	1,89,650	94,825	14,200	80,625

Kattywar, Political Agency, Camp Buntlee,
13 December 1856.

(signed) *W. Lang*, Political Agent.

(No. 5152 of 1856.)

V 9572

COPY of the above papers forwarded for the information of the Chamber of Commerce, with reference to Government letter, No. 3962, dated the 8th October last.

24 December 1856.

(signed) *H. Young*,
Officiating Chief Secretary to Government.

* Sending rough estimate of the produce of cotton in Kattywar for 1855-56, and that exported, or still likely to be so.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1507

EXTRACT paras. 16 and 17 of Revenue Letter from the Governor of Bombay to the Honourable Court of Directors, dated 14 August (No. 80) 1848.

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Bombay.

Para. 16. The proceedings recorded under dates as noted in the margin * have reference to a request made by the Government of Scinde, in a letter of the 2d March 1846, to be supplied with a few maunds of American cotton seed, and 300 Mauritius sugar canes, which the Collector of Shikarpoor considered it desirable to introduce into Scinde. We accordingly forwarded to Kurrachee eight barrels containing 20 maunds of New Orleans cotton seed, obtained from the Government cotton farm in the Dharwar Collectorate.

Cotton Experiments, Scinde. Supply to the Government of Scinde of some American cotton seed and Mauritius sugar cane.

EXTRACT paras. 2 and 3 of Revenue Letter from the Honourable the Court of Directors †, dated 4 April 1849, No. 6, alluded to in Revenue Letter dated 31 August (No. 118) 1849.

2. We shall be glad to be informed of the result of these experiments.

REVENUE Letter from the Government of Bombay to the Honourable the Court of Directors, dated 31 August (No. 118) 1849.*

REFERRING to paras. 2 and 3 of your despatch No. 6, dated the 4th April last, we have the honour to transmit herewith copy of a letter, No. 1496, dated the 25th ultimo, from the Commissioner in Sind, and of its enclosures, from which your Honourable Court will perceive with regret that the results of the experiments made with the American cotton seed and the Mauritius sugar cane sent to that province from the Presidency in 1846 are not very encouraging.

(No. 1496 of 1849.)

FROM the Commissioner in Sindh to the Right Honourable Viscount Falkland, Governor and President in Council, Bombay, dated 25 July 1849.

My Lord,

I HAVE the honour to acknowledge the receipt of Mr. Acting Secretary Courtney's letter, No. 3351, of the 17th May last, calling for a report of the result of the experiments made with the American cotton seed and the Mauritius sugar cane supplied to this province from the Presidency in 1846, and in reply to transmit for the information of your Lordship in Council copies of the documents noted in the margin ‡, which contain all the information I have been able to collect relative to the results of the experiments in question, and which it will be perceived are not very encouraging; but at the same time the scale on which they were tried would seem to have been somewhat limited.

Kurrachee,
25 July 1849.

I have, &c.
(signed) R. K. Pringle,
Commissioner in Sindh.

(Copies.)

(No. 1719 of 1847.)

FROM the Collector and Magistrate of Shikarpoor to the Secretary to Sindh Government, Kurrachee, dated 6 December 1847.

Sir,

I HAVE the honour to forward a specimen of the cotton produced in the Roree Districts, from Sea Island seed; the cultivators are decidedly of opinion that this is not so profitable as the ordinary seed.

2. The

* Revenue Consultations 1846: 18 March, V. 2067 to 70; 18 March, V. 2324 and 25; 22 April, V. 3321 to 23; 28 April, V. 3670 to 72; 23 September, V. 6824 to 27.

† Stating that a supply of American cotton seed has been forwarded to Scind, and that some Mauritius sugar canes will be forwarded in the ensuing season.

‡ Letter from the Collector of Shikarpoor to the Secretary to Government, Scinde, No. 1719, of the 6th December 1847. Letter to Commissioner in Scinde from Collector of Kurrachee, No. 633, of 2nd June 1849, with accompaniment. Letter to Commissioner from Major Blenkins, C.B., late in charge Government Gardens, Kurrachee, dated 12th July 1849. Letter to Commissioner from Collector of Shikarpoor, No. 380, of 16th July 1849, with accompaniment.

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Bombay.

2. The produce of the foreign seed, in two separate patches, averaged 18½ seers; whereas the country seed in the same neighbourhood averaged above 4½ maunds of 40 pukka-seers per acre.

Collector's Office, Shikarpore, U. S.,
6 December 1847.

I have, &c.
(signed) P. Goldney, Major,
Collector and Magistrate, U. S.

EXTRACT of a Letter from Major *Blenkins*, in charge of the Kurrachee Experimental Garden, to *R. K. Pringle*, Esq., Commissioner in Sindh; dated 12 July 1849.

I WOULD beg to observe, that the cotton-seed sent up was found not to answer in the Kurrachee garden, from the attacks of an insect resembling the common weevil, of a very offensive smell; these insinuating themselves into the pods, and there depositing their eggs, greatly to the injury of the cotton; and on inquiry I ascertained that cotton never thrived within the influence of the sea breeze; but how far such is correct, I am unable, from my limited experience on this subject, to comment upon.

Revenue Department (No. 380 of 1849).

From the Collector of Shikarpore to the Commissioner in Sindh.

Sir,

IN reply to your letter, No. 1177, of the 30th May 1849, I have the honour to forward a copy of a report, by the Deputy Collector of Mehur, on the results of the American cotton sowing.

2. In a former letter, No. 1719, of 6 December 1847, I reported on the seed sown at Roree, with samples of the produce, as duly acknowledged by the late Secretary's letter, No. 3764, of the same month.

Collector's Office,
Shikarpore, dated 16 July 1849.

I have, &c.
(signed) P. Goldney, Major,
Collector, U. S.

(No. 151 of 1849.)

From the Deputy Collector of Mehur to the Collector of Shikarpore.

Sir,

I HAVE the honour to report, that very little of the American cotton seed, sent to Mehur, has been made use of by the Zemindars; and the produce of that sown has turned out so small, that I can find none who wish to cultivate any more.

2. The best crop that has been raised was on a piece of land, five beegahs in extent, by Hajee Saleah, zemindar of Mehur, in Peshrus, 1258; but even this only yielded at the rate of 80 lbs. of cleaned cotton, and 200 lbs. of seed per beegah; while from 105 lbs. of the same seed, sown in other parts of Mehur, some of the plants were cut off by the hot winds, and the rest, though they grew to a good size, never flowered. The five beegahs above mentioned yielded no cotton the second year.

3. The natives have probably understated the produce; but it is evident, from their refusing to sow more of the American seed, that it does not succeed with them; and, with a view to ascertain the real produce, I last year had a beegah of land sown, under my own superintendence. The first plants, on growing to about six inches high, were cut off by the hot wind. More seed was put in, and this time the plants grew most luxuriantly, and to three or four times the size of the native plants, giving every appearance of bearing a most abundant crop; but just before they were ready to pick, the pods were attacked by the worm which destroyed so much jowarree and other autumn crops last season, and only about 20 lbs. of damaged cotton were produced.

4. These small pieces of land were sown at Doobee last year, but destroyed by the worm; while the Sindh plant was very little affected.

5. The cotton yielded by the American seed, when uninjured by the worm, is very superior to the Sindhee, which is probably the worst in the world; but, as far as has been here ascertained, the American yields less, is liable to be injured by the hot winds, is more subject to the ravages of the worm, and, yielding no cotton the second year, is not calculated for growing in the manner usual here, namely, to sow the seed late, mixed with the jowaree, the cotton plants growing to about a foot high, but yielding no produce till the second year.

6. In conclusion I would add, that these remarks merely apply to the seed as it has been treated here; that is to say, precisely as the native; a mode of cultivation, perhaps, unsuited to the foreign, and which may account for the want of success.

Deputy Collector's Office,
Mehur, 14 July 1849.

I have, &c.
(signed) A. Young,
Deputy Collector.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1509

REVENUE LETTER from the Government of Bombay to the Honourable Court of Directors, dated 11th May (No. 43) 1850.

III.
Bombay.

WE beg to transmit herewith a copy of our proceedings, as noted in the margin, in consequence of a proposition to settle in India, should sufficient inducement offer, made, in a letter addressed to Colonel Outram by a Mr. Larking, a gentleman who has for many years been a resident in Egypt, and engaged there in the cultivation and preparation of cotton for the home market.

Cotton Experiments.
Offer made by Mr. Larking to settle in India as a cotton grower, &c. Rev. Cons., 1850, 6th March, V. 3236, to 39.

MEMORANDUM.

THE Revenue Secretary has the honour to place before the Honourable Board a letter, written under date 17 January 1850, by Mr. Larking to Colonel Outram.

2. As it is most important to the interests of the country that a person disposed, and apparently in a condition, to purchase cotton on the spot, and prepare it for the market, should have every facility afforded him of judging of the practicability of the objects he contemplates, and as it cannot be desired nor supposed that Mr. Larking should abandon his present operations in Egypt without a knowledge of how far it may be advisable to settle in a country entirely new to him, the Revenue Secretary suggests that Colonel Outram be authorised to inform Mr. Larking, that, in case he think fit to visit India for the purpose of examining the cotton districts, a free passage to and from Suez will be granted him in the Honourable Company's steamer.

28 February 1850.

(signed) *H. E. Goldsmid,*
Secretary to Government.

My dear Colonel,

Alexandria, 17 January 1850.

SINCE my return home, I have reflected seriously on the conversation we had at Cairo relative to the cultivation of cotton in India. These, added to what I have at different times heard from parties well acquainted with that country, confirm me in the opinions I have long since formed, that the experience I have acquired might be turned to far better account in India than in Egypt.

Settled as I have been for so many years in this country, and considering the very large amount of capital I have invested in agricultural pursuits, I should not for a moment entertain the idea of leaving it, but for the great change which has taken place in the government since the death of Mahomed Ali. Under his administration I met with every encouragement and assistance in introducing and carrying out an improved system of cultivation, and the success which followed was all that could be desired, particularly in the articles of cotton and flax, as you will find confirmed by the accompanying copy of an address from the leading Manchester cotton spinners to Mahomed Ali; but, since the government has fallen into the hands of Abbas, a complete revolution has taken place. His object appears to be to undo all that his grandfather had done; and, owing to his dislike in general to Europeans, I find that I am now thwarted and vexed to the same extent that I was formerly encouraged, and have the mortification to see all the improvements I was instrumental in introducing going rapidly to decay. Under these circumstances, you will not be surprised that I should feel inclined, even at some sacrifice, to change the scene of my labours, and that I should prefer the solid protection of the British flag to the capricious favour of an Eastern potentate; but, before taking such a step, it behoves me to see my way clearly, that I may not by too much precipitation make bad even worse.

My object, therefore, in writing to you is to request that you will obtain for me as much information on the question as you can. From your position in India you will perhaps be able to learn whether the Government are inclined to encourage the introduction of an improved system of cotton cultivation, and whether they are prepared to assist in the promotion of the same, and in what way that assistance would be granted.

The Indian Government has I believe already done much towards improving the growth of cotton, but, if I am correctly informed, the results are not yet such as could be desired. Never having been in India, and being ignorant of the mode of cultivation followed there, I am not in a position to form a judgment on the subject, or to say in what consists the cause of failure; but I cannot but think that if the same means were brought to bear in India which have been applied in Egypt, that similar results might be obtained, for, in our vast Indian empire, it is more than probable that some provinces may be found combining those elements which, when properly worked, have produced such superior cotton in Egypt.

You are perhaps not aware that the cultivation of cotton in Egypt is of modern date, and was introduced entirely by Mahomed Ali. Before his time, even the cotton for

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Bombay.

stuffing the divans was imported; at the present moment it is one of the most important articles of export, and commands at Liverpool a higher price than the average of American cotton. What the energy of one man did for Egypt, surely the Indian Government can do for India.

I am fully aware of the difficulties to be overcome in introducing a new system amongst a people so bigotted to the habits and customs of their forefathers as are the people of the East: but these difficulties I have seen overcome in one instance, and should not despair of seeing it done again, particularly if the strong arm of Government was brought to bear upon the question.

I will not longer trespass on your time at present. What I have written and what passed between us verbally is sufficient to put you in possession of my wishes. I will therefore conclude by asking your good offices in the right quarter to obtain for me the information I require. I will add, that, should it be thought advisable, I have no objection to visiting India for a few months, either to put myself in communication with those who have had practical experience in the country, or by inspection to ascertain to the best of my judgment which localities would be the best adapted for carrying out the system so successfully followed in Egypt.

Wishing you a pleasant voyage to Bombay, and with kind regards from all your friends at Alexandria,

Believe me, &c.
(signed) *J. W. Larking.*

To His Highness the Pascha of Egypt.

THE cotton spinners of Manchester and the neighbourhood approach your Highness with the most profound respect, and the undersigned believing that you are actuated by an enlightened policy, and are especially desirous of increasing the facilities of commerce between Egypt and Great Britain, beg to convey to your Highness the opinions which they entertain of one of the great staple products of your country, raw cotton wool, and to express their firm conviction that if the defects of that article as now existing were removed, not only would a relatively higher price for it be obtained, but an improved quality would lead also to an increased consumption of it.

Hitherto the cotton-wool of Egypt has combined qualifications of excellence and of inferiority in the same lot; and often in the same bale is found fine, long, and strong stapled cotton, with an extensive admixture of short, coarse, weak, discoloured, and decayed cotton, besides having large quantities of sand and seeds incorporated with it, thereby limiting the consumption of such cotton, and diminishing both the manufacturing and commercial value of it. The spinners of this district therefore respectfully call the attention of your Highness to these defects, and beg to suggest, that if only the clean and perfect portions of Egyptian cotton were sent to this country, such an improvement would greatly increase the number of consumers of it, and it would be applied to manufacturing purposes for which it is now unfit, and at the same time it would be made to yield as much higher a price in the market as its improved quality would entitle it to. It is submitted, that the first steps to adopt in improving Egyptian cotton would be to gather and select the clean and perfect portion of it very frequently, so that it would not be injured by long exposure to the sun.

That every attention should be bestowed upon the cleaning of it. That it should be kept in a place where it cannot become wet, and consequently decayed; that no sand or dirt should be permitted to be mixed up with it, that all coarse or rough stapled cotton should be avoided, and when produced should be packed separately, and that at all times cotton of the same quality should be kept together, and all qualities in their distinct classes sent to market.

That Egypt possesses the most eminent qualifications for attaining excellence and perfection in the cultivation of cotton, the spinners of Manchester have the satisfaction of testifying, and have seen and examined with great pleasure the specimens of improved cultivation shown to them by Mr. Larking, to whom they have personally explained their views, and to whom they refer for the further elucidation of their opinions.*

In directing the attention of your Highness to this subject, they are induced to view the importance of it not only with respect to advantages which this country may derive from the promotion of its manufactory, but also with reference to the beneficial results which Egypt would not fail to obtain, and they are strongly impressed with the practicability of your Highness being able to effect these desirable changes in the product of cotton-wool from the confidence with which your efforts to improve the cultivation and quality of flax have inspired them, and they have only now to express their hope that the same talent and energy

* The specimens alluded to in this paragraph were a lot of 60 bales of my own growth; it was valued at Manchester at 1s. 2d. per lb. at a time when ordinary Egyptian cotton was selling at 6d.

(signed) *J. W. Larking.*

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1511

energy which have placed the Egyptian* flax in so commanding a position, may be applied with the same beneficial results to the improvement of cotton-wool.

With profound respect, the spinners of Manchester and the neighbourhood remain,
Your Highness's obedient servants,

(signed)	Thomas Houldsworth & Co., employing 1,000 hands.	
	W. Connel & Co. - - - "	1,200 "
	M'Lean Williams - - - "	700 "
	T. Williams & Co.	
	S. M. Moore and Son - - - employing 400 hands.	
	J. Hunt and Son - - - "	400 "
	Gard and Bazeley - - - "	1,100 "
	Hy. and Ed. Ashworth - - - "	800 "
	P. A. Arrowsmith & Co. - - - "	600 "
	B Gray - - - - - "	600 "
	J. Kennedy & Co. - - - - - "	700 "
	R. Ogsden - - - - - "	600 "
	A. and G. Murray - - - - - "	1,000 "

November 1845.

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MINUTE by the Honourable Board.

I ENTIRELY approve of the proposal of the Revenue Secretary in regard to Mr. Larking, and if my colleagues concur with me, I would suggest that Mr. Larking should be written to, to the effect of Mr. Goldsmid's memorandum, by the mail which will leave this the day after to-morrow.

(signed) *Falkland.*
W. Cotton.
J. P. Willoughby.
D. A. Blane.

28 February 1850.

(No. 1,635 of 1850.)

Territorial Department, Revenue; Resolution, dated 1 March 1850.

Ordered, THAT extract from a memorandum by the Revenue Secretary, dated the 28th ultimo, and copy of a Minute by the Honourable Board of the same date, be transferred to the Marine Department, in order that the requisite instructions may thence be issued to the Commander-in-chief of the Indian Navy, for providing Mr. Larking with a free passage from and to Suez in the Honourable Company's steamers.

(signed) *H. E. Goldsmid,*
Secretary to Government.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 14 October (No. 88) 1850.

IN continuation of our letter of the 11th May last, No. 43, informing your Honourable Court of a proposition to settle in India, should sufficient inducement offer, made by Mr. Larking, a gentleman engaged in the cultivation of cotton in Egypt, we have the honour to annex extract from a letter and copy of its accompaniment addressed by Mr. Larking to Lieutenant-colonel Outram, and placed by the latter gentleman at the disposal of the Revenue Secretary.

EXTRACT of a Letter from Mr. *J. W. Larking* to Lieutenant-colonel *Outram*.

Alexandria, 4 July 1850.

I HAVE taken a long time to answer your many letters relative to my inquiries on cotton cultivation; at this you will scarcely be surprised knowing that the object I had in view was nothing less than that of disposing of all my property in Egypt, and investing the amount in India, a step which required much mature reflection before carrying it into execution. I have reflected seriously on the subject and examined it in all its bearings, and the conclusion I have come to is, that under the existing state of affairs it would be unwise in me to enter upon so large a risk, and that I had better continue to submit to the grievances

* This alludes to the great improvement in the quality of Egyptian flax consequent on the new system of cultivation, introduced at my suggestion and carried out under my superintendence, owing to which the price of Egyptian flax ran from 70, its former average, to 150 p. per cantar; but now that the new system has been abandoned by Abbas Pascha, the average has fallen again to 70.

(signed) *J. W. Larking.*

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Bombay.

grievances and vexations I am liable to here, rather than by too hasty a change, involve myself in others perhaps equally onerous.

Before writing more, let me beg of you to make my acknowledgments to Mr. Goldsmid, and others for their kindness in sending me the information I requested; it is most valuable. I have read the reports with the greatest attention. The Government has certainly given great encouragement to the experiments, but the results hitherto obtained are, in my opinion, very poor, particularly when compared with what has been done in this country. It is not this, however, which deters me from entering upon the speculation, for I feel as confident as ever, that by proper management cotton may be produced in India, equal in quality and quantity per acre to that of Egypt, but from conversations I have had with persons thoroughly acquainted with the interior of India, I have reason to believe that a settler in that country would find himself in a false position, particularly if not a servant of the Company's, and that although Government would to a certain extent encourage his undertaking, adverse influences might arise which would indirectly thwart and counteract the assistance of Government. It would be most distressing to me to find myself in such a position when too late to recede, and for this reason and no other, I think it more prudent to avoid the risk.

As it may be interesting to those connected with the cotton cultivation of India, to know to what point of perfection the cultivation of that plant has arrived in Egypt, I send you a statement showing the cost of cultivation and the produce of 20 acres of land sown with cotton, and the same calculation as regards a similar quantity of land in India; the latter taken from the reports sent me by Mr. Goldsmid. The difference is so great that, as regards India, the cultivation of cotton may be said to be a total failure. To what cause to attribute this failure, not having been in India, it is impossible for me to say; but if I may risk an opinion, formed by deduction, I should say that the fault was in the locality chosen for the experiments, and for this reason. The South Maharatta country is in about the same latitude as Sennaar; there the experiment was tried by Mahomed Ali and failed, the results being little better than those obtained at Dharwar, it was consequently abandoned, and confined to the Delta, where after some years of perseverance, cotton was produced abundantly, of a quality superior to the ordinary run of American cotton. The latitude of the Delta of Egypt is the same as that of the best cotton districts of America; may we not therefore come to the conclusion that such is the latitude most favourable to the development of the cotton plant, and infer that similar latitudes in Asia would produce the same results as in America and Africa, if so, it is evident that Sindh is the country to which the Indian Government ought to turn its attention, and I have little doubt, from all I have heard of that country, its soil and means of irrigation, that with proper management it would soon become a cotton-growing country, capable of competing with America.

Although, as I have said above, I have given up the idea of settling in India, I shall at all times be most happy to give any information to the Government relative to the mode of cultivating cotton in Egypt, should they deem it worth their attention to make any fresh trials. The partial failure of the cotton crop in America has caused to the Manchester and Glasgow spinners much alarm, and you will see that the question of cotton cultivation in India will be agitated more than ever. Mr. Bright, in the House of Commons, has already brought forward a motion relative to it, and depend upon it more will be done.

(True Extract.)

(signed) *H. E. Goldsmid,*
Secretary to Government.

COST of cultivating 20 acres of Cotton in India, calculated upon the most favourable data, taken from a printed Report entitled, "Cotton Experiments in the Southern Maharatta Country, from 1830 to 1848," and a Paper entitled, "Queries regarding Cotton Cultivation, Dharwar."

Land rent on 20 acres	- - - - -	Rs.	a.	p.
Cost of cultivation	- - - - -	20	-	-
Picking	- - - - -	5	-	-
Ginning, at 4½ rupees per candy	- - - - -	5	11	-
		Rs.	50	11 -
Produce,—				
Twenty acres, at 50 lbs. of clean cotton per acre, 1,000 lbs.,				
at 75 rupees per candy of 784 lbs.	- - - - -	98	-	-
Deduct cost of cultivation	- - - - -	50	11	-
Would leave profit	- - - - -	Rs.	47	5 -

Or, about Rs. 2. 5 a. per acre.

N.B.—Mr. Mercer calculates the profit upon an acre of land cultivated in cotton at only 1 r. 0 a. 5 p. See paragraph 83 in Cotton Experiments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1513

Cost of cultivating Twenty Acres of Land in Cotton in Egypt, calculated in English Money.

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	£.	s.	d.
Miri or Government land tax - - - - -	12	-	-
Proportion of poll tax - - - - -	1	10	-
Wear and tear of cattle and agricultural implements, reckoned at 25% on the cost - - - - -	12	10	-
Fodder for cattle for one year - - - - -	42	-	-
Labour, such as ploughing, hoeing, watering, &c. - - - - -	10	-	-
Picking cotton - - - - -	5	-	-
Ginning - - - - -	7	10	-
Packing, bale cloth, &c. - - - - -	4	10	-
Carriage to Alexandria - - - - -	3	-	-
	£.	98	- - *
Produce,—			
<i>N.B.</i> —The cantar is about 97 lbs. English; 20 acres at 4½ cantars per acre, 90 cantars at \$ 9 dollars per cantar; \$ 810, or - - - - -		162	- -
Showing a profit of - - - - -		64	- -

Or, about 3 l. 4 s. 0 d. per acre.

The produce of cotton varies according to the mode of cultivation, from three to seven cantars per acre. In the cost of cultivation, I have charged the most expensive mode of tillage and management, which would naturally produce the largest quantity, or seven cantars per acre, but to be on the safe side, I have taken the crop at rather under the average.

The same remark is applicable to the price in the above statement; I have fixed it at the market price of Alexandria for good ordinary cotton, whereas cotton cultivated in the manner implied by the cost in the above statement would produce a superior article, in proof of which I have, within the few last days, sold my own crop at 16 dollars per cantar.

(True Copy.)

(signed) H. E. Goldsmid,
Secretary to Government.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 17th February (No. 22) 1851.

WITH reference to our letter, No. 88, dated 14th October last, we beg to transmit herewith copy of a letter from the Commissioner in Sindh and of its accompaniments, suggesting that experiments be tried in that province with New Orleans, Egyptian, and Sea Island cotton seed.

2. We beg to request that your Honourable Court will forward, as soon as possible, a quantity of Sea Island cotton seed.

3. From the documents noted in the margin, your Honourable Court will perceive that we have desired the collector of Belgaum to supply us with some New Orleans, and Mr. Larking and the Honourable Company's agent in Egypt with some Egyptian cotton seed for transmission to Sindh.

4. We refer your Honourable Court to our Secretary's letter of this date, No. 1421, to the Commissioner in Sindh, for our sentiments regarding the proposed experiments with New Orleans cotton seed, and Mr. Frere's suggestions that "each collector be requested to purchase and forward to Bombay, on account of Government, a large sample, say 200 bags of such cotton, as his collectorate produces, for transmission to England, with a view to obtain a broker's report on its quality and value."

* In this calculation, the cost and keep of the cattle for the whole year is charged upon the 20 acres of cotton, although they would not be employed upon that crop more than six months; during the other six months they would be turned to account in other work upon the farm.

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Bombay.

(No. 195 of 1851.)—Revenue Department.

From the Commissioner in Scinde to the Right Honourable Viscount Falkland,
Governor and President in Council, Bombay.

My Lord,

IN transmitting the accompanying copy of correspondence noted in the margin,* with reference to Mr. Secretary Goldsmid's letter, No. 7517, dated the 14th October last, I have the honour to request that your Lordship in Council will be pleased to cause that a portion of each kind of any cotton seeds that may now be procurable, be sent to Kurrachee for transmission to the collectors, for the purpose of giving each species a trial, and that in particular the seeds enumerated in para. 8 of Captain Rathbone's letter of the 2d November last, may, if possible, be procured for him.

2. I would also beg to suggest that each collector be requested to purchase and forward to Bombay, on account of Government, a large sample, say 200 bags, of such cotton as his collectorate produces, for transmission to England, with a view to obtain a broker's report on its quality and value.

I have, &c.

(signed) H. B. E. Frere,
Commissioner in Scinde.

On River Indus, 5 February 1851.

(No. 1770 of 1850.)—Revenue Department.

To the Three Collectors.

Sir,

IN transmitting for your information the accompanying copy of a letter from Mr. Secretary Goldsmid, No. 7517, dated the 14th instant, with enclosure, I have the honour to request that you will favour me with information as to the produce and cost of cotton cultivation in your districts as compared with those in Egypt, as stated by Mr. Larking, and your opinion as to whether, by any improved system of culture, it might be brought to realise that gentleman's conjecture, founded on the presumed similarity of climate in the same latitudes.

I have, &c.

(signed) R. K. Pringle,
Commissioner.

Kurrachee, 25 October 1850.

(No. 868 of 1850.)—Revenue Department.

From the Collector of Hyderabad to the Commissioner in Scinde, Kurrachee.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1770, of the 25th instant, with enclosure, on the subject of cotton, and in reply to submit that the cost of cotton cultivation here does not exceed that of the ordinary grain cultivation, and, exclusive of purchase of cattle and implements, may be taken at about a rupee and ten annas a beegah, over and above the land rent, which is for the beegah a rupee and six annas.

2. The produce in a fair season is stated to be about two maunds of pod per beegah, and the yield of that on cleaning would be half a maund of cotton fit for use.

3. Very little cotton, however, is grown here; not perhaps more than a thousand beegahs in all, and that chiefly in very small patches, by cultivators, for their own use. The reasons for this are two: first, that the few cotton cloths made in Scinde by professional weavers are chiefly made of imported yarn, and there is, consequently, very little demand for the raw material; and, secondly, that the crop is a precarious one, owing to the species of cotton plant cultivated here being one wholly unsuited to the climate of Scinde.

4. The species cultivated in Scinde appears to be the *Gossypium herbaceum*, a kind which is unable to bear any great amount of cold, and the consequence is, that the cutting winds of the cold season invariably kill it. Whenever, therefore, these commence at all earlier than usual, the crop is lost; and indeed a chopping round of the wind to the northward, at a less advanced period of the year, often creates considerable damage to it.

5. But

* * Circulars to Collectors, dated 25th October 1850. From Collector of Hyderabad, No. 868, dated 2d November 1850. From Collector of Hyderabad, No. 925, dated 2d December 1850. From Collector of Hyderabad, No. 59, dated 29th January 1851. From Collector, Shikarpore, No. 16, dated 6th January 1851.

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5. But while this species is unsuited to Scinde, the Egyptian cotton, which I take to be a variety of the Sea Island kind, and to belong to the species *Gossypium Barbadense*, seems to be admirably fitted for it. The hottest weather does not affect it, and the northern blasts of winter, instead of injuring, appear to give it additional life and vigour. It is longer, to be sure, in coming to perfection; the first year it does not yield cotton at all, and the second year but a scanty crop, but after that the yield is far greater than that of the common cotton; the fibre is much longer, the texture of it more silky; there is double the proportion of fibre to seed in it. The expense of the cultivation would be less, and the wool, being fitted for the finest fabrics, would, of course, command a much higher price. The only point required is, that it must be grown in a situation to admit of irrigation throughout the year.

6. Such is the information I am able to afford on this subject from observation of the Egyptian cotton plants that have been grown here. These, however, are few in number, not exceeding a dozen, and have been cultivated in gardens as curiosities, and not with a view of deriving profit from them. Indeed, the wool, which is much prized, has always been given away. They are the produce of some seeds I got from Egypt about seven years ago, and the oldest of them have borne a considerable quantity of cotton annually after the first and second years for that period.

7. If Government are anxious to try the experiment on a larger scale, I can very easily make it to the extent of from 50 to 100 beegahs, without entailing any expense on the State whatever. I would devote a beegah or two to it at each of the Government gardens, and there are several natives here having private wells and gardens who would very gladly take in a beegah or two of the Government land adjoining, and crop it with cotton, on condition of being exempt from rent for it till the bushes began to bear a full crop, or, in other words, for the first two years; and with the abundance of waste land that there is in Scinde this could hardly be said to entail any charge on Government. I have no doubt myself that the result would be successful, but if otherwise, nothing would have been lost by the attempt; while if successful, there would be no difficulty in spreading the cultivation to any extent that was desired, the Government becoming the purchaser at a rate which would guarantee it against loss, until enough was grown to induce the establishment of private agencies for the purpose, which would not, when there arose a field for them, be found to be long in springing up.

8. I have, in conclusion, to state, that should the Government feel disposed to make the experiment in the manner and to the extent proposed by me, I shall require to be supplied with five or six maunds of seed, half of which should, if possible, be American black cotton seed, of the Sea Island kind, and the other half Egyptian, of the kind found to succeed best there; both, I believe, as I have said before, to belong to the same species, the *Gossypium Barbadense*; still there may probably be some difference between them in quality, and I should like, therefore, to have some of each. But whatever seed is sent me, it should be sent me as soon as possible, for we are now within but a little more than two months of the proper season for this kind being sown.

Hyderabad, Collector's Office, 2 November 1850. I have, &c.
(signed) A. B. Rathborne,
Collector.

P. S.—The beegah spoken of by me above, is the Scinde beegah, which is a little more than half an acre, and the maund is the Indian maund of 40 pukka seers.
(signed) A. B. Rathborne.

No. 925 of 1850.—Revenue Department.

From the Collector of Hyderabad to the Commissioner in Scinde, Kurrachee.

Sir,

IN continuation of my letter, No. 868, of the 2d ultimo, on the subject of cotton, I have the honour to inform you, that I have since learnt, from undoubted authority, that cotton grows wild in Scinde all along the range of hills at the back of Kotree.

2. This fact proves the theory of Colonel Outram's Egyptian correspondent to be true, that Scinde has a climate naturally adapted for the growth of the plant.

Hyderabad, Collector's Office, Allayarka Tunda, 2 December 1850. I have, &c.
(signed) A. B. Rathborne,
Collector.

No. 59 of 1851.—Revenue Department.

From the Collector of Hyderabad to the Commissioner in Scinde, Kurrachee.

Sir,

I HAVE the honour to forward a sample picked last month of the cotton grown here from Egyptian seed alluded to in the 5th and 6th paras. of my letter, No. 868 of the 2d November last.

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2. This,

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2. This, however, I imagine to be inferior to what the produce of this kind of cotton, if regularly cultivated, would be, as Egyptian cotton is said, I am told, to deteriorate somewhat in quality, as well as quantity, after the fourth year.

Hyderabad, Collector's Office,
29 January 1851.

I have, &c.
(signed) A. B. Rathborne,
Collector.

No. 16 of 1851.—General Department.

From the Acting Collector, Upper Scinde, to the Commissioner in Scinde, Kurrachee.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 1770, of the 25th October last, calling for information as to the cost and produce of cotton cultivation in this collectorate.

2. The extent and cultivation of this article in Upper Scinde during the last two seasons has been as follows:—

1848-49	-	-	-	-	-	-	-	-	27,780	beegas.
1849-50	-	-	-	-	-	-	-	-	27,091	ditto.

the beega being 2,500 square yards, or little more than half of the English acre, and assessed at Rs. 1. 9. 6. for the crop.

3. In the absence of the periodical rains elsewhere known throughout India, the cotton here is grown from irrigation, which is of two kinds, either in water raised from wells, or canals by wheels, or from the direct overflowing of the Indus; the former description is confined principally to the Shikarpoor and Larkhanah districts, and the latter to those of Sukkur and Mehur. In both cases the plant is biennial; but in very favourable situations a crop has been taken from the same plants for three successive years, an occurrence, however, which is by no means common.

4. Cotton grown from canals or wells is usually, in the first season's planting, sown about the end of April, and plucked in the beginning of August, that grown upon inundated lands being sown and gathered about two months earlier. In both cases, after the pods are picked, the plants are left to themselves, until, when the spring again comes round, they are pruned, trimmed, and made ready for the second yield, which seldom fails of being nearly as abundant as that obtained the first season.

5. There is no doubt that the facilities for cotton cultivation in this part of Scinde are very great, and, in the event of a never-failing supply in the periodical inundation, that the article might be grown to any extent required, the general cheapness of labour, and the little expense attending the growth of the plant during the second season of its existence, affording facilities for such a result not so universal in other parts of the Presidency. The chief, and in the event of the irrigation being insured, the only evil which the plant has to contend against, and in respect to which little or no provision can be made, is the hot winds, which prevail in their greatest severity during the period it is in flower, and whereby much damage is at times occasioned by the latter being scorched up, and perishing. The evil might be guarded against, and perhaps mitigated, by the cultivation being limited to sheltered situations; but this could only be partially successful, and would moreover confine the culture of the crop within a limit little commensurate with the expanded sphere over which it is desired it should extend.

6. It has been a matter of much difficulty to ascertain with any degree of exactitude the general cost of cultivation, and the average amount of produce realised, as none of those parties whom I have consulted agreed in the opinions they expressed, and even the results of their experience to be gained from the zemindars themselves vary considerably according to the division of the collectorate within which they reside. I am disposed, however, to consider that the following may be taken as a very fair specimen of a favourable year:

	Rs.	a.	p.
Cost of cleaning one beega -	-	-	12
Ploughing -	1	4	-
Seed -	-	-	2
Watering -	4	-	-
Weeding and hoeing -	-	8	-
Gathering -	2	-	-
Government rental -	1	9	6
Total Cost - - - Rs.	10	3	6
Produce of one beega in a good season, one maund or 80 lbs. of roosee or clean cotton, at 11 ½ rupees per maund -	11	8	-
Profit - - - Rs.	1	4	6
Value of three maunds of seed, at ten annas per maund	1	14	-
TOTAL Profit per Beega - - - Rs.	3	2	6

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TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1517

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7. Taking, therefore, this as a result of a good crop in a good season, and for the sake of average in good and bad seasons, and the different varieties of land under tillage, diminishing it by one-third, the out-turn and profit on cultivation may be considered satisfactory, and sufficient to warrant our giving the subject every attention; for there is no doubt the Scinde cotton, though perhaps at present the worst in the world, and very inferior to that of Hindoostan, would, under increased care and an improved system of agriculture, turn out of very superior quality to the article it now is.

8. Some American cotton seed was received in this Collectorate in 1846, and in the spring of 1847 a field of about ten beegas was sown with it near Mehur, and the result was favourable; for the zemindar to whom the seed was given, and who is more likely to under than over-rate the produce, admits that it yielded about 320 lbs. of kuppas per beega, which would give nearly 80 lbs. of cleaned cotton, and this was of a staple very superior to the indigenous growth of the country. Subsequent experiments from the same seed proved entire failures, owing to worms having attacked the pods; while the native cotton remained uninjured. These trials cannot, however, be considered in any way conclusive, as, from the little trouble bestowed upon cotton cultivation here, it has never received fair play; and Mr. Lester, at Sukkur, informs me that some American seed which he had sown in his garden there, came up most luxuriantly, the shrubs being about six feet high, and the yield most abundant; I have, however, as far as that is concerned, passed through fields of the indigenous cotton with the plants as high as my shoulder.

9. I am therefore of opinion that some experiments on a small scale might be made with great advantage in this collectorate, and, with this view, would recommend that Government be requested to despatch a supply of acclimated American seed, as also some Egyptian seed, in order that the adaptation of the two varieties to the soil and climate may be fairly and fully tested. The latter of the two would, I imagine, from the similarity between the two provinces, and the absence of rain in each, be most likely to succeed; and if accompanied by the necessary instructions as to the mode of culture, no exertions should be wanting on the part of the local officers to make it so.

Camp Gotkee, 6 January 1851.

I have, &c.
(signed) G. Inverarity,
Acting Collector, Upper Sind.

No. 1417 of 1851.—Territorial Department, Revenue.

To Captain Johnson, Honourable Company's Agent, Alexandria.

Sir,

I AM directed by the Right Honourable the Governor in Council to request you will have the goodness to receive charge of, and forward to Bombay, as soon as possible, a supply of cotton seed, which Mr. Larking has been requested, in a letter enclosed in the accompanying packet, to make over to you for the purpose.

2. Government request that, in the event of Mr. Larking not being at present in Egypt, you will have the goodness to open the accompanying packet, and endeavour to obtain and furnish the seed and directions applied for.

3. You are also requested to have the goodness to pay all expenses incurred by Mr. Larking and yourself, and draw a bill on this Government for the amount.

Bombay Castle, 17 February 1851.

I have, &c.
(signed) H. E. Goldsmid,
Secretary to Government.

No. 1418 of 1851.—Territorial Department, Revenue.

To J. W. Larking, Esq., Alexandria.

Sir,

LIEUTENANT-COLONEL OUTRAM having furnished me with extracts from the letter you addressed him under date 4th July 1850, on the subject of cotton cultivation in India, I placed the same before the honourable Board, and received their instructions to forward a copy of those extracts to the late Commissioner in Sindh and the Revenue Commissioners of the older provinces in this Presidency.

2. Copy of a letter from the present Commissioner in Sindh, and its accompaniments, is herewith forwarded, with a request that you will have the kindness to procure, and to furnish Captain Johnson, the Honourable Company's Agent, for immediate transmission to Bombay, with a supply of cotton seed of the description which, in your opinion, may be best adapted for the climate of Sindh, and sufficient in quantity for experiments to be made in all

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all parts of that province (and not to the limited extent suggested in the accompanying papers). At the same time you would, perhaps, have the goodness to furnish this Government with a paper of instructions as to the mode of culture which, in your opinion, may be best adapted for the several descriptions of seed you may furnish.

3. Captain Johnson will pay on account of this Government all expenses incurred.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 17 February 1851.

No. 1419 of 1851.—Territorial Department, Revenue.

To *H. W. Reeves, Esq.,* Collector of Belgaum.

Sir,

THE Right Honourable the Governor in Council has directed me to request that you will immediately forward to the Collector of Customs at the Presidency, for transmission to the Commissioner in Sindh, a small quantity of New Orleans cotton seed.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 17 February 1851.

(No. 1421.)

To *H. B. E. Frere, Esq.,* Commissioner, Sindh.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 195, dated the 5th instant, with accompaniments, and to inform you, in reply, that the Collector of Belgaum has this day been requested to forward to the Presidency, for transmission to you, a small quantity of New Orleans cotton seed. The Honourable Company's Agent in Egypt and the Honourable Court have also this day been written to for Egyptian and Sea Island seed.

2. As it appears doubtful, from what is stated in the papers accompanying your letter under reply, whether the New Orleans variety will prosper in Sindh, Government consider it desirable that the ryots should not be requested to grow it until experiments have been made by the Collectors, as otherwise the ryots might get a distaste for such experiments, and not be inclined to take and give a trial to the Egyptian and Sea Island kinds. The experiments should not be made in particularly favoured localities by the Collectors, but on ground such as is available for the cultivation of the plant throughout the province.

3. His Lordship in Council approves of your suggestion in para. 2, so far as regards the transmission of 200 bags of cotton to Bombay. On its receipt, a portion will be sent to the Chamber of Commerce, and the rest to the Honourable Court.

4. You are requested to report how the cotton is freed from the seed.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 17 February 1851.

REVENUE LETTER from the Government of Bombay to the Honourable Court of Directors, dated 10th April (No. 50) 1851.

WITH reference to para. 3 of our letter of the 17th February last. No. 22, we beg to inform your Honourable Court that we have been favoured with a communication from Mr. Larking, of which we annex a copy, relative to the cultivation in Sindh of Egyptian cotton seed.

2. A quantity of that seed, procured by Mr. Larking, and transmitted by the Honourable Company's agent at Alexandria, has also been received by us and despatched to the Commissioner in Sindh.

To *H. E. Goldsmid, Esq.,* Secretary to Government, Bombay.

Sir,

I HAVE received your letter of the 17th February, No. 1418, of 1851, by which I am happy to learn that the suggestions I made to Colonel Outram by my letter of the 4th July 1850, relative to the cultivation of cotton in Scinde have been considered worthy the attention

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1519

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attention of the members of Government, and approved by Mr. Rathborne, the Collector of Hyderabad, to whose opinion from his local knowledge I attach great importance.

I have lost no time in procuring from the interior a small quantity of the best description of Egyptian cotton seed, and have arranged with Captain Johnson, the Honourable Company's agent at Alexandria, for forwarding the same by the mails of this month.

I also enclose a memorandum showing the mode of cultivating cotton in Egypt, which I trust may be of use.

I beg to assure you that it will at all times afford me pleasure if I can be of any use in forwarding the views of the Bombay Government as regards their attempt to improve the cultivation of cotton in India.

Alexandria, 17 March 1851.

I have, &c.
(signed) *J. W. Larking.*

MEMORANDUM relative to the mode of cultivating Cotton in Egypt.

DURING the months of December, January, and February (according to weather, and the earlier the better), the land is ploughed, cross ploughed, and reploughed with a plough which breaks the soil to the depth of nine inches; in this state it is left to the influence of the rains and irrigation till the month of March, when deep furrows are drawn the length of the field by two ploughs, one following the other; the furrows to be about four feet apart.

These furrows are then cleared out by the hoe, so as to allow a free passage for the water employed in irrigation.

The cotton seed is then sown on one side of the furrow in the loose soil thrown out by the plough and the hoe, in making the furrow; it is dibbled in at the distance of 18 inches (more or less, according to soil), four or five seeds in each hole, and watered as soon as possible.

This watering is generally sufficient till the plant has reached the height of four or five inches; the first hoeing then takes place, and the plants thinned out by the hand wherever more than two plants have come up from the four or five grains of seed deposited in each hole, taking care to leave the strongest plants.

Immediately after this operation the second irrigation takes place.

It is then irrigated about once a month, till the seed pod begins to ripen, which for cotton sown in March generally commences in August and ends the middle of December. The plants are then grubbed up, and the land prepared for a grain or green crop. The above is the mode of cultivation followed in Egypt by the most experienced cotton growers; but no doubt some modifications would be advisable to meet difference of climate, soil, &c. &c.

Alexandria, 17 March 1851.

(signed) *J. W. Larking.*

No. 3706 of 1851.—Territorial Department, Revenue.

To *H. B. E. Frere*, Esq., Commissioner in Sindh.

Sir,

WITH reference to my letter of 17th February last, No. 1421, I have been directed by the Right Honourable the Governor in Council to transmit to you herewith copy of a letter from Mr. Larking, dated 17th ultimo, and of its accompanying memorandum, and of my reply of this day's date, No. 3767, as also four small casks of Egyptian cotton seed received from that gentleman through the Honourable Company's agent at Alexandria.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 5 April 1851.

No. 3707 of 1851.—Territorial Department, Revenue.

To *J. W. Larking*, Esq., Alexandria.

Sir,

I HAVE been directed to acknowledge the receipt of your letter of 17th ultimo, with its accompaniments, and to convey to you the best thanks of the Right Honourable the Governor in Council for the same, and for your kindness in procuring the cotton seed. Four small casks have been received from the Honourable Company's agent at Alexandria, and will be despatched to the Commissioner in Sindh.

2. His Lordship in Council has instructed me to acquaint you that you will be informed as to the success of the experiments made with the seed, when the results are communicated to Government by the Commissioner.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 5 April 1851.

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REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 15 May, No. 70, of 1851.

Honourable Sirs,

WITH reference to our letter, No. 50, dated the 10th ultimo, we beg to transmit, for the information of your Honourable Court, the accompanying copy of a letter from the Commissioner in Sindh, No. 602, dated 19th idem, and its accompaniments; and as also of our Secretary's reply to Mr. Frere, No. 5012, dated the 7th instant, relative to the growth of cotton in Sindh.

No. 602 of 1851.—Territorial Department, Revenue.

FROM the Commissioner in Scinde to the Right Honourable Lord Viscount Falkland, Governor and President in Council, Bombay.

My Lord,

IN continuation of the correspondence noted in the margin * on the subject of the growth of cotton in Scinde, I have the honour to forward copy of a letter from the Collector of Kurrachee and its enclosures, reporting on the subject in relation to his collectorate.

No. 654, dated 4th April 1851.

2. I take this opportunity of mentioning the few facts which I noted bearing on this subject during my late visit to Upper Scinde.

3. The plant and mode of culture seem both to differ from those usual in India; but on these points Dr. Gibson, who gave much attention to the subject when lately in Scinde, will be able to give better information than I can.

4. I would observe, however, that as artificial and constant irrigation is the rule of cultivation in Scinde, and not, as in India, the exception, many varieties may perhaps be profitably cultivated here, which have been abandoned in India, owing to the impossibility of cultivating them without irrigation.

5. The production of cotton in Scinde is not equal to the demand, chiefly for local manufactures of coarse cloth. This is especially the case in Upper Scinde, where upwards of 13,500 acres are cultivated. The deficiency is supplied by cotton imported from India by sea and up the river, besides a very considerable quantity brought across the desert from Jesulmere on camels, and sold at Korea. There is a considerable exportation of raw cotton and coarse yarn to Cutchee and the other Khelat provinces.

6. To the question, "Why, with such soil and water, both well adapted to cotton, and able to produce cotton whenever they chose to sow it, they did not grow and export it instead of grain, which is with difficulty saleable?" The cultivator's usual answer was, 1st, "that they preferred grain, because they could partially subsist on it while green, and before it was sold; whereas the cotton was of no use in feeding them till it was picked and sold;" and, 2dly, "that the system of assessment, by a division of the produce, operated more unfavourably to the cultivator when the crop was a small quantity of a high-priced commodity like cotton, than when it was a large quantity of cheap grain;" the former being the usual reply.

7. My own impression was, that under a good system of assessment the production of cotton in Upper Scinde would rapidly increase. A moderate fixed assessment will, I am of opinion, do more than measures like that alluded to at the end of Captain Partridge's report. I have pointed out to that gentleman the impropriety of his orders, and requested him not to repeat them.

8. Dr. Gibson judged that the appearance of the Delta promised very favourable results to the cultivation of cotton, considering that it manages to exist even in the arid salt land and clay of Kurrachee; and it will be seen that Captain Stewart, who has been long in charge of those districts, concurs with him.

I have, &c.
(signed) H. B. E. Frere,
Commissioner in Scinde.

Kurrachee, 19 April 1851.

* No. 195, of 5th February 1851, with accompaniments.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1521

No. 604 of 1851, Revenue Department.

From the Collector of Kurrachee to the Commissioner in Scinde.

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Sir,

I HAVE the honour to acknowledge the receipt of your predecessor's letter, No. 1770, dated 25th October last, with accompanying copy of a letter from Mr. Secretary Goldsmid, with enclosures, requesting information as to the cost and produce of cotton cultivation in my collectorate as compared with those of Egypt, as detailed by Mr. Larking; and inquiring whether, by any improved system of culture, it might be brought to realise that gentleman's conjecture, founded on the presumed similarity of climate in the same latitude.

2. In reply, I beg to report that, having forwarded copies of the above-mentioned documents to my deputies, I herewith transmit copies of their replies, together with the following remarks, for your information, and for submission to Government.

3. Captain Stewart, Deputy Collector of Gorabarree, reports, that cotton cultivation has not as yet had a trial in the districts under his charge; and as these compose the greater part of the Delta of the Indus, it is impossible at present to institute a comparison as regards their fitness for the culture of cotton between the Scindian and Egyptian Deltas. Captain Stewart, however, states that he has made arrangements for interesting some of the principal zemindars of his districts in the question; and that he hopes with their assistance and his own exertions to be able to test, by actual experiment, the capabilities of the soil for the produce of the cotton during the ensuing season. He expresses himself sanguine of success.

4. A great similarity has been frequently remarked in point of climate, formation and mode of irrigation, between the deltas of Egypt and of Scinde; but as regards its adaptation to the culture of the cotton plant, I fear that on trial the latter will be found very inferior to the former. In the first place, the soil deposited by the Nile is considered by Dr. Wilson and other competent judges of a richer quality than that deposited by the Indus; the Delta of the former is of more ancient formation, and has been under culture from time immemorial, from which causes, and others hereafter mentioned, the soil would appear to be far less impregnated with saline matter than that of the Indus. In point of position the former has greatly the advantage; its shores have merely to repel the comparatively placid and tideless waves of the Mediterranean; whereas those of the latter, along their whole extent, are exposed to the full forces of the ocean, which at every tide overflows a considerable portion of the soil, while its waters rush for miles up the numerous creeks and smaller branches of the river, rendering the fresh water contained in the latter, brackish and the soil salt, and altogether unfit for agricultural purposes during the greater part of the year. Heavy dews, which are considered by the natives as highly prejudicial to the cotton plant, usually fall at night, and these, combined with the dust storms during the day, disqualify, in my opinion, this part of Scinde for the successful culture of the cotton plant. The Sea Island variety, which is said to thrive well in the neighbourhood of the sea, might perhaps succeed in this locality, and I would beg to recommend that a good supply of seed of this description be procured for trial.

5. The soil of Middle and Upper Scinde, extending on both sides of the river from Kotree upwards, is considered by the natives as best adapted to cotton cultivation. The greater part of the cotton grown in Scinde is produced in those districts, and it is there that I would beg to recommend that efforts be made to extend the culture of the plant.

6. The cost and produce of cotton cultivation, as carried on under native management in their respective districts, seem to be correctly ascertained by Captains Partridge and Dunsterville; their reports correspond with those which I have received from the cultivators and native officials: I am, however, of opinion that no satisfactory data will be obtained until experiments have been made under a European superintendent, well skilled in the culture and management of the cotton plant, and I trust that the services of some duly qualified person may soon be rendered available for this purpose. In the meantime should it meet with your approval, I would recommend that Collectors and their deputies be instructed to commence at once to make experiments on a small scale, by cultivating, under their immediate superintendence, 10 or 12 acres of such land as they may consider most suitable with foreign and indigenous cotton, and that seed of the New Orleans, Sea Island, and such other varieties as are most esteemed in the market, be obtained from Bombay for the purpose. The cotton raised in this manner should be carefully cleaned and transmitted, with a memorandum of all expenses incurred in its culture, to the Chamber of Commerce, for examination and report: small grants of land, free of rent for a certain number of years, might also be made to a few of the superior zemindars in each collectorate, on condition that they sowed the foreign seed provided for them, and followed the instructions given for preparing the land, sowing the seed, picking and cleaning the cotton, &c., and that they sold the produce to Government at a fair valuation.

7. In conclusion, I beg to state, that the whole extent of land cultivated with cotton in the year 1849-50 in my collectorate was 3,863 beegahs 13 wiswas, Nubia measure, the produce of which, I regret to say, I have no means of ascertaining.

Kurrachee, Collector's Office,
4 April 1851.

(signed)

I have, &c.

H. W. Freedy, Captain,
Collector of Kurrachee.

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(No. 164 of 1850.)

From the Deputy Collector of Ghorabarree to the Collector of Kurrachee.

Sir,

I HAVE the honour to acknowledge the receipt of your letter of the 1st instant. No. 1884, in the Revenue Department, enclosing copies of correspondence on the subject of the cotton culture in Egypt, and requesting my report as to whether it would succeed in the districts under my charge. I beg, in reply, to inform you, that the cultivation of cotton has had no trial as yet. The subject had my attention a few months ago, when apprehensions regarding a scarcity of the article were entertained; but it was too late in the season to admit of the necessary arrangements being made to give effect to the trial it deserves.

2. The district of Syatree, Garka, Sakra, and Ghorabarree comprises the most important portion of the delta of the Indus, on the right bank of the sutta or main stream, as it is there denominated, the two last-mentioned districts being the most productive, and forming the lowest part of it. The products of these now consist of rice, wheat, bajree, barley, nangley, moong, sugar-cane, and tobacco, with a few other grains, in small quantity. Of this the rice formed almost the only product of this part of the Delta, on our first taking possession of the country; and it was then the opinion of the inhabitants that the soil, climate, and sea air were obnoxious to the culture of any dry grains whatever, and that therefore they were not grown. The fallacy of this has been satisfactorily proved, and, by perseverance, the culture of dry grains has been yearly increasing.

3. From the account of the Nile Delta, afforded by Mr. Larking, and of its suitability for cotton culture, and with reference also to its similarity to the Indus Delta, in point of climate, means of irrigation, and general features, I consider it very probable that cotton might be found to succeed quite as well as the other products, which, to the natives four years back, seemed impossible.

4. That the cotton plant grows well even in the most southern parts of the Delta, there can be no doubt; but it is only to be met with in a few straggling bushes on the margins of fields, or on watercourses. In the few instances of its having been regularly sown, it has been mixed with other grains; and there is therefore no example to be found in the revenue papers of former years of any piece of ground having produced cotton exclusively, from which any data can be taken. The soils of the two Deltas being deposited and fertilized by the same process (both having, at a comparatively recent period, been covered by sea-water, and therefore more or less impregnated with saline matter, even now extending themselves in the direction of the sea), there appear to be few natural characteristics in which both do not equally participate; and there is no reason that I can see why the one Delta should not be capable of producing what the other does.

From Mr. Larking's letter it would appear that the extensive culture of cotton into the Nile Delta is but of recent introduction, and the result of some years' perseverance; and it is probable that the system of collecting revenue exclusively in kind (all other payments having, from time immemorial, been made in the staple food of the country), may have presented obstacles to the more extensive culture of an article like cotton, which must first enter the market before the agriculturist can receive the fruit of his labours. This is the case in the Delta of the Indus, where the "starree," or cultivator is glad to subsist on the grain he has raised before it is fully ripe, and he is with difficulty prevented doing so before the division of the crop is effected. Arrangements have therefore been made with a few of the principal landholders in different parts of the districts, whose interests in the cotton question have been enlisted, to enter into more liberal terms with their "starrees," in view of testing, by actual experiment, the possibility of raising cotton; and, on my own part, no exertion shall be wanting to bring the subject before you, as satisfactorily as circumstances will permit, during the next spring season.

Deputy Collector's Office, Kurrachee,
29 November 1850.

I have, &c.
(signed) T. R. Stewart, Captain,
Deputy Collector of Gooraborree.

REPORT on the average Produce and Cost of Cotton Cultivation in the Deputy Collectorate of Jerruk.

THERE are two methods of cultivating cotton, one on land irrigated by wheels, and the other on low land flooded by the inundation. The former is the plan chiefly adopted, principally because its results are more certain, and because a far greater quantity is produced; but at the same time its expenses are proportionably greater; 20 beghas of land irrigated by the wheel (which is as much as one wheel is capable of) will, it is calculated, exhibit the following result:

	Rs.	a.	p.
Produce about 15 maunds of cotton (of 8 lbs.), at 14 rupees per maund	210	-	-
And about 25 maunds of cotton-seeds at 2 rupees per maund	50	-	-
TOTAL	260	-	-

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1523

III.
Bombay.

Expenses:		Rs. a. p.	Rs. a. p.	Produce:
				Rs. a. p.
Cleaning the 20 beegahs of land, at 4 annas per beegah		5 - -		260 - -
One maund of seed		2 8 -		
Excavating the ground for fixing the churka and digging channels for feeding the same		1 - -		
Churka Expenses:			8 8 -	
Petty repairs by carpenters		- 8 -		
Petty repairs by smith		- 8 -		
Pots		1 - -		
Ropes, &c.		1 - -		
Three months' food and fodder for four bullocks			3 - -	
Pay of labourers for three months, 48 rupees, and expense for picking, &c., 16 rupees		24 - -		
Ginning		64 - -		
Land rent		8 - -		
		29 2 4		
			125 2 4	
				136 10 4
Profits				123 5 8

On Sailabee land the expenses are much less, but the produce usually falls short of that raised by the churka; assuming the same extent of land, viz., 20 beegahs, the produce under very favourable circumstances, with a good soil and abundance of moisture in the ground, will amount to the same as the above, or about 15 maunds of cotton, and 25 maunds of five seers, which are equal to

The Expense attending which are as follows:		Rs. a. p.	
Cleaning the 20 beegahs of land		5 - -	
One maund of seed		2 8 -	
Petty expenses for repairs to ploughs, &c., fourahs, &c.		- 8 -	
One month's food and fodder for four bullocks		4 - -	
Pay of labourers for three months, 48 rupees, and expenses of picking, &c., 16 rupees		64 - -	
Ginning		8 - -	
Land rent		29 2 4	
			113 2 4
Profits			146 13 8

The cultivation of cotton in the districts under my charge is considered of minor importance by the zemindars, who prefer the immediate and substantial return yielded from the cultivation of rice, jowaree and bajree, in which they are principally engrossed. In the interior of the districts the demand for cotton is very trifling, and the zemindars have no funds to speculate with, nor can they wait until their produce finds a good market; I think that it could be produced in quality equal to that of any other country, for I have seen very superior specimens of it; but in order to raise it to that standard, its cultivation would necessarily require European superintendence and careful management. Its chief enemy appears to be the dew, which in my southern districts falls very heavily.

Kurrachee, 11 December 1850.

(signed) J. B. Dunster ville, Captain,
Deputy Collector.

From the Deputy Collector of Sehwan to the Collector of Kurrachee.

Sir,
I HAVE the honour, in obedience to the directions contained in your letter, No. 1886, of the 1st November last, to report the results of my inquiries into the cotton produce of this zilla; and as the cost, &c. of cultivation differs in all the districts, it will be necessary to detail them all separately, from which a general average may be taken.

1524 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III

Bombay.

Shamtanee.

The Shamtanee purgunna has an area of 88,531 jureeb of cultivable land, of which last year 251 jureeb were planted with cotton. The cost and produce of 20 jureeb is as follows:—

Land rent on 20 jureeb at Rs. 1. 6. per jureeb and ubwabs 6 rupees per cwt.	Rs.	a.	p.
	31	12	9½
Proprietary fee on two wheels of cultivation on 20 jureeb at 4 rupees per wheel (this the cultivator has to pay to the zemindars)	8	-	-
Ploughing the land (20 jureeb) at 10 annas per jureeb	12	8	-
Seed for 20 jureeb at 2 seer per jureeb 1 maund	1	4	-
Hire of four bullocks for the irrigation of one jureeb per day, 4 annas, two labourers per day, 2 annas 6 pies per day; making a total of 6 annas 6 pies per jureeb, or for 20 jureeb Rs. 8. 2.			
Cotton cultivation requires irrigating six times in the month, which gives Rs. 48. 12., and to be continued for four months, which shows	195	-	-
Carpenter, for repairing and setting up two wheels	2	-	-
Potter, for supplying the wheels with earthen pots	2	-	-
Cleaning at 1½ rupees per maund, or 18 maunds 18½ seers	27	10	8
Ginning expenses on 18 maunds 18½ seers	2	-	-
	Rs.	282	3 5½

The produce of 20 jureeb, at 4 maunds the jureeb, is 80 maunds of uncleaned cotton, of which the pickers claim one-thirteenth, or 6 maunds 6 seers, leaving 73 maunds and 34 seers; of this about a fourth or 18 maunds 18½ seers will be turned out clean, leaving 55 maunds 15½ seers of seed. Clean cotton sells in this pergunnah at 16 rupees per maund, which gives for 18 maunds 18½ seers	295	6	8
55 maunds 15½ seers of seed at the rate of 1½ maund per rupee	36	14	8
Total - - - Rs.	332	5	4
Deduct Cost - - - - -	282	3	5½
Profit on 20 Jureeb - - - - - Rs.	50	1	10½
or, Rs. 2. 8. 1. per jureeb.			

Boobuk.

The Boobuk pergunna has an area of 1,905 jureeb fit for cultivation, of which last year 50 jureeb were cultivated with cotton. The cost and produce is as follows:—

Land Rent, at the same rate as above, for 20 jureeb	Rs.	a.	p.
	31	12	9½
Hire of three wheels at 6 rupees the wheel	18	-	-
Carpenters, for setting up wheels	3	10	6
Hemp for rope for wheel	1	11	-
Potter, for earthen pots	3	-	-
Six pairs of bullocks at 2 rupees per pair per month; 12 rupees for six months	72	-	-
Hire of six pairs of bullocks for four months	112	8	-
Six labourers per wheel at 1 anna 3 pies per day for six months	84	6	-
Seed, 3 maunds, at 1½ rupee per maund	3	12	-
Weeding labour on 20 jureeb	10	-	-
Picking at 9 pies per day	52	3	3
Proprietary fee for the cultivation to zemindars at ½ rupee per jureeb	10	-	-
Ginning at Rs. 1. 9. per maund	62	8	-
	Rs.	469	7 6½

The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1915

III.
Bombay.

The produce of 20 jureeb in the Boobuk purgunnah, at the rate of 8 maunds of uncleaned cotton per jureeb, is 160 maunds, of which a fourth comes out clean, or 40 maunds at the rate of 13½ rupees the maund, the current rate -	Rs. a. p.	540 - -
The balance, or 120 maunds of seed at 10 annas 8 pies per maund, gives -	Rs.	80 - -
	Rs.	620 - -
Deduct Cost -	Rs.	469 7 6½
Profit on 20 Jureeb or, Rs. 7. 8. 5. per jureeb.	Rs.	150 8 5½

The Turtee purgunnah has an area of 17,555 jureeb, of which last year 250 jureeb were cultivated with cotton; the cost and produce on land which has not received the benefit of the inundation is as follows: the submerged land occupied with this plant will be shown afterwards.

Land rent on 20 jureeb, as above	Rs. a. p.	31 12 9½	Pucka land.
Proprietary fee paid by the cultivators to the zemindars, at 3 rupees each, on two wheels	Rs.	6 - -	
Ploughing 20 jureeb at 8 annas per jureeb	Rs.	10 - -	
Seed at 3 seers per jureeb or maund, 20 seers per 20 jureeb at Rs. 1. 4. per maund	Rs.	1 14 - -	
Hire of four bullocks at 1 anna 3 pies per bullock, and two labourers at 1 anna 3 pies each per day on each jureeb, being for 20 jureeb Rs. 9. 6. per day for six times; the month, Rs. 56. 4., or for four months	Rs.	225 - -	
Carpenter, setting up two wheels	Rs.	2 - -	
Potter, for earthen pots on two wheels	Rs.	3 - -	
Cleaning the cotton, 18 maunds, at 1½ rupees per maund	Rs.	27 - -	
Ginning the same	Rs.	1 8 - -	
	Rs.	308 2 9½	

The produce of 20 jureeb will be about 4 maunds of uncleaned cotton per jureeb or 80 maunds, for which deduct a tenth, or 8 maunds for picking share, leaving 72 maunds; of this a fourth or 18 maunds will come out clean, and sold at the rates of the purgunnah, 16 rupees per maund will give	Rs. a. p.	288 - -
54 maunds of refuse seeds at 1½ rupees per maund	Rs.	67 8 - -
Total Produce	Rs.	355 8 - -
Deduct Cost	Rs.	307 2 9½
Profit on 20 Jureeb or, Rs. 2. 6. 8. per jureeb.	Rs.	48 5 2½

On land submerged by the inundation, the cost is as follows:

Rent, as before	Rs. a. p.	31 12 9½	Kutchia land.
Seed at 6 seers per jureeb, being 3 maunds for 20 jureeb, at Rs. 1. 4. per maund	Rs.	3 12 - -	
Sowing labour	Rs.	8 - -	
Watching men, at 1 rupee per month for four months	Rs.	4 - -	
Weeding, at ½ rupee per jureeb	Rs.	10 - -	
Carpenter and potter	Rs.	5 - -	
Cleaning, at Rs. 1. 10. 4. per maund on 12 maunds 30 seers	Rs.	21 7 9	
Ginning the same	Rs.	1 8 - -	
	Rs.	85 8 6½	

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III.
Bombay.

	Rs.	a.	p.
The produce of 20 jureeb is about 85 maunds of uncleaned cotton, being 4 maunds 10 seers per jureeb; of this, the picker takes a tenth, or 8 maunds 20 seers, leaving 76. 20.; of this, a sixth will come out clean, or 12. 30., which sold at 13 rupees the maund, gives	165	12	-
Refuse seed sold at 1½ maunds the rupee on 63 maunds 30 seers, gives	42	8	-
Total of Produce	208	4	-
Deduct Cost	85	8	6½
Profit on 20 Jureeb	122	11	5½
or, Rs. 6. 2. 2. per jureeb.			

Dadoo

The Dadoo purgunnah has an area of 22,000 jureeb fit for cultivation, of which last year 916 jureeb were planted with cotton, the cost and produce is as follows:

	Rs.	a.	p.
Rent on 20 jureeb	31	12	9½
Cleaning the same, at 8 annas per jureeb	10	-	-
Hire of eight pairs of bullocks for three months, at 16 rupees per month	48	-	-
Four labourers for three months, at 2 rupees each per month to drive the bullocks	24	-	-
Four labourers to weed and superintend the cultivation, at 2 rupees each per month for six months	48	-	-
Seed, 7 seers per jureeb, being 3 maunds 20 seers, for 20 jureeb at 1 rupee per maund	3	8	-
Hire of two wheels at 3 rupees each	6	-	-
Hire of agricultural implements	2	-	-
Carpenter, for setting up the wheel	2	-	-
Potter, for earthen pots	2	-	-
Wild date for rope for wheel	1	-	-
Cleaning the cotton 16 maunds, at 1¼ rupee per maund	20	-	-
Total Cost	198	5	-

1st. produce 8 pickings 24 maunds; 2d. eight pickings 32 maunds; 3d. eight pickings 24 maunds, after deducting the picker's share gives, of uncleaned cotton 80 maunds, of which a fifth or 16 maunds will come out clean; this, sold at 15 rupees the maund, will give	240	-	-
Refuse seed 64 maunds, at 10 annas 6 pies per maund	42	-	-
Deduct Cost	282	-	-
	198	-	-
Profit on 20 Jureeb	83	11	-
being Rs. 4. 2. 11. per jureeb.			

Phooljee.

The Phooljee purgunnah has an area of 2,45,293 jureeb, of which 373 jureeb were last year cultivated with cotton, the cost and produce as follows:

	Rs.	a.	p.
Rent, as before	31	12	9½
Making a bund round the field area of 20 jureeb	20	-	-
Ploughing 20 jureeb	20	-	-
Seed, at 5 seer per jureeb, being 2½ maunds, at 12 annas per maund	1	14	-
Watchers for five months and a half, at 2 rupees per mensem	11	-	-
Carpenter and potter	8	-	-
Cleaning cotton	13	1	-
	98	3	9½
Produce on 20 jureeb, at 2 maunds per jureeb, gives 40 maunds of uncleaned cotton; deduct 3 maunds 3 seers the picker's share, leaves 36 maunds 37 seers; of this, a fifth, or 7 maunds 15 seers 10 an. will come out clean, and, sold at the rate of 14 rupees the maund, gives	103	7	3½
Twenty-nine maunds, 26 seers, 6 annas of refuse seed, at 10 annas per maund, gives	18	7	-
Deduct Cost	121	14	3½
	98	3	9½
Profit on 20 Jureeb	23	10	6
or, Rs. 1 2. 11. per jureeb.			

The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1527

The area of cultivable land in the Sehwan purgunnah is 12,171 jureeb, of which last year 46 jureeb were planted with cotton; cost and produce as follows:

III.
Bombay.

Sehwan.

	Rs.	a.	p.
Rent, as before	31	12	9½
Hire of two wheels, at 4 each	8	-	-
Ploughing 20 jureeb, at 8 annas per jureeb	10	-	-
Seed 2 maunds, at 1 rupee per maund	2	-	-
Hire of four bullocks, at 4 annas per jureeb, being for 20 jureeb 5 rupees; watered six times during the month 30 rupees for four months	120	-	-
Two labourers, at 1½ annas each per day on each jureeb, being per day Rs. 3. 12.; this, for six times during the month, gives Rs. 22. 8., and for four months	90	-	-
Carpenter and potter	4	-	-
Cleaning the cotton, at 1½ rupees the maund, on 18 maunds, 18½ seers of clean cotton	27	10	8
	Rs.	293	7 6
Produce of 20 jureeb, at 80 maunds, or 4 maunds per jureeb; of this, a thirteenth, or 6 maunds 6 seers, the picker's share, is deducted, leaving 73 maunds 34 seers of uncleaned cotton; of this, a fourth, or eighteen maunds, 18½ seers will come out clean, and sold at 16 rupees the maund, gives	293	5	4
Fifty-five maunds 15 seers of refuse seed, at 1½ maunds the rupee	36	14	8
		330	4 -
Cost of 20 Jureeb		293	7 6
Profit on ditto		36	12 6
or, Rs. 1. 13. 5. per jureeb.			

The area of cultivable land in the Lukkee purgunnah is 32,074 jureeb, of which last Lukkee year 300 jureeb were planted with cotton, the cost and produce as under:

	Rs.	a.	p.
Rent, as before	31	12	9½
Rent of two wheels	4	-	-
Ploughing 20 jureeb at 8 annas per jureeb	10	-	-
Seed at 4 seers per jureeb, being 2 maunds at 1 rupee per maund	2	-	-
Hire of eight bullocks at 4 annas per jureeb, being 5 rupees for 20 jureeb, watered six times a month, gives 30 rupees, and for four months	120	-	-
Three labourers at 3 annas per jureeb, being for 20 jureeb Rs. 3. 12. or 22½ rupees per month for six months, or for four months	90	-	-
Carpenter and potter	2	8	-
Cleaning 18 maunds 26¼ seers at Rs. 2. 1. per maund	38	7	8
Ginning	2	-	-
	Rs.	300	12 5½
Produce of 20 jureeb, 85 maunds of uncleaned cotton, of which eight or 10 maunds 25 seers is the property of the pickers, leaving 74 maunds 15 seers; of this, 18 maunds 26¼ seers will come out clean, and sold at 16 rupees the maund, will give	298	8	-
55 maunds 28¼ seers of refuse seed, sold at 11 annas 1 pie per maund gives	38	7	8
		336	15 8
Deduct Cost		300	12 5½
Profit on 20 Jureeb		36	3 2½
or, Rs. 1. 12. 11. per jureeb.			

1528 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

The area of cultivable land in the Mullar pergunnah is 57,070 jureeb, of which, last year, 780 jureeb were under cotton cultivation. Its cost and produce is as follows:

Mullar.

	Rs.	a.	p.
Rent, as before - - - - -	31	12	9½
Rent of 2 wheels at 4 rupees - - - - -	8	-	-
Ploughing 20 jureeb at 10 annas per jureeb - - - - -	12	8	-
Seed at six seers per jureeb, being three maunds, at 1 rupee per maund - - - - -	3	-	-
Four bullocks, at 1 anna each per day, and a man to drive them at 1 anna per day; one man at 1½ annas per day for conducting the water and watching the cultivation, making a total of 6 annas 6 pies per day per jureeb, or for 20 jureeb Rs. 8. 2.; this expense is required for irrigation twice a month, which cost Rs. 16. 4. per month, and for four months - - - - -	65	-	-
Carpenter and potter, two wheels - - - - -	4	-	-
Cleaning 10 maunds 20 seers, at 1½ rupee per maund - - - - -	15	12	-
Ginning - - - - -	2	-	-
	Rs.	142	- 9½
Produce of 20 jureeb, 60 maunds of uncleaned cotton, of which the pickers take an eighth, or 7 maunds 20 seers, leaving 52 maunds 20 seers; of this 10 maunds 20 seers will come out clean, and, sold at 15 rupees per maund, will give - - - - -	157	8	-
42 maunds of refuse seed at 1 rupee per 1½ maunds - - - - -	28	-	-
		185	- -
Deduct Cost - - - - -		142	- -
Profit on 20 Jureeb - - - - -	Rs.	43	- -
or, Rs. 2. 2. 9½. per jureeb.			

Highest profit.

From this detail, which is necessarily lengthy as regards figures, to show the capabilities of each district, it will be seen that the pergunnahs of Boobuk and Dadoo are the most profitable; the former, after deducting cost of cultivation, giving Rs. 7. 8. 5, per jureeb, and the latter Rs. 4. 2. 11.; in the former the cultivation is scanty, but the ground is highly manured and taken care of; hence the double produce in Dadoo; likewise the water is plentiful, and more labour used. The produce of the submerged land in the Turtee pergunnah giving Rs. 6. 2. 2. per jureeb profit, is no fair criterion to judge of, as it is planted in the jowarree cultivation, and the expenses of irrigating that suffices for the cotton; hence the item of irrigation in the pukka land of the same pergunnah 225 rupees is not included in the cost, which perhaps, however, it ought to be. With only ordinary care; and, taking the average of seasons, I am inclined to think that the profit may amount generally to 2½ or 3 rupees per jureeb; but although it is a favourite crop with the ryots, you are aware it is a precarious one, more especially in the Phooljee and Mullar pergunnahs, where the cultivation is principally dependent on rain, and the uncertain periodical freshes of the Gaj River. One great obstacle to an extension of the cultivation in this precariousness, is the prohibition of remissions, except in total failures. According to the present rules, if one jureeb out of twenty only is productive, the whole has to be paid for, and amongst the poorer classes of cultivators it is sometimes downright ruinous, and I know not a more disagreeable and distressing duty than having to enforce it.

General average.

The extent of land fit for cotton in this zillah is enormous, but, except in the Dadoo and Santanee pergunnahs, and small spots of the others, the means of irrigation are wanting; in the Phooljee and Mullar pergunnahs the plant might be cultivated to any extent if water was forthcoming. On the Gaj River it might also be extended, with remissions for bad crops and a rent of one rupee per jureeb; in the Dadoo pergunnah a plan of extension invites attention, it is the lessening the rent, say 2 annas a jureeb, on all land cultivated in excess of the previous year; this was a mode pursued in the late reign; it is a small premium, which, added to the profit of the speculation itself, would be an encouragement, and a very trifling loss to Government.

As regards cotton cultivation in Scinde, I believe more is not produced than is required for the wants of the people; but with reference especially to this zillah, enough is not produced, and the deficiency is supplied from Kurrachee. Without, therefore, better means of irrigation, and a greater degree of enterprise and labour than the Scindhee gives to it, I am afraid it will be a long time before this becomes an exporting country.

In

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1529

III.
Bombay.

In conclusion, I have only to add that, consequent apparently on the late rains in the Punjab, the Nara River has a fair supply of water, most unusual at this season, and occurring as it does at the cotton sowing period, I have issued strong injunctions to the kardars not to allow an acre of land fit for the plant to be otherwise occupied. I trust the result may be favourable.

Sehwan,
Deputy Collector's Office,
6 February 1851.

I have, &c.
(signed) J. H. Partridge, Captain,
Deputy Collector of Sehwan.

(No. 5012 of 1851.)

From Mr. Secretary Goldsmid to the Commissioner in Sindh.

Sir,

In acknowledging the receipt of your letter, No. 602, dated the 19th ultimo, with accompaniments on the subject of the growth of cotton in Sindh, I have been directed by the Right honourable the Governor in Council to observe that you do not notice the receipt of the Egyptian cotton seed despatched to your address, with my letter No. 3706 of the 5th idem, and to request that you will report when it was received.

2. With reference to the latter part of Captain Preedy's fourth para., I have been desired to inform you that the Honourable the Court of Directors have already been applied to for a quantity of Sea Island cotton seed for transmission to Sindh.

3. The order given by Captain Partridge, referred to in the latter part of your seventh para., was most improper and injudicious.

4. His Lordship in Council does not understand the force of the two answers quoted by you in your sixth para., for, if he is not mistaken, cotton land in Sindh pays money assessment, and is not subject to Bataee.

Bombay Castle,
7 May 1851.

I have, &c.
(signed) H. E. Goldsmid,
Secretary to Government.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 9 August (No. 121) 1851.

WITH reference to our letter, No. 70, dated the 15th May last, we have the honour to transmit herewith copies of a letter with enclosure, addressed by our Secretary to Mr. J. W. Larking, under date the 24th idem, No. 5856, requesting information as to the description of machine which is best adapted for cleaning Egyptian cotton, and of that gentleman's reply of the 3d ultimo.

No. 5856 of 1851.—Territorial Department, Revenue.

To J. W. Larking, Esq., Alexandria.

Sir,

I HAVE been directed to forward copy of a memorandum from the Commissioner in Scinde, No. 775, dated the 13th instant, with accompaniments, as also a copy on tracing cloth, of the sketch of the cotton-cleaning machine therein referred to, and to request that you will favour the Right honourable the Governor in Council with information as to the description of machine which is best adapted for cleaning the Egyptian cotton.

2. Government would be much obliged by your also having the goodness to procure, if constructed in Egypt, and make over to Captain Johnson for transmission to Bombay (6) six of the machines, with a memorandum descriptive of the manner in which they are used. If the machines are made in England, you would perhaps favour Government with the name of the maker and other particulars.

3. The Honourable Company's agent will pay on account of this Government all charges incurred.

Bombay Castle, 24 May 1851.

I have, &c.
(signed) H. E. Goldsmid,
Secretary to Government.

III.
Bombay.

(No. 775 of 1851.)

TRUE extract transmitted for the information of Government with reference to para. 4 of Mr. Secretary Goldsmid's letter, No. 1421 of the 17th February last.

The machine would appear to be a rather rude form of the Guzerat churka.

(signed) *H. B. E. Frere,*

Kurrachee, 13 May 1851.

Commissioner in Scinde.

EXTRACT paras. 2 and 3 of Letter, from the Acting Collector of Shikarpoor, No. 301, dated 30 ultimo.

2. WITH reference to your 3d para., I beg to forward a sketch of the machine employed in this Collectorate for separating the seed from the cotton. The instrument is called by the natives "Aitree." I annex a sketch of it, in order to show how rude it is in construction, and how inefficient in its operation. The instrument has for its base a plank or rather block of wood about 20 inches long, and four in breadth. On this plank are raised two pedestals, having a space between them of eight or ten inches, and being themselves about 18 inches high. Between these pedestals and resting on them are two rollers, the one of steel or iron three-quarters of an inch in diameter, the other of wood an inch and a half or nearly two inches in diameter. These rollers are turned by the hand, the handle of the wooden one being on the opposite side to that of the steel. Two men are employed in working the instrument. One man on one side turning the wooden roller from right to left, while the man opposite causes his steel roller to revolve in the opposite direction. The thin steel roller is placed over the wooden one, and almost touching it.

3. The cotton which is to be freed from the seed is placed in a heap close to the workmen, one of whom while turning the handle with his right hand, feeds the instrument with his left. The rollers revolving in the opposite directions close to each other, draw in the phootee; the seed, from their size, not being able to pass between the rollers, are pressed out, and fall on this side the rollers, while the cleared cotton passing through the rollers falls on the other.

MINUTE by the Right Honourable the Governor, concurred in by the Honourable Messrs. *Blane* and *Bell*.

MR. LARKING should be furnished with copy of this on tracing cloth, and requested to inform us what description of machine is best adapted for cleaning the Egyptian cotton.

He might be requested to procure and forward us six (6) of the machines, with a memorandum descriptive of the manner in which they are used. The Honourable Company's agent paying all charges.

26 May 1851.

(signed) *Falkland.*
D. A. Blane.
A. Bell.

To *H. E. Goldsmid*, Esq., Bombay.

Sir,

YOUR letter of the 24th May, No. 5856, of 1851, I received too late to answer by the last mail, having been at the time in the interior, with H. H. the Viceroy, looking over some cotton farms, with the view of introducing various improvements.

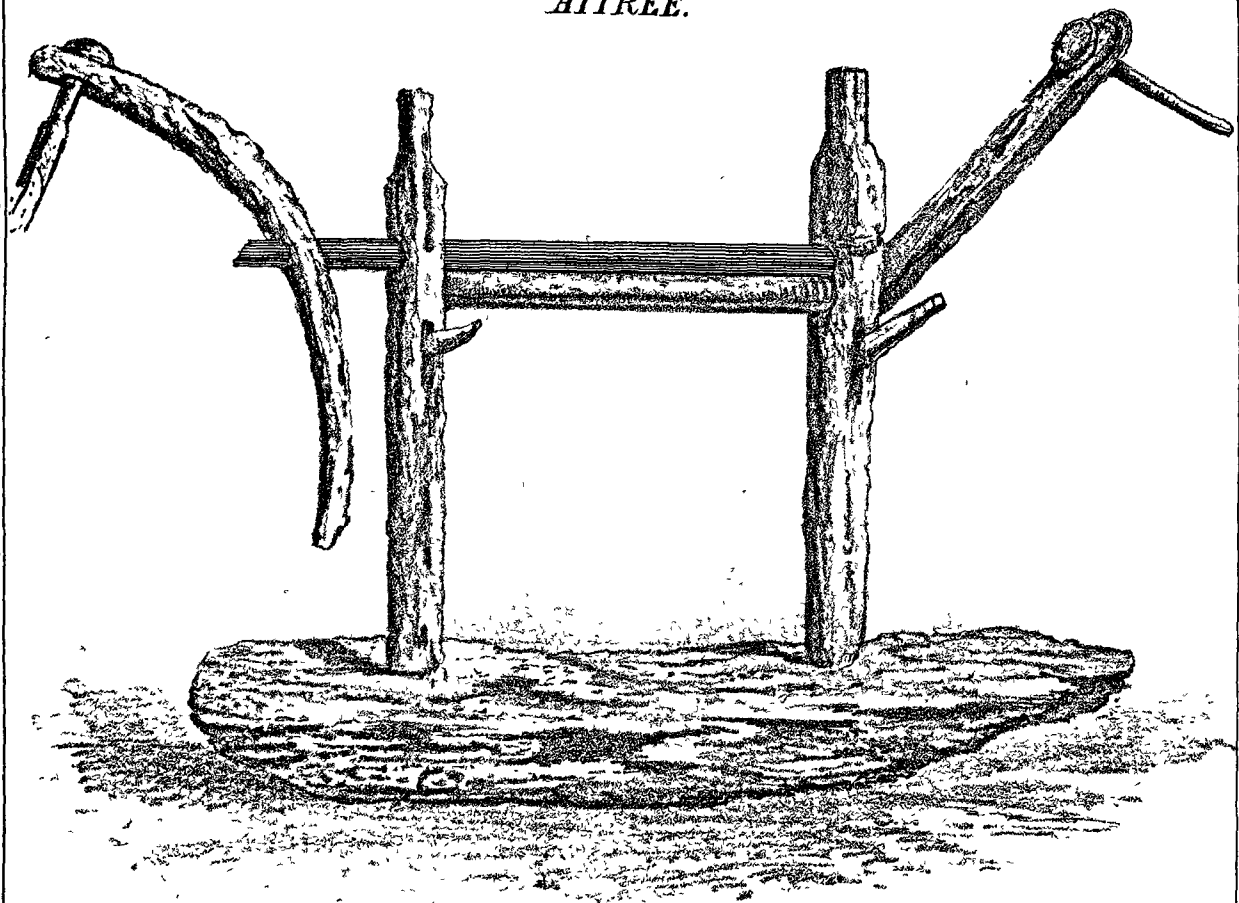
In reference to these improvements, I am obliged to undertake a journey to England, and start by the steamer the day after to-morrow; consequently I regret that it will be out of my power to attend personally to the making of the Egyptian cotton gins you wish me to provide for you.

I have, however, taken steps to have them prepared, and, when ready, they will be handed to Captain Johnson, for shipment, as you direct.

You will find the cotton gin of Egypt a very rude affair, being merely an improvement of

[To face page 1530.]

AITREE.



*"Aitree". A Machine used in the Shikarpore Collectorate,
for Separating Seed from Cotton.*

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1531

of the one of which you have sent me a drawing. The principle is the same; a wooden and an iron roller turning, in opposite directions, the motion given by the foot.

I had lately out a saw gin from England, of a sort said to have been approved of by the Honourable East India Company. It cleans the cotton perfectly and rapidly, but sadly deteriorates the quality, by cutting the staple. I have consequently given it up, and return to the Egyptian gin.

Alexandria, 3 July 1851.

I remain, &c.
(signed) *John W. Larking.*

III.
Bombay.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 8 November (No. 147) 1852.

WITH reference to our letter, No. 22, dated the 17th February 1851, and subsequent correspondence, ending for the time with our letter, No. 121, dated the 9th August following, we have the honour to forward, for the information of your Honourable Court, the accompanying copy of papers, egarding an experiment made at Dharwar with a quantity of uncleaned cotton, received from Sindh for the purpose of ascertaining wheiher the staple be injured by ginning.

(No. 1229 of 1851.)

From the Commissioner in Scinde to the Right Honourable Lord Viscount Falkland, Governor and President in Council, Bombay.

My Lord,

WITH reference to Mr. Secretary Goldsmid's letter, No. 1421, dated the 17th February last, para. 4, calling on me to report how the cotton in Scinde is freed from the seed, I have the honour to transmit, for the information of your Lordship in Council, extract paras. 6 to 8 of a letter, No. 436, dated the 25th instant, from the acting Collector of Hyderabad, on the subject, describing the instrument in use in his collectorate, which is merely a rude Guzerat churka.

V. 12,698.

Kurrachee,
28 June 1851.

I have, &c.
(signed) *H. B. E. Frere,*
Commissioner in Scinde.

EXTRACT paras. 6 to 8 of a Letter from the Acting Collector of Hyderabad to the Commissioner in Scinde, dated 25 June 1851, No. 436.

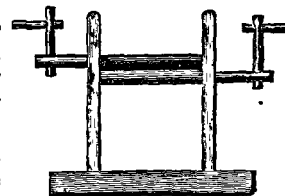
Para. 6. THE plan of freeing the cotton from seed is as follows:

7. The machine or gin employed by the natives of this country for separating the seeds from the cotton wool, is called in Scinde, "Artaree," and is of the simplest and most primitive construction.

V. 12,699.

8. Two upright pieces of wood are let into a bottom piece, and into the uprights are fixed two smooth cylindrical rollers, placed horizontally one over the other, almost in contact. The upper roller is composed of iron, the lower of wood. To one end of these rollers is affixed a handle (side sketch); two men or women then seat themselves on the ground with the machine between them, holding the bottom piece of it firmly grasped by their feet, whilst with their hands they whirl round the handles and feed the rollers with cotton.

The rollers move in reverse rotation, the cotton is placed between them and engaged by them, and the seeds which are too large to pass through the same opening are left behind. In this manner 30 seers or 60 lbs. of uncleaned cotton, termed "Thuttee" in Scinde, can be passed through the rollers in one day; and one-fourth of that quantity, or 7½ lbs. of cleaned cotton, be collected. Taking the wages of the men at two annas each per diem, the expense of cleaning a maund of cotton would be Rs. 1. 5. 4.



III.
Bombay.

(No. 7672 of 1851.)

From Mr. Chief Secretary *Malet*, to the Commissioner in Sindh.

V. 12701.

Sir,
I HAVE been directed by the Right honourable the Governor in Council to acknowledge the receipt of your letter (No. 1229), dated the 28th ultimo, with accompaniment from the acting Collector of Hyderabad, describing the machine in use in that collectorate for cleaning cotton.

2. Under date the 24th May last, Government applied to Mr. Larking for information as to the description of machine in use in Egypt, and for six of the same, or the name of the maker in England, if made up there.

3. You will have the goodness to send to the Customs' Department, Bombay, for transmission to Dharwar, a quantity of uncleaned cotton, in order that Mr. Blount may ascertain and report whether the staple is injured by ginning:

Bombay Castle,
25 July 1851.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

(No. 1100 of 1852.)

MEMORANDUM from the Collector of Dharwar, with Accompaniment.

FORWARDED, with reference to Mr. Chief Secretary *Malet's* memorandum, in the Territorial Department, Revenue, No. 7674, dated the 25th July 1851, for the information of the Right honourable the Governor in Council, the sample of cotton referred to by Mr. Blount has this day been transmitted by Bangy Dawk.

Dharwar Collector's Office,
27 July 1852.

(signed) *J. S. Law*,
Collector.

(No. 118 of 1852.)

To *J. S. Law*, Esq., Collector, Dharwar.

Sir,

WITH reference to your letter, No. 420, of 1852, and the correspondence noted in the margin,* I have the honour to report to you that I have had a quantity of the Scinde cotton, therein alluded to, cleaned on the saw gin; I do not consider the cotton injured from being cleaned on the gin, but I beg to remark that I consider the quality of the cotton inferior, in being very short and unequal in staple, that is, the length of fibre on the seeds is in some parts long, in others very short, which would give it the appearance, when cleaned, of being cut or torn, no matter what machine is used in the cleaning process.

The fibre is strong, it does not adhere to the seeds more firmly than other native cotton, and is cleaned easily with the saw-gin. The result of a trial I made on the 19th instant, with a seven-saw gin, worked by four men, was as follows:—

	Time worked, three hours.	Lbs.	oz.
Clean cotton	- - - - -	24	15
Seeds	- - - - -	57	6
Trash	- - - - -	1	6
		83	6

This result does not equal the quantity of native cotton of this district, which has been cleaned on trials made with gins, but this is perhaps owing to the cuppas having been pressed into a bale, causing the wool to lay very close on the seeds, and prevented the teeth

* 1. Commissioner of Scinde's letter to the Right honourable the Governor in Council, No. 1229, dated 28th June 1851, with accompaniments.
2. Government reply, No. 7672, dated 25th July 1851. No. 420 of 1852. From *J. S. Law*, Esq., Collector of Dharwar, to the Superintendent of Cotton Experiments, S. M. C., dated 29th March 1852.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1533

teeth of the saws acting so effectually as they would on fresh cotton which has not been pressed into a bale.

A sample of the cotton, marked Scinde cotton, saw-ginned, is herewith forwarded for your inspection.

Dharwar,
24 July 1852.

I have, &c.
(signed) J. M. Blount,
Superintendent of Cotton Experiments, S. M. C.

III.
Bombay.

(No. 6825 of 1852.)

ENDORSEMENT to the Commissioner in Sindh.

COPY of a memorandum from the Collector of Dharwar, No. 1100, dated 27th July last, and its accompaniment, forwarded to the Commissioner in Sindh for his information with reference to paragraph 3, of Government letter, No. 7672, dated the 25th July 1851, together with the sample of cotton referred to by Mr. Blount.

Bombay Castle,
20 October 1852.

(signed) A. Malet,
Chief Secretary to Government.

REVENUE Letter from the Government of Bombay to the Honourable the Court of Directors, dated 29 January (No. 16) 1853.

WE beg to inform your Honourable Court that having received six of the Egyptian cotton-cleaning machines referred to in our letter No. 121, dated the 9th August last, from Mr. Piozin, Mr. Larkin's *locum tenens*, during the latter gentleman's absence in England, we distributed four of them amongst some of our own officers, and sent one to Mr. Landon of Broach, and one to Messrs. Ritchie, Stuart & Co., and requested them to favour us, after trial, with their opinion on the merits of the machine.

2. From their replies, a copy of which is annexed, your Honourable Court will observe that no advantage is likely to result from our attempting to introduce the machine into this Presidency.

From Messrs. *Ritchie, Stuart & Co.*, to Mr. Chief Secretary *Malet*.

Sir,

WE have the honour to acknowledge receipt of your letter, No. 6653, of the 15th instant, requesting us to reply to No. 10,663, of the 12th November last, regarding an Egyptian cotton-cleaning machine which Government sent us.

In reply, we have the honour to inform you, that the cleaning machine alluded to resembles the cotton churka used in this country, but is of a much ruder construction, and is suggestive of no improvement in the manufacture of machines for the cleaning of cotton. We paid to the superintendent of stationery Rs. 7. 0. 66. for the above machine; it could be made for 1½ rupees, we should suppose. The machine, as sent us, was without the iron cylinder alluded to in Mr. Piozin's letter. The cost of cleaning cotton by the churka in this country is considerably less than that stated by Mr. Piozin to be the cost of cleaning by the Egyptian machine.

Bombay, 16 October 1852.

We have, &c.
(signed) *Ritchie, Stuart & Co.*

(No. 1287 of 1852.)

From the Collector of Dharwar to the Secretary to Government.

Sir,

WITH reference to your letter dated 12th November 1851, No. 10,664, I have the honour to forward, for the information of the Right honourable the Governor in Council, the accompanying copy of a report by Messrs. Blount and Frost on the subject of the Egyptian churka therein referred to, and beg to add that from what I have myself seen of the machine, I fully concur in the opinions regarding it expressed by those officers.

296—Sess. 2.

9 P 3

2. I would

2. I would observe that a similar machine was sent to the Honourable the Court of Directors in 1835, as appears from page 289 of the printed volume of Reports and Documents regarding cotton wool, indigo, &c., printed in 1836, which also contains a good lithographed illustration of it.

Dharwar, Collector's Office,
31 August 1852.

I have, &c.
(signed) *J. S. Law,*
Collector.

(No. 138 of 1852.)

To *J. S. Law*, Esq., Collector, Dharwar.

Sir,

WITH reference to the communication noted in the margin,* received under cover of your endorsement, dated 17 November 1851, we have the honour to report to you that the Egyptian churka therein alluded to has been erected at the gin factory in this place for the purpose of testing its facilities of cleaning cotton as compared with machines of similar construction in use in this district.

This churka is not different in the principle of its construction or action from the ordinary native machine. It has a wooden roller, to which is attached a short handle, and to the opposite end of the iron roller is attached a fly-wheel, which is worked by a treadle. The churka is built into a wall on an incline to the seat of the workman, which is formed by an extension of the same wall, on which he sits astride, and works the treadles with the right foot and the handle of the wood roller with the right hand. The position of the workman is cramped and awkward, and we are sure, from the trials made by ourselves and stoutest coolies in the factory, that to work this churka successfully would require men specially trained for it. The mechanism of the machine is extremely rude, and, altogether, it is the most unwieldy churka we have ever seen. It possesses not one advantage over the native churka, and is inferior to it in several particulars. It costs Rs. 7. 2. 8., whilst the price of the native churka is only from 12 annas to one rupee. It requires a strong man to work it, whilst the native is worked here exclusively by women. It can clean per diem, as per Messrs. Piozin and Broadhurst's report, 20 to 25 lbs. of cotton, which is no more than can be done by a woman in a day's work. Here the native churka is a portable article, whilst the Egyptian churka has to be built into a wall, and is a fixture, which is an objection, and for these reasons we are of opinion the Egyptian churka will not be made use of here in preference to the native machine.

Dharwar,
5 August 1852.

We have, &c.
(signed) *John M. Blount,*
Superintendent Cotton Experiments S. M. C.
H. Frost, Engineer.

(No. 463 of 1852.)

From the First Assistant Collector in Charge to Mr. Chief Secretary *Malet*.

Sir,

WITH reference to Mr. Goldsmid's letter, No. 10,665, dated 12 November 1851, I have the honour to submit for the information of the Right honourable the Governor in Council, copy of a report received from Mr. Price, superintendent of cotton experiments in this Collectorate, on the Egyptian cotton-cleaning machine. The instructions conveyed to this department were, that a joint report should be made by Messrs. Price and Daley, but as the former gentleman's report appears to be so decisive as to the inutility of the introduction of the machine into this country, and it would cause still further delay if Mr. Daley had to come up to Dhundooka in order to try it, I have thought it better to hand in the enclosed report at once.

Ahmedabad, Collector's Office,
13 November 1852.

I have, &c.
(signed) *A. Rogers,*
First Assistant Collector in Charge.

* No. 5856 of 1852.—From H. E. Goldsmid, Esq., Secretary to Government, to J. W. Larking, Esq., Alexandria, with extract of a letter, No. 301, dated 30th April 1851, from the Acting Collector of Shikarpoor. Paragraphs 2 and 3 transmitted to Government, with letter No. 775 of 1851. From H. B. E. Frere, Esq., Commissioner in Sindh. Letter from J. W. Larking, Esq., to H. E. Goldsmid, Esq., Secretary to Government. Letter from W. Piozin and — Broadhurst, Esq., to H. E. Goldsmid, Esq., Secretary to Government. No. 10664 of 1851.—From H. E. Goldsmid, Esq., Secretary to Government to J. S. Law, Esq., Collector of Dharwar.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1535

III.
Bombay.

(No. 107 of 1852.)

To A. Rogers, Esq., First Assistant Collector in Charge, Ahmedabad.

Sir,

WITH reference to your endorsement No. 443, of the 21st instant, I have the honour to forward the accompanying report of the trial of the Egyptian cotton-cleaning machine alluded to in Government letter No. 10,665, of the 12 November last.

Superintendent's Office, Camp Gogo,
28 October 1852.

I have, &c.
(signed) Thomas Price,
Superintendent of Cotton Experiments.

(No. 108 of 1852.)

REPORT of the Trial of the Egyptian Cotton-Cleaning Machine alluded to in Government Letter No. 10,665, of the 12th November last.

HAVING set up the machine according to plan, a labourer was employed to work it in the manner described in Mr. Piozin's letter to Mr. Secretary Goldsmid, by sitting astride at one end of the machine with the right foot on a lever attached to the fly-wheel by means of a rope, and while with one hand he turned the handle of the iron roller, his other hand was employed in feeding the machine; the machine in principle is similar to that of the Guzerat churka, the mode of working it only differing, and as it requires some experience for one to keep both his hands and a foot continually at work, it is much to be attributed to this want of experience that the man employed at the machine failed *in toto*; I accordingly had it set up in the manner the churkas of the country are done, and employed in addition a boy to keep the fly-wheel in motion. By this means a small quantity of cotton was cleaned, but the process was slow and irregular, very probably owing to the rough manner in which the iron cylinder was made, it being merely a round bar flattened at one end, whereas the iron cylinder of the Guzerat churka is thicker in the middle than at the ends, and filed very smooth; the out-turn was in consequence less than the churka would give. I am humbly of opinion its introduction would be no improvement over the present churka of the country.

Superintendent's Office, Camp Gogo,
28 October 1852.

(signed) Thomas Price,
Superintendent Cotton Experiments.

From Mr. J. Landon to the Secretary to Government.

Sir,

WITH reference to your letter, No. 10,667, of 12th November 1851, and its accompaniments, I have the honour to state, for the information of the Right honourable the Governor in Council, that the Egyptian machine therein alluded to cleans cotton properly, and without injury to the staple.

For the long-stapled black seed cotton it can be worked easily by one person; but to clean the short-stapled cottons of India, which adhere to the seed with great tenacity, two persons are required to work it, precisely in the same manner as they do the country churka.

As the two machines are exactly alike, both in principle and construction, the merits of the one are equal to those of the other when worked in the same manner and applied to the same kind of cotton. The Egyptian mode of setting the machine up, or something like it, is necessary to enable one person to work it instead of two.

I am not aware that the black seed cotton is anywhere cultivated in India, and am therefore respectfully of opinion that no advantage can accrue to the cotton interest of this country from the introduction of the churka in question, or from the adoption of the Egyptian method of working it.

The saw-gin has never yet been applied successfully to the cleaning of long-stapled cotton, on account of the injury it does to the staple; but for separating the seed from all varieties of short staple, it is, as regards cleanliness, efficiency, and economy, infinitely superior to every other machine known.

As an instance of the superior economy of the saw-gin, as compared with the Goozerat churka (which is the most efficient native machine in India), I may mention that if the whole of the cotton shipped from Broach were to be cleaned by the former, instead of the latter, a saving would be effected under this head alone of more than Rs. 3,00,000 (three lakhs) per annum. This estimate is based upon the price which I pay per bhar for ginning, and that which is uniformly paid for cleaning by the native churka, and may therefore be relied on as correct.

In explanation and apology for the apparent delay which has occurred in submitting this report, I respectfully beg to state, that I was unable sooner to make such a trial of the Egyptian machine as would enable me to speak with certainty of the result.

Broach, 12 January 1853.

I have, &c.
(signed) J. Landon.

III.
Bombay.

(No. 447 of 1852.)

From the Commissioner in Sind to the Right Honourable Lord Viscount *Falkland*,
Governor and President in Council, Bombay.

My Lord,

No. 6, dated the 5th
December 1852. WITH reference to Mr. Secretary Goldsmid's letter, No. 10,668, of the 12th November 1851, I have the honour to submit for the information of your Lordship in Council, copy of a report by the superintendent of Cotton Experiments, Mr. Prince, on the subject of the Egyptian cotton-cleaning machine forwarded by Government.

Commissioner's Office, Kurrachee,
18 December 1852.

I have, &c.
(signed) *H. B. E. Frere*,
Commissioner in Sind.

(No. 6 of 1852.)

From the Superintendent of Cotton Experiments to the Commissioner of Sind.

Sir,

I HAVE the honour to acknowledge the receipt of the Government Memorandum, bearing your endorsement, No. 3045 of 1852; and the accompanying correspondence on the subject of the Egyptian cotton-cleaning machines, mentioned in Government letter, No. 10,668 of 1852, as to whether the machines clean the cotton properly and without injury to the staple, as also whether they are easily worked, and their relative merits to those of the ordinary churkas used in Sind.

2. In reply, I have the honour to inform you, that while I was in Kurrachee, Mr. Maher showed me one of the machines mentioned in letter, No. 10,668 of 1852; but I had not then, nor have I since had an opportunity of trying it; however, I have no hesitation in saying, that it will clean cotton properly, and without injury to the staple; it is, in fact, very similar to the Goozerat churka and to the common Sind churka, or "attarree," the only difference being (as far as I can see) that the Egyptian churka is worked by one man, with a windlass or crank and a wheel and treadle, as shown in the diagram, and the Sind churka is worked by two persons, with two cranks and without the wheel, which enables them both to feed at the same time, and, consequently, to clean more cotton than could be done by only one hand feeding.

3. With regard to the comparative working merits of the Sind and Egyptian churkas, I am inclined to think that a Sindhee churka, turned and fed by two women or boys (by whom the work is generally done), would turn out as much or more clean cotton in a day than an Egyptian one would of the same size, turned and fed by one man in the same time.

4. In conclusion, I would beg to observe, that the Sind churka, or "attarree," is simple and less expensive than the Egyptian (which would require an elevation of masonry and be a fixture), that the people are accustomed to its use, it being the only kind used I am informed in Sind; and that for the present, I think it would answer all the purposes for which it is required.

I have, &c.
(signed) *Thomas George Prince*,
Superintendent of Cotton Experiments.

Kotree,
15 December 1852.

(No. 560 of 1853.)

From Mr. Secretary *Goldsmid* to *J. W. Larking*, Esq., Alexandria.

Sir,

In forwarding herewith, for your information, a copy of the letters noted in the margin,* containing opinions on the merit of the Egyptian cotton-cleaning machine, referred to in Mr. Piozin's letter of the 17th September 1851, I have been directed to communicate to you the thanks of his Lordship in Council for the part you have been so good as to take in the matter.

Bombay Castle,
28 January 1853

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

* Government letter to Messrs. Ritchie, Steuart & Co., and others, No. 10663, dated 12th November 1851. From Messrs. Ritchie, Steuart & Co., dated 16th October 1852. From the Collector of Dharwar, No. 1287, dated 31st August 1852, with enclosure. From the First Assistant Collector of Ahmedabad, in charge, No. 463, dated 13th November 1855, with enclosure. From Mr. J. Landon, dated 12th January 1852. From the Commissioner in Sind, No. 447, dated 18th December 1852, with enclosure.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1537

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 17 December (No. 194) 1851.

III.
Bombay.

WE beg to transmit, for the information of your Honourable Court, the accompanying copy of a letter, No. 913, dated the 2d instant, from the Collector of Customs at this Presidency, and of our Secretary's reply, No. 11,637, dated the 17th idem, regarding 18 bales of cotton, the produce of the current year, of the Hyderabad Collectorate, in Sindh, despatched thence to Bombay.

No. 913 of 1851, Territorial Department, Revenue.

To *H. E. Goldsmid*, Esq., Secretary to Government.

Sir,

THE Collector of Hyderabad, Scinde, has informed me of the despatch to Bombay of 18 bales of cotton grown this year in his collectorate, 15 cleaned and three uncleaned, and states as his belief that the former are intended for the Chamber of Commerce, and the latter for transmission to Mr. Blount, at Dharwar. As no instructions have been received by me from Government on the subject of the above cotton, may I request the favour of your informing me of the pleasure of his Lordship in Council.

2. I beg to forward herewith samples of the two sorts of cotton received by dawk from the Collector of Hyderabad, and have the honour to be,

Sir, &c.

(signed) *H. Young*, Collector of Customs.

Bombay Custom-House,
2 December 1851.

(No. 11,637 of 1851.)

From Mr. Secretary *Goldsmid* to the Collector of Customs.

Sir,

I HAVE been directed by the Right honourable the Governor in Council to acknowledge the receipt of your letter, No. 913, dated the 2d instant, requesting instructions as to the disposal of 18 bales of cotton forwarded to you by the Collector of Hyderabad, in Sindh, grown this year in his collectorate.

2. In reply, I have been desired to request that you will have the goodness to dispose of the cotton as follows:—

One (1) bale cleaned and one (1) bale uncleaned to be sent to Mr. Blount, at Dharwar.

One (1) bale cleaned and one (1) uncleaned to the Chamber of Commerce.

One (1) cleaned and one (1) uncleaned to Mr. Larking, Egypt, charges to Suez being defrayed by this Government, and the remaining bales to the Honourable Court.

I have, &c.

(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 17 December 1851.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 1 May (No. 60) 1852.

WE do ourselves the honour to annex, for the information of your Honourable Court, copies of our proceedings relative to samples sent to us by the Commissioner in Sindh, of cotton grown from New Orleans and Egyptian seed sown last year by Mr. A. Young, Deputy Collector at Mehur, in the Shikarpore Collectorate.

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 21. April 1852.—V. 4565 to 70.

(No. 112 of 1852.)

From the Commissioner in Scinde to the Right Honourable Lord Viscount Falkland, Governor and President in Council, Bombay.

My Lord,

V. 4565. I HAVE the honour to forward, for submission to your Lordship in Council, two baskets containing samples of cotton grown from New Orleans and Egyptian seed, sown last year by Mr. A. Young, Deputy Collector at Mehur, in the Shikarpoor Collectorate.

I have, &c.
(signed) H. B. E. Frere,
Commissioner.
Camp Hyderabad, 29 March 1852.

(No. 2699 of 1852.)

MEMORANDUM by the Revenue Secretary.

V. 4566. THE Secretary to Government, Revenue Department, presents compliments, and requests Mr. J. W. Larking will have the goodness to favour the Bombay Government with his opinion on the sample of cotton herewith forwarded, grown from the Egyptian seed sown last year by Mr. A. Young, Deputy Collector at Mehur, in the Shikarpoor Collectorate of the province of Sindh.

(signed) H. E. Goldsmid,
Secretary to Government.
Bombay Castle, 17 April 1852.

(No. 2713 of 1852.)

MEMORANDUM by the Revenue Secretary.

V. 4567. THE Secretary to Government, Revenue Department, presents compliments, and requests the Honourable Company's agent at Alexandria will have the goodness to forward, free of charge, to Mr. Larking, a letter and small basket of cotton this day sent to that gentleman's address.

2. The charges incurred will be defrayed by this department.

(signed) H. E. Goldsmid,
Secretary to Government.
Bombay Castle, 17 April 1852.

V. 4568.

My dear Goldsmid,
THE New Orleans we think not good in either colour or staple. The Egyptians, good staple, but not very good colour.

Yours, &c.
(signed) J. R. Hadow.

V. 4569.

My dear Goldsmid,
THE Egyptian is as fine a specimen of Indian cotton as I have ever seen, long and strong in staple, particularly free from leaf and dirt.

Can this be produced in quantity, or is this merely a waistcoat-pocket sample (of which we have had so many specimens), grown in flower-pots or in a garden? Why they can grow cotton in Manchester itself by artificial means; but I should much like to know the circumstances under which this Egyptian cotton was produced. Can it be grown in quantity, and at a cost that will remunerate the grower? If it can, then it will form a most valuable article of export from young Egypt. I am afraid to name a value for it, but you may set it down at 30 to 50 per cent. beyond ordinary Broach cotton, probably more. But I have strong doubts of its being grown in quantity, in having been so often disappointed by similar exhibitions.

The New Orleans is clean, and that is all that can be said in its favour. It is but poor stuff, colour bad, short in staple. Was the seed fresh, or was it got from Southern Mah-ratta Country?

19 April.

Yours, &c.
(signed) J. Smith.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1539.

(No. 2741 of 1852.)

VI.
III.
Bombay

From Mr. Secretary *Goldsmid* to the Commissioner, Sindh.

Sir,

I AM directed by the Right Honourable the Governor in Council to forward you the accompanying copies of notes containing the opinions of Messrs. Hadow and Smith, on the samples of cotton furnished with your letter of the 29th ultimo, No. 112.

V. 4570.
Remington & Co.
Nicol & Co.

2. Portion of the cotton seed grown from Egyptian, has been sent by the mail of the 17th instant to Mr. Larking in Egypt, for his opinion.

3. You will have the goodness to furnish, as soon as possible, the information indicated by Mr. Smith as being desirable.

4. You will also state whether you require more seed from Egypt, and if so, in what quantity, and when.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 19th April 1852.

REVENUE LETTER from the Government of *Bombay* to the Honourable the Court of Directors, dated 16 June (No. 85) 1852.

WE beg to forward herewith a copy of our further proceedings regarding the samples of New Orleans and Egyptian cotton sent to us by the Commissioner in Scinde, referred to in our letter, No. 60, dated the 2d ultimo.

(No. 170 of 1852.)

From the Commissioner in Scinde to the Right Honourable the Governor and President in Council.

My Lord,

WITH reference to Mr. Secretary *Goldsmid*'s letter, noted in the margin,* I have the honour to transmit the accompanying copy of a communication from the Collector of Kurrachee,† and to request that the quantity of Egyptian seed applied for by Captain *Preedy* may be supplied; and an equal portion for the other collectorates, or 2,000 lbs. in all, to arrive here not later than January.

2. Land of the kind described in para. 7 is more abundant in Upper Scinde, especially above Sukkur, in the new districts; and it is there that I expect a considerable extension of cotton cultivation.

I have, &c.
(signed) *H. B. E. Frere*,
Commissioner in Scinde.

Kurrachee,
24 May 1852

(No. 1015 of 1852.)

TRUE copy forwarded for the Commissioner's information, with reference to his endorsement, No. 948, of 27th April, and with a recommendation that the request contained in the concluding paragraph may be complied with, and that a supply of Egyptian cotton seed, to the extent of about 1,000 lbs. may be supplied.

(signed) *H. W. Preedy*, Captain,
Collector.

Kurrachee, Collector's Office,
17 May 1852.

(No. 98 of 1852.)

From the Deputy Collector of Sehwan to the Collector of Kurrachee.

Sir,

WITH reference to the copies of correspondence forwarded under your endorsement, No. 862, dated the 30th ultimo, I have the honour to inform you that the specimens of cotton

* No. 2741, of the 19th April last.

† No. 1015, dated 17th instant, in a letter from the Deputy Collector, Sehwan.

cotton grown from New Orleans and Egyptian seed were given me by Mr. Wright, the apothecary, in medical charge at Mehur, and were obtained from a few plants grown by him in his garden at that place.

2. The cotton was, however, not grown under circumstances more favourable than if it had been in an open field, and indeed, owing to the Egyptian seed not having been received till the proper season for sowing was past, it had not a fair chance. From the lateness of sowing, the cotton did not form till the cold weather, and to this the bad colour of the specimen is probably due.

3. The Egyptian seed sown by the zemindars appears, from the reports, to have come up well; but, from the cause above alluded to, the pods did not form till the cold weather, when the canals drying, the plants died for want of water. Had there been water available, the yield would probably have been as good as in Mr. Wright's garden, where the plants were watered from a well.

4. It is impossible to say, without a trial on a large scale, whether the cultivation of the Egyptian cotton would remunerate the grower. The dirty inferior Sindee cotton sells in the bazaars at from 14 to 16 rupees the maund of 80 lbs., or about the price put by Mr. Smith on the clean specimen from Egyptian seed. But the Sindee yields on an average only about 100 lbs. of cotton, of which a large per-centage is composed of leaves and stalks, while Mr. Larking states the average yield in Egypt to be about 400 lbs. of clean cotton, so that, supposing the cultivation to be moderately successful, it may be expected to be remunerative.

5. The two principal obstacles to the extensive cultivation of cotton in Sind are the system of division of produce between the labourer and his employer, and the late period at which the canals fill with water.

6. So long as the labourer is paid by a share of the produce, he will prefer cultivating that which is most immediately of service to him, namely, grain; but were the cultivation once seen to be profitable on a large scale, there is no doubt that the Hindoos, who are the principal cultivators of cotton, would arrange this with the labourers, especially now that the quantity of grain produced is so large, and prices so low.

7. The want of water in the canals when it is most required is an obstacle more difficult to overcome, and at present confines the cultivation of the best cotton to wells and the banks of dunds of the river Indus, or the few canals that have water in them all the year round, wells are too expensive for general adoption, and the other situations are all low, and liable to be flooded by sudden rising of the river.

8. Cotton watered by wheels from wells, dunds, &c., is sown about March, and the crop gathered by the end of September; and next year the ground is broken up for a different crop. This kind is called "Neree."

9. There is another and more extensive kind of cultivation, called "Bagur," in which the seed (of the same kind) is sown, mixed with the jowaree, as late as June or July, by which time the canals are full. The jowaree grows and ripens its crop, the cotton vegetates, but the plants are stunted in their growth, and do not flower, and during the cold weather die down to the roots. In the following spring the dead stalks of the cotton plants are cut off, and the ground cleared of the roots of the former years — jowaree, jungle, &c.; the plants then shoot up with greater or less rapidity, according to the quantity of moisture in the soil, and in moist lands near the bank of the river, mature a crop without further watering; but in the generality of lands, water is given as soon as the canals fill.

10. Cotton that will bear this treatment may be grown on all the khureef lands in Sind, but that which requires to be treated as the "neree" must be limited by the quantity of water available in March.

11. While in charge of the Mehur districts, I had several trials made with New Orleans seed (produced in India) in the mode described as "Bagur" cultivation, and, in every instance, it failed. I have given some of the small supply of Egyptian seed received this year to be tried in this way, and will let you know the result.

12. The specimen of New Orleans cotton was grown from acclimatised seed, supplied by Government; it was extensively tried, and though a few pods of superior cotton were obtained, the result was not considered favourable. Unless the ground was kept very moist the plants suffered from the hot winds, and the moisture deteriorated the quality of the cotton. The plant was also more obnoxious to the attack of the worm than the native kind.

13. The cleanliness of the samples sent is owing to the care bestowed on such small quantities. It will be long before any large quantity can be obtained unmixed with leaves and stalks.

14. In conclusion, I beg to remark, that although there appears but little chance of Sind exporting cotton, still the substitution of a better kind for that now grown on which lands

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1541

lands is quite practicable, and would be of immediate and great benefit to the cultivators. I hope, therefore, a supply of Egyptian seed will be furnished next year, and not later than January, so as to afford the zemindars plenty of time to make their arrangements for the season.

Deputy Collector's Office,
10 May 1852.

I have, &c.
(signed) *A. Young*, Deputy Collector.

III.
Bombay.

(No. 4196 of 1852.)

From Mr. Secretary *Goldsmid* to the Commissioner in Sindh.

Sir,

I HAVE been directed to acknowledge the receipt of your letter, No. 170, dated the 24th ultimo, submitting copy of a memorandum from the collector of Kurrachee, accompanied with transcript of a letter to his address from the deputy collector of Sehwan, wherein Mr. Young furnishes the information called for by Government regarding the samples of New Orleans and Egyptian cotton, forwarded with your letter, No. 112, dated the 29th March last.

2. In reply, I have been directed to remind you of the inutility of Government being furnished, as a sample, with a handful or so of cotton grown in a garden.

3. The Honourable Company's agent in Egypt will be requested by the next mail to procure and forward, in time to reach here in November, or by the steamer to arrive here in the second week in December next, the quantity of Egyptian seed applied for by you.

Bombay Castle,
12 June 1852.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

(No. 4197 of 1852.)

From Mr. Secretary *Goldsmid* to the Honourable Company's Agent, Alexandria.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to request that you will have the goodness to procure from Mr. Larking, and forward, in time to reach here in November, or by the steamer to arrive here in the second week in December next, 2,000 lbs. of Egyptian cotton seed for distribution in Sindh.

2. The charges incurred will be defrayed by this department, as soon as you favour me with information as to the amount.

3. You are requested to acknowledge the receipt of this letter.

Bombay Castle,
12 June 1852.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 24 February (No. 27) 1853.

IN continuation of our letter, No. 85, dated the 16th June last, we have the honour to forward herewith a copy of our proceedings regarding the supply of Egyptian cotton seed procured and despatched by the Honourable Company's agent at Alexandria for distribution in Sindh.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 13 October 1852.—V. 12,718 to 20.

From the Honourable Company's Agent at Alexandria to Mr. Secretary *Goldsmid*.

Sir,

I HAVE to acknowledge your letter, No. 4197 of 1852, territorial department, dated Bombay, 12 June last; and in reply, beg to inform you that Mr. Larking is in England, and not expected back till November next, but I have spoken to his agent here about the cotton seed, and he has promised to get it as soon as he can, which shall be forwarded without delay.

Alexandria, 30 August 1852.

I am, &c.
(signed) *H. Johnson*.

V. 12,718.

1542 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 13 October 1852.—V. 12,678 to 82.

(No. 73 of 1852).

From the Commander of the Honourable Company's Steamer "Ajdaha" to Mr. Secretary *Goldsmid*.

V. 12,678.

Sir,
I HAVE the honour to inform you, that I have brought from Suez 20 casks of cotton seed to your address, and which I herewith send in a Government pilot boat to the "Apollo" bunder.

Bombay Harbour, 11 October 1852. I have, &c.
(signed) *W. C. Barker*, Commander,
Commanding H. C. S. P. "Ajdaha."

From Mr. Chief Secretary *Malet* to the Commander of the Honourable Company's Steamer "Ajdaha."

V. 12,682.

Sir,
I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 78, of this date, and to inform you that the acting collector of customs has been requested to land at once the cotton seed therein alluded to.

Bombay Castle, 11 October 1852: I have, &c.
(signed) *A. Malet*,
Chief Secretary to Govt.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 20 October 1852.—V. 13,630.

(No. 931 of 1852.)

From the Acting Collector of Customs, Bombay, to Mr. Chief Secretary *Malet*.

V. 13,630.
20 casks of cotton
seed for the Scinde
province.

Sir,
I HAVE the honour to acknowledge receipt of your letter, No. 6482, dated 11th instant.
2. In reply, I beg to inform you that the cotton seed therein alluded to has been received and shipped on board the steamer "Bombay," belonging to the Bombay Steam Navigation Company, which starts for Kurrachee on the 18th instant.
3. The Commissioner in Scinde has accordingly been advised.
4. And a receipt has also been furnished to Commander Barker, of the Honourable Company's Steamer "Ajdaha," as directed in your 2d para.

Bombay Custom House,
16 October 1852. I have, &c.
(signed) *Richard Spooner*,
Acting Collector of Customs.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 10 November 1852.—V. 13,975 to 77.

From the Honourable Company's Agent at Alexandria to Mr. Secretary *Goldsmid*.

V. 13,975.

Sir,
WITH reference to my letter of 15th last month, I now enclose a bill of costs for the cotton seed forwarded to you by the last steamer to Bombay, together with Mr. Piozin's receipt for the amount I have paid him in English money, equal to 6l. 10s., which you can remit to me at your convenience.

Alexandria, 29 September 1852. I am, &c.
(signed) *H. Johnson*.

Cost and Charges of the 20 Casks Egyptian Sea Island Cotton Seed consigned to Captain *Johnson's* Agent for the Honourable East India Company.

Value of the seed, about 40 okey in each cask	-	-	pr.	287	20
Cost of 20 empty casks portorage at	-	-	-	265	0
Cooperage -	-	-	-	65	20
Petty charges -	-	-	-	32	0
Egp.	-	-	-	650	0

Alexandria, 28 September 1852. E. & O. E.
(signed) *M. Piozin*.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1543

III.
Bombay.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue,
dated 22 December 1852.—V. 16,258 to 62.

(No. 401 of 1852.)

From the Commissioner in Sind to the Right Honourable the Governor in Council,
dated 17th November 1852.

My Lord,

WITH reference to previous correspondence, I have the honour to submit, for the information of your Lordship in Council, the accompanying copy of a letter, as per margin,* from the Superintendent of Cotton Experiments in this province, reporting on the state of the 20 casks of Egyptian cotton seed lately received from Bombay.

V. 16,258.

2. I beg to suggest that paras. 3 and 4 of Mr. Prince's letter be communicated to the agent in Egypt for his future guidance.

Commissioner's Office, Kurrachee,
17 November 1852.

I have, &c.
(signed) H. B. E. Frere,
Commissioner in Sind.

(No. 2 of 1852.)

From the Superintendent of Cotton Experiments to the Commissioner of Sind.

Sir.

WITH reference to extract of Government letter, No. 6,482, dated 11th October 1852, bearing your endorsement, and announcing the arrival at Bombay of twenty casks of cotton seed by steamer "Ajdaha" from Suez, I have the honour to inform you that on the arrival of the seed at the Collector's office here, I examined it, and from the musty and peculiar smell was induced to think it was damaged; on dividing several of the seeds, I found a good many of them were spoiled. I took samples from three of the casks and planted them in boxes filled with earth, and after the lapse of a sufficient time, found that only about one part in three came up, and the rest of the seeds were all rotten. I then took a small quantity (25 seeds) from each of the remaining casks and planted them, and they came up in the like proportion as those from the other three casks, that is, about one seed in three germinated and all the rest were destroyed.

V. 16,259.

2. I beg to recommend that on the distribution of the seed among the cultivators, they may be warned to plant the seed four times as thick as they would do if it were good.

3. I beg likewise to suggest that the party who has the procuring of the foreign seed be directed to be careful to select seed of the previous season, as over-yearred seed is generally greatly deteriorated.

4. In conclusion, I would also suggest that directions be given, in case of any future importation of cotton seed, that the casks or bags may be kept on the deck of the vessel if possible, as if stowed in the hold they are liable to sweat, which will more or less damage the seed.

Kurrachee, 1 November 1852.

I have, &c.
(signed) T. G. Prince,
Superintendent of Cotton Experiments.

RESOLUTION on a Letter from the Commissioner in Sind, dated 17th November 1852,
No. 401.

V. 16,260.

COPY of these papers should be sent to Captain Johnson, for communication to Mr. Larking.

Mr. Frere to be informed that it is thought better that instead of distributing the seed generally, and risking it falling into disfavour with the ryots (consequent on its bad quality), it should be given by portions for the purpose of producing seed for distribution to natives.

(signed) Falkland.
D. A. Bell.

13 December 1852.

* No 2, dated the 15th November 1852.

III.
Bombay.

(No. 8015 of 1852.)

From Mr. Secretary *Goldsmid* to the Honourable Company's Agent at Alexandria.

Sir,

V. 16,262.

WITH reference to your letter of the 15th September last, I have been directed by the Right Honourable the Governor in Council to transmit herewith, for communication to Mr. Larking, copy of a letter from the Commissioner in Sindh, No. 401, dated 17th ultimo, and of its enclosure, relative to the 20 casks of Egyptian cotton seed despatched by you.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Government.

Bombay Castle, 16 December 1852.

From the Honourable Company's Agent at Alexandria to Mr. Secretary *Goldsmid*.

Sir,

I HAVE to acknowledge your letter, No. 8015 of 1852, Territorial Department, dated Bombay, 16th December last, with its enclosure, relative to the last batch of cotton seed sent by Mr. Larking's agent from this place.

In reply, I beg to inform you that Mr. Larking is still in England, and his return uncertain. I, however, enclose an explanation of the circumstance by his agent.

Alexandria, 17 January 1853.

I am, &c.
(signed) *H. Johnson*.

To Captain *H. Johnson*, Agent to the Honourable East India Company, Alexandria.

Sir,

I HAVE read the letter which you have shown to me, to your address from Mr. Goldsmid, Secretary to Government of Bombay, dated 16th December 1852, No. 8015, together with the reports which accompanied it, and in compliance with your request that I will give you my opinion as to what has been said in regard to the quality of the cotton seed sent from hence, or of the result given of the different experiments which have been made in India, a result considered anything but satisfactory, I hasten and make it my duty to submit the following. And, first of all, you will recollect, Sir, they were in a hurry to receive the cotton seed required, so that it should arrive in time and at the season for sowing it, and, therefore, they could not here obtain it entirely fresh; I was then obliged to take that of the preceding year, and I procured it from the only place where it was to be had of the desired quality (Sea Island), that is to say, from our village of Barhara. I will add, that before placing it in casks, I not only took as much care as possible to select it, but more, I put a certain quantity of seed in water to see if the germination was good, and the trial was decided as rather satisfactory.

Now, and without wishing to maintain that the cause of whatever damage which may have happened to the seed is owing only to its having remained for a long time in the barrels, it is, however, possible, nay probable, that this circumstance has greatly contributed, all oily seed being subject to ferment, and, consequently, was spoiled; above all, if it had been placed anywhere, or put on board in a damp situation, or any other place which would more or less have accelerated that fermentation; at all events, it will not, perhaps, be irrelevant to mention that when they sow cotton here it is invariably the custom to put into each hole a good number of seed to ensure success, and that notwithstanding the good quality in general of the seed, which shows that it is hardly expected to see all shoot up which have been planted in the ground; and no sooner does the cotton show itself than they are ready to root up all that is not required, to allow the remainder to gain more strength, and as the cotton seed, which abounds elsewhere, costs but little, you will easily understand, Sir, that in the sowing of it here we need not be economical. We are always content here when the third, or even the fourth, part succeeds, and this must have happened in India. I am, besides, very happy to assure you that, having used the same seed exactly to sow here about 45 acres of cotton, it has succeeded very well.

I should, doubtless, deeply regret that they should for one moment believe in Bombay there has been any negligence here or fault in regard to the cotton seed procured; but, and under all the circumstances, I flatter myself that what I have above stated will remove the remotest suspicion on the subject.

Alexandria, 16 January 1853.

I have, &c.
(signed) *M. Piozin*.
(True Translation.)
(signed) *John Broadhurst*,
French Translator to Government.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1545

MINUTE by the Honourable Board, dated 19 February 1853.

III.
Bombay.

Copy to be forwarded to Mr. Frere, and Captain Johnson requested, when any seed is sent in future from Egypt, to have the goodness to give particular instructions on the points noticed by Mr. Piozin to the commanders of the steam-vessels conveying the same.

(signed) *Falkland.*
D. A. Blane.
A. Bell.

(No. 1181 of 1853.)

From Mr. Secretary *Goldsmid* to the Commissioner in Sindh, dated 24 February 1853.

Sir,

WITH reference to the Government resolution, No. 8014, dated the 16th December last, I have been directed by the Right Honourable the Governor in Council to forward for your information copy of a communication from the Honourable Company's agent at Alexandria, dated 17th ultimo, and of a translation of its accompaniment, from Mr. Piozin, regarding the 20 casks of the Egyptian cotton seed referred to in your letter, No. 401, dated the 17th November 1852.

2. A copy of my letter of this date to the Honourable Company's agent at Alexandria is also annexed.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 24 February 1853.

(No. 1182 of 1853.)

From Mr. Secretary *Goldsmid*, to the Honourable Company's Agent, Alexandria.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, dated the 17th ultimo, with accompaniment, and to request that when any seed is sent in future for this Government from Egypt you will have the goodness to give particular instructions on the points noticed by Mr. Piozin, to the commanders of the steam-vessels conveying the same.

2. A copy of my letter of this date to the Commissioner in Sindh is annexed.

I have, &c.
(signed) *H. E. Goldsmid,*
Secretary to Government.

Bombay Castle, 24 February 1853.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 5 June (No. 83) 1852.

WE beg to report, that we have instructed the Acting Collector of Customs at this Presidency to forward to your Honourable Court (177) one hundred and seventy-seven bales of cotton, the produce of the northern districts of the collectorate of Kurrachee in Sindh. A copy of the correspondence noted in the margin relative to this cotton is hereto appended for your Honourable Court's information.

(No. 314 of 1852.—Territorial Department, Revenue.)

From *Richard Spooner*, Acting Collector of Customs, to *H. E. Goldsmid*, Esq., Secretary to Government.

Sir,

By the Honourable Company's steam frigate "Auckland," which arrived from Kurrachee on the 5th instant, I have received 125 bales of Sindh cotton out of the quantity shown in the margin; and as in the intimation received from the Collector of Kurrachee no mention is made as to its disposal, I have the honour to request you will have the goodness to obtain the instructions of the Right Honourable the Governor in Council for my guidance. 179 bales of Sindh cotton.

2. The cotton would seem to be the produce of the district of Schwan.

I have, &c.
(signed) *R. Spooner,*
Acting Collector of Customs.

Bombay Custom House,
7 April 1852.

RESOLUTION.

No advice has yet been received from Sindh.

Two bales may be sent to the Chamber of Commerce, with a request that they will give their opinion as to its quality; on receipt of their reply, instructions will be given to the Collector of Customs, relative to the disposal of the rest of this cotton.

Commissioner in Sindh to be requested to explain where this cotton was obtained and cleaned.

15 April 1852.

(signed) *A. Bell.*
J. Warden.

(No. 2559 of 1852.—Territorial Department Revenue.)

FOR the Acting Collector of Customs, with a request that he will send the two bales therein alluded to, to the Chamber of Commerce, who have this day been written to on the subject.

Bombay Castle, 13 April 1852.

(signed) *H. E. Goldsmid,*
Secretary to Govt.

(No. 2560 of 1852.—Territorial Department, Revenue.)

FOR the Commissioner in Sindh, with copy of the Acting Collector's letter of 7th instant, No. 314.

Bombay Castle, 13 April 1852.

(signed) *H. E. Goldsmid,*
Secretary to Government.

(No. 2561 of 1852.—Territorial Department, Revenue.)

To *John Connon*, Esq., Secretary to the Chamber of Commerce.

Sir,

I HAVE been directed to inform you that the Acting Collector of Customs at the Presidency has this day been instructed to send to you two bales of Sindh cotton, and to request that the Chamber of Commerce will favour the Right Honourable the Governor in Council with their opinion as to its quality.

2. Government have not yet received any account from Mr. Frere as to the locality where the cotton was produced, but the Acting Collector of Customs reports that "it would seem to be the produce of the district of Sehwan."

Bombay Castle, 13 April 1852.

I have, &c.
(signed) *H. E. Goldsmid,*
Secy to Govern.

(No. 24 of 1852.)

To *H. E. Goldsmid*, Esq., Secretary to Government, Bombay.

Sir,

I HAVE the honour, by direction of the Committee of the Chamber of Commerce, to acknowledge receipt of your letter, dated the 13th instant, and numbered 2561 of 1852, in the Territorial Department, Revenue, having reference to two bales of Sindh cotton forwarded to the Chamber by the Acting Collector of Customs, of the quality of which the Right Honourable the Governor in Council is pleased to ask the Chamber's opinion.

2. In reply, I am instructed respectfully to inform his Lordship in Council that this cotton is, in the opinion of the Chamber, somewhat harsh, short in staple, and not well cleaned, but free from seed, and valued at present at 70 to 75 rupees per candy.

Bombay, Chamber of Commerce,
29 April 1852.

I have, &c.
(signed) *J. Connon,*
Secretary.

(No. 162 of 1852.—Territorial Department, Revenue.)

From the Commissioner in Sindh to the Right Honourable Lord Viscount *Falkland*,
Governor and President in Council, Bombay.

My Lord,

WITH reference to previous correspondence noted in the margin,* I have the honour to submit copy of letters from the Collector of Kurrachee † with Bill in original, amounting to 1,254 rupees, on account of expenses incurred in the purchase of, and transmission from, Sehwan to Kurrachee, of the cotton shipped on board the H. C. S. F. "Auckland."

2. It

* Mr. Secretary Goldsmid's letter, No. 2560, dated 13th April. Mr. Secretary Goldsmid's letter, No. 3188, dated 7th May 1852.

† No. 633, dated 3d ultimo (endorsement), with enclosures. No. 969, dated 12th instant, with enclosures.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. (1547)

III.
Bombay.

2. It will be seen from these papers that the cotton has cost more than the Broach cotton sells for in Bombay, and being inferior in quality, cannot, unless the price be greatly reduced, ever be useful cotton in the Bombay market.

3. I have little doubt but that the production will extend and the cost be reduced; at present the production being very limited, the selling price is probably regulated by the price which imported cotton bears on the spot.

4. I request that the bill herewith enclosed when passed by your Lordship in Council, may be sent to the Civil Auditor.

Kurrachee, 18 May 1852.

I have, &c.
(signed) *H. B. E. Frere,*
Commissioner in Sindh.

(No. 633 of 1852.)

TRUE copies forwarded for the information of the Commissioner in Sindh with reference to the latter part of the first para. of the Commissioner's letter, No. 316, dated 3d March 1851, to the collector of Hyderabad.

Kurrachee Collector's Office,
3 April 1852.

(signed) *H. W. Preedy,* Captain,
Collector.

(No. 608 of 1852.)

From the Collector of Kurrachee to the Collector of Customs, Bombay.

Sir,

UNDER instructions from the Commissioner in Sindh, I have the honour to inform you that I have this day sent on board the Honourable Company's steam frigate "Auckland" 179 bags of cotton, weighing about 8,554 lbs. The invoice of cost and charges thereon has not yet been received from the Deputy Collector of Sehwan, but I have written to that officer to expedite its transmission, and the necessary information shall be transmitted to you on its receipt.

Kurrachee Collector's Office,
2 April 1852.

I have, &c.
(signed) *H. W. Preedy,* Captain,
Collector.

(No. 622 of 1852.)

From the Collector of Kurrachee to the Collector of Customs, Bombay.

Sir,

IN continuation of my letter, No. 608, of yesterday's date, I have the honour herewith to forward for your information, copy of a demi-official letter from Lieutenant Adams, of the Honourable Company's steam frigate "Auckland," stating his inability to receive on board the whole of the cotton. I have, however, written to the deputy collector in charge of customs, to engage sufficient tonnage for the remaining cotton.

A receipt for the cotton received on board the steamer is herewith forwarded for your information.

Kurrachee Collector's Office,
2 April 1852.

I have, &c.
(signed) *H. W. Preedy,* Captain,
Collector.

Saturday Noon, 2d April 1852.

My dear Sir,

WE have filled our fore and after orlops, and I send you receipt for the number of bales we have been able to stow away.

I am sorry we cannot take all, but the only place remaining is the fore coal hold, and I do not like to run the risk of setting fire to the ship by stowing them there.

We shall leave this port this evening as soon as the tide serves to go over the bar.

Captain Preedy, &c. &c.

Believe, me, &c.
(signed) *G. H. Adams.*

RECEIVED from the collector of Kurrachee, 125 bags (a hundred and twenty-five bags) of cotton for delivery to the collector of customs, Bombay.
The cotton appears to be in good condition, although loosely packed.

Kurrachee, 2 April 1852.

(signed) *W. M. Pengelly,* Lieut. I. N.,
Commanding Officer H. C. S. F. "Auckland."

(No. 969 of 1852.—Revenue Department.)

From the Collector of Kurrachee to the Commissioner in Sindh.

Sir,

WITH reference to your letter, No. 930, dated the 26th ultimo, and endorsement, No. 1081, dated this day, I have the honour to forward for your information, copy of a letter, No. 91, dated 4th instant, from the deputy collector of Sehwan, intimating the mode in which the cotton in this province is freed from seed, together with a memorandum of the expenses incurred on account of the consignment of cotton alluded to in the correspondence forwarded to you under my endorsement, No. 633, dated 3d ultimo, and from which you will observe that the total expenditure amounts to Rs. 1,254. 12. 8., giving an average value per candy of Rs. 97. 3. 11., or Rs. 1. 3. 11. in excess of the price of Broach cotton, as averaged by the Chamber of Commerce.

2. The above cotton was procured in the northern districts of my collectorate, having been grown in the pergunnas of Mallar, Phooljee, Jungar, and Dadoo.

3. A copy of this letter and accompaniments has been forwarded for the information of the collector of customs, Bombay.

Kurrachee Collector's Office,
12 May 1852.

I have, &c.
(signed) H. W. Preedy,
Collector.

(No. 91 of 1852.—Revenue Department.)

From the Deputy Collector of Sehwan to the Collector of Kurrachee.

Sir,

WITH reference to your letter, No. 842, of 28th ultimo, I have the honour to inform you that the cotton was freed from seed by the common "churka," which is the only machine I have ever seen used for the purpose in Sindh.

Deputy Collector's Office, Camp Johee,
4 May 1852.

I have, &c.
(signed) A. Young,
Deputy Collector.

(True copy.)

(signed) H. W. Preedy, Captain, Collector.

MEMORANDUM of Expenses incurred in the Transmission of the Cotton received from Sehwan to Bombay.

1852 :		R. a. p.	R. a. p.
14 April	- Paid hire of two boats for conveying 179 bags of cotton from the bunder to the steamer "Auckland," and bringing back 54 bags in consequence of there being no room in the steamer - - - -	5 - -	
16 April	- Expenses incurred on ditto, as follows:		
	<i>Rs. a. p.</i>		
	Twine for sewing the bags - - - 2 -		
	Biggaries to load the boat - - - 1 14 -		
	Boat hire from Kurrachee.		
	Bunder to Keamaree - - - - 6 -		
	Freight on 54 bags to Bombay - 10 - -	12 6 -	
28 April	- Remitted to Lieutenant Ethersey for the transmission of the above cotton from Sehwan to Waghoda, as per copy of his letter attached - - - - -	43 14 10	
	Paid 10 cart hire for conveying the cotton from Waghola to the collector's office -	20 - -	
	Paid 10 cart hire for conveying the cotton from the collector's office to the bunder -	3 12 -	
			85 - 10
	Add expense incurred by the deputy collector of Sehwan, as per detailed account - - - -		1,169 11 10
	TOTAL - - - Rs.		1,254 12 8

(signed) H. W. Preedy, Captain,
Collector.

The East India Company, *Dr.*

To the Contingent BILL of EXPENSES incurred by the Deputy Collector of Sehwan, on account of the purchase of COTTON forwarded to Kurrachee, agreeably to Collector's Letter, No. 419, dated 12th March 1851.

DATE.	DETAIL.	AMOUNT.	TOTAL.
		<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
	Amount paid for 15 maunds of cotton, produce of Mullar, at 12 rupees the maund of 80 lbs.	180 - -	
	Amount paid boat hire for conveyance of above cotton from Mullar to Sehwan	2 - -	
	Amount camel hire, for conveyance of empty bags from Sehwan to Mullar for packing the above cotton	- 8 -	182 8 -
	Amount paid for 20 maunds of cotton, produce of Jangar, at <i>Rs.</i> 14. 8. the maund	290 - -	
	Amount paid for 39 seers 15 acres of cotton, produce of Jangar at <i>Rs.</i> 13. 5. 4. the maund	13 5 -	
	Amount paid camel hire for conveyance of the above cotton from Jungar to Sehwan	1 4 -	
	Amount paid hire of one camel for conveyance of empty bags to Jangar from Sehwan	- 6 -	
	Amount paid for cotton thread for sowing bags	- 1 -	305 - -
	Amount paid for 21 maunds 6 seers of cotton, produce of Tooljee, at 13 rupees the maund	274 15 2	
	Amount paid for 28 maunds of cotton, produce of Tooljee, at <i>Rs.</i> 13. 8. the maund	378 - -	
	Amount paid camel hire for conveyance of the above cotton to Sehwan from Tooljee	6 3 -	
	Amount paid camel hire for conveying empty bags to Tooljee from Sehwan for packing the cotton	2 - -	661 2 2
	Amount paid for 3 maunds cotton produce of Dadoo, at <i>Rs.</i> 13. 8. the maund	40 8 -	40 8 -
	Deduct amount realised on account of Government, by the sale of a portion of the above cotton damaged by fire at Kotree, estimated at 1 maund 32 seers, 15 annas, and credited in the Sehwan accounts for January 1852	- - -	1,189 2 2 19 6 4
	TOTAL Company's Rupees	- - -	1,169 11 10

(E. E. & Cont^{rs} received.)

(signed) A. Young, Deputy Collector.

Sehwan, Deputy Collector's Office,
1 February 1852.

I do hereby declare that to the best of my belief the sums herein charged were disbursed for the purposes stated.

(signed) A. Young, Deputy Collector.

1550 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

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Bombay.

(No 377 of 1852.)

From Captain *R. Ethersey*, I.N., Commanding Indus Flotilla, to Captain *H. W. Preedy*,
Collector of Kurrachee.

Sir,

IN reply to your letter, No. 797, of the 24th instant, I have the honour to inform you that the expenses incurred by my department in the transmission of 70 maunds of cotton from Sehwan to Wagoda in January last, amount to Company's Rs. 43. 14. 10. (rupees forty-three, annas fourteen, and pies ten), which has been debited to Government on my account for last month.

I have, &c.
(signed) *R. Ethersey*, I.N.
Commanding Indus Flotilla.

Kotree, 26 April 1852.

(No. 3845 of 1852.—Territorial Department, Revenue.)

To *H. B. E. Frere*, Esq., Commissioner in Sindh.

Sir,

I HAVE been directed by the Right Honourable the Governor in Council to acknowledge the receipt of your letter, No. 162, dated the 18th ultimo, with accompaniments, and to inform you that the bill and memorandum for the aggregate amount of, rupees twelve hundred and fifty-four, annas twelve, pies eight (*Rs. 1,254. 12. 8.*), expended in the purchase at Sehwan, in the Kurrachee collectorate, and transmission to Bombay, of the cotton received by the Honourable Company's steam frigate "Auckland," have been passed and sent to the acting civil auditor.

2. The acting-collector of customs has been instructed to forward to the Honourable the Court of Directors the cotton in question, exclusive of two bales which were sent to the Chamber of Commerce.

3. A copy of your letter under acknowledgment, and of the bill and memorandum accompanying it, has been forwarded to the Chamber of Commerce.

I have, &c.
(signed) *H. E. Goldsmid*,
Secy. to Govt.

Bombay Castle, 2 June 1852.

(No. 3846 of 1852.—Territorial Department, Revenue.)

To *R. Spooner*, Esq., Acting Collector of Customs, Bombay.

Sir,

WITH reference to the Government resolution, No. 2559, dated the 13th April last, I have been directed by the Right Honourable the Governor in Council to request that you will forward to the Honourable the Court of Directors the 123* bales of Sindh cotton therein referred to, which are now in your possession.

2. You will have the goodness to report the name of the vessel by which this cotton may be consigned, and the expense that may be incurred on account of its shipment.

I have, &c.
(signed) *H. E. Goldsmid*,
Secretary to Govt.

Bombay Castle, 2 June 1852.

(No. 520 of 1852.—Territorial Department Revenue.)

From *R. Spooner*, Acting Collector of Customs, to *H. E. Goldsmid*, Esq., Secretary to Government.

Sir,

179 bales of cotton
from Sindh.
123.

I HAVE the honour to acknowledge receipt of your letter, No. 3846, of the 2d instant, directing me to forward 123 bales of Sindh cotton to the Honourable the Court of Directors.

54.

2. Since my letter, No. 314, dated 13th April 1852, was penned, the remaining portion of 54 bales has arrived.

3. And I would therefore beg to solicit the instructions of Government as to their disposal.

Bombay Custom House,
4th June 1852.

I have, &c.
(signed) *R. Spooner*.
Acting Collector of Customs.

* 125 received, of which two were sent to the Chamber of Commerce.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1551

III.
Bombay.

REVENUE LETTER from the Government of *Bombay* to the Honourable the Court of Directors, dated 30 July (No. 98) 1852.

WE have the honour to forward herewith copy of a letter, No. 680, dated the 15th instant, from the Acting Collector of Customs at this Presidency, and of its enclosed memorandum of expenses incurred at Bombay.

(No. 680 of 1852.—Territorial Department, Revenue.)

From *Richard Spooner*, Acting Collector of Customs, to *A. Malet*, Esq., Chief Secretary to Government, dated 16 July 1852.

Sir,

As promised in the 2d para. of my letter, No. 616, dated 30th ultimo, I beg to forward herewith a detailed memorandum of expenses, amounting to rupees two hundred and forty-seven, annas ten, and pie one (*Rs. 247. 10. 1.*) incurred at Bombay on account of the cotton as per margin.*

Bombay Custom House,
16 July 1852.

I have, &c.
(signed) *R. Spooner*,
Acting Collector of Customs.

MEMORANDUM of Charges incurred at Bombay for receiving 177 bales of *Sehwan* (*Scinde Cotton*), and shipping them on board the Ship "*Loch Lomond*," *William Bray*, Commander, consigned to the care of *Mr. William Rathbone*, *Liverpool*.

	<i>Rs.</i>	<i>a.</i>	<i>p.</i>
Paid to <i>Bhunjee Gudhur</i> for landing 177 packages of cotton from the boats, weighing, carrying to the godowns, and stowing them, and again for removing from the godowns to the cotton press, and for packing them in 18 whole bales, and for shipping them on board the ship, including gunnies, lashings, &c.	24	4	4
Paid for screwing 18 bales	26	11	8
Paid average freight on ditto	166	6	10
Paid average insurance premium on ditto	35	2	9
Paid average charges for bill of lading and export notes on ditto	-	-	6
Total	247	10	1

Bombay Custom House,
16 July 1852.

(signed) *R. Spooner*,
Acting Collector of Customs.

REVENUE LETTER from the Government of *Bombay* to the Honourable the Court of Directors, dated 2 October (No. 128) 1852.

FROM the papers herewith forwarded your Honourable Court will learn that we have engaged the services of *Mr. T. G. Prince* to superintend the cotton experiments in *Sindh*, subject to your sanction, which we now solicit.

(No. 210 of 1852.—Revenue Department.)

From the Commissioner in *Sindh* to the Right Honourable Lord Viscount *Falkland*, Governor and President in Council, *Bombay*.

My Lord,

WITH reference to the correspondence which has taken place on the subject of the production of cotton in *Sindh*, I have the honour to report, that I hardly think any very definite or useful result is likely to follow the experiments made, unless there be some intelligent practical man on the spot, who can move about the country, and devote a large share of personal attention to the subject, who knows what Government require, and can devote himself entirely to obtain it.

2. The collectors do all that can be reasonably expected of them, and will, I am convinced, zealously and usefully second the efforts of any one who may be sent up for the purpose

* 177 bales of *Sehwan* (*Scinde*) cotton shipped to *Liverpool*, on account of the Court of Directors, screwed in 18 patent bales. Ship *Lochlomond*, *William Bray*, commander.

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Bombay.

purpose specified; but I doubt whether they will always obtain the information wanted so correctly and fully; and they certainly will not present it to Government so speedily, or in so useful a shape, as a person specially retained for the purpose.

Kurrachee,
23 June 1852.

I have, &c.
(signed) *H. B. E. Frere*,
Commissioner in Sindh.

MINUTE by the Honourable Board.

CONSIDERING the qualifications of Mr. George Prince, which appear, from what I can learn, to be good; the capabilities of Sindh as a cotton producing country, and the desire of the Honourable Court that we should improve and encourage the cultivation of cotton in Sindh, I would avail ourselves of his services pending a reference to the Honourable Court for sanction. He may, I think, be granted the same pay and allowances as are given to Mr. Vary.

20 September 1852.

(signed) *Falkland*,
D. A. Blane,
A. Bell.

(No. 6281 of 1852.)

From Mr. Chief Secretary *Malet* to the Commissioner in Sindh.

Sir,

I HAVE been directed to acknowledge the receipt of your letter, No. 210, dated the 23d June last, and to inform you that, considering the qualifications of Mr. George Prince, which appear, from what Government can learn, to be good, the capabilities of Sindh, as a cotton-producing country, and the desire of the Honourable the Court of Directors that Government should improve and encourage the cultivation of cotton in Sindh, the Right Honourable the Governor in Council has resolved on availing himself of Mr. Prince's services, pending a reference to the Honourable Court for sanction.

2. Mr. Prince will draw the same pay and allowances as are given to Mr. Vary, the superintendent of cotton experiments at Sattara, namely:—

Rupees, 250 per mensem,	Pay,
„ 30 „	Horse allowance, and
„ 5 per diem	Travelling allowance (while actually out in the districts).

Bombay Castle,
27 September 1852.

I have, &c.
(signed) *A. Malet*,
Chief Secretary to Government.

REVENUE LETTER from the Government of Bombay to the Honourable the Court of Directors, dated 2 March (No. 23) 1855.

WE have the honour to forward herewith, a copy of our proceedings as per margin, relative to the cotton experiments carrying on in Sindh, under the superintendence of Mr. T. G. Prince.

EXTRACT from the proceedings of Government in the Territorial Department, Revenue, dated 20 December 1854.—V. 10,636 to 39.

(No. 247 of 1854.)

From the Commissioner in Sind, to the Right Honourable the Governor in Council.

My Lord,

V. 10,636.

I HAVE the honour to submit the enclosed Report* from Mr. Prince, superintendent of cotton experiments in this province, on the subject of his proceedings during the past year.

2. The Report, I think, is satisfactory and creditable to Mr. Prince, and the plan he is pursuing, appears to afford fair prospect of success, and should, I think, be persevered in.

Commissioner's Office, Kurrachee,
5 August 1854.

I have, &c.
(signed) *H. B. E. Frere*,
Commissioner in Sind.

* Dated 17th June 1854, reporting his proceedings during the past year.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1553

III.
Bombay.

To H. B. E. Frere, Esq., Commissioner in Sind.

Sir,

I HAVE the honour to submit a report of my proceedings, during my recent journey through the province, and of what has been done in the cultivation of foreign cotton, since the date of my last Report.

V. 10,637.

2. On my return from the districts in April last year, I planted, in that and the following month, in the government garden, and in an enclosed field in the neighbourhood, about 10½ acres of land, with New Orleans and Egyptian seed, partly imported and partly naturalised.

3. The acclimatised seed grew well, and produced a fair stand of plants, but three successive days of hot winds, when they were in the third leaf, and again three more days of similar weather, when the plants were about three weeks old, so effectually stunted them, that they never recovered it, and produced in consequence only about 1½ maunds of inferior cotton.

4. The New Orleans imported seed, of which I planted about five acres, did not come up at all. This seed I had tried in November 1852, previous to its distribution, and found it good, but in the interval of six months that ensued before it was planted, it had greatly deteriorated, though kept in a dry and airy place. Evidence of this I subsequently found in all parts of the country; in many places it had not grown at all, in others only partially.

5. In September last 6,000 lbs. of Sea Island seed were received from Bombay which on trying I found to be good, nearly every seed germinating. Of this seed I sent in November 4,800 lbs. to the deputy collectors of Shah Bunder and Ghorabarree, and about 250 lbs. to the political agent at Cutch. In December 14,000 lbs. of New Orleans seed were received from the Dekkan and the Southern Mahratta country, and in January 2,000 lbs. of this seed were sent to the Chief Commissioner of the Punjaub, 5,000 lbs. to Shikarpoor, 5,000 lbs. to Hyderabad, and 2,000 lbs. for the Kuirachee collectorate. This seed was fresh and good, the produce of the last harvest, and has grown well wherever it has been planted, as I learn by late advices from different parts of the country.

6. On my proceeding to the districts, I found that in the Ghorabarree district a number of small patches of land of a few rods each had been planted late in the season with New Orleans and Egyptian seed, much of this seed had failed to come up, and where it had grown from the lateness of the planting and from carelessness and neglect, little or no cotton had been produced. Ghorabarree.

7. In the Sacra kardarate I found some ten or twelve of these patches on the banks of the Bagar. They had been planted in August with New Orleans seed, and though small, the plants were looking healthy and well, and were tolerably well loaded with bolls. Little damage had been done by insects or dews, though the plants were overrun with weeds. The Egyptian seed that had been sown had all failed to grow.

8. In the Tatta kardarate about an equal extent of land had been planted in August in still smaller patches. The plants, though small, cropped by cattle, and every way neglected, bore a reasonable quantity of fair-sized bolls. No damage had been done by insects or otherwise.

9. In the Jerruck kardarate several patches had been planted in the Dubbiar in the beginning of August; the plants here, as in the other kardarates, had been neglected, and were in several patches damaged by cattle; they were, however, healthy and green, and though scarcely 18 inches high, were bearing an abundance of as large bolls as ever I saw; in fact, the bolls could not be finer. Some slight damage had been done among the plants by the grub at the root (*mooriae*). Much of the seed sown in this as well as in the Tatta kardarate had not grown. Mr. Cole, the deputy collector, had planted about half an acre in a field near his premises, in July; these plants were large, and had been properly treated. Mr. Cole has since informed me that he picked an abundant crop from this field of plants.

10. In the Ghorabarree kardarate nothing was produced; the kardar's report says, the principal part of the seed sown was flooded.

11. The canals in this district, and throughout the province filled unusually late, and the seed was planted late, in consequence.

12. I found most of the cultivators of this district entirely averse to plant the American cotton this season. They plead poverty from losses by floods and bad harvests the two past seasons as the reason for their unwillingness. Only the cultivators of the Sacra kardarate engaged to plant 53 begahs of land with Sea Island seed on the banks of the Bagar in the beginning of April on the terms proposed by the Government.

13. The large landholders in this district, though engaging to make the trials themselves, have in almost every instance given the seed to their "harris," or sub-tenants to plant. These are generally small holders of from 10 to 50 begahs, who can only plant in small patches. I have this season stipulated in the written agreements that the seed be planted throughout

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Bombay.

throughout the province in fields of not less than an acre of land, in a few instances of not less than a begah.

14. A belief exists among some of the zemindars and others, that the heavy dews that fall in the Delta are injurious to cotton, and they allege this as one reason why more native cotton is not grown there. I have as yet however seen only one instance where they have done any damage to the foreign cotton, and in that one the plants were surrounded on three sides by tall sugar-cane crops and trees, so that neither the sun nor air had free access to the plants, and as a necessary consequence the cotton in a few of the opening bolls was discoloured and otherwise injured.

15. Where the foreign cotton is planted in open situations, freely exposed to the action of the wind and sun, I am of opinion that little or no damage will be done by the heaviest dews. The only effect produced by these dews would be one similar to that produced by a light rain or Scotch mist, in general they are no doubt beneficial, and the only time at which they could be injurious to the cotton would be when the bolls are opening, and the crop is being harvested, and as at that season the sky is mostly unclouded and the sun bright and powerful, I am persuaded that little need be feared from the dews, and that this (as regards foreign cotton) is a prejudice which a few good crops will soon dissipate.

Sehwan. 16. In the Sehwan districts only a small quantity of New Orleans cotton had been produced. Much of the seed distributed, the kardar's reports say, had failed to grow, and some was destroyed by inundation. Some fine plants had been produced from New Orleans seed in Beeá, Oonerapora, and the neighbouring villages. These were in small patches of ground planted in August, and the plants remarkably healthy and flourishing, and well laden with large bolls. On one plant, about 2½ feet high, I counted 33 large bolls, six of which had been pierced by the boll-worm; the rest had not been injured by insects, though foul with grass and weeds. Some Egyptian plants of the previous season had been pruned, and had grown well, but produced nothing. About a begah of New Orleans plants, also, of the year before had been pruned, and were looking healthy, though they had been neglected and were choked with weeds; they were well laden with bolls, but smaller than those on the annual plants.

17. The largest and most respectable cultivators of this district have engaged to plant 85 begahs of land with New Orleans seed this season, 50 begahs to be planted on well lands in February and March, and the rest whenever the water is available.

Mehur. 18. In the Mehur districts no cotton had been produced except by Mr. Wright, the apothecary there, who had sown a beegah and half in March, April, and May, which had yielded 5 maunds, 16 seers of "phootie" or seed cotton, and 1 maund, 25 seers of clean cotton. These plants were of average size, and had been properly dealt with in most respects; no damage had been done by insects or blights. Mr. Wright informs me that he had these plants pruned in February, that they have grown up stout and healthy, and are now full of flowers and bolls, and promising a good crop this season.

19. Much of the seed (New Orleans) sown in this district did not come up; several patches are reported by the kardars as having been eaten by the grub at the root in the Tiggr kardarate; the plants were blighted by the hot winds. The principal zemindars of this district have agreed to plant 57 begahs this season, with New Orleans seed, as soon as the water in the canals is available.

Larkhana. 20. In the Larkhannah districts, about 4 maunds of seed cotton had been produced from New Orleans seed planted in April; this cotton was good, but picked in a slovenly way, and mixed with trash of all sorts. Much of the seed planted did not grow, some few plants had been destroyed by the grub, and some withered by the hot winds, particularly in the Kumbur kardarate. A small quantity of Egyptian seed had been planted in the Nusseerabad Kardarate, contrary to my directions, and had yielded nothing.

21. The principal zemindars of this district signed an agreement to plant 123 begahs with New Orleans seed this season. Of these, 57 to be planted on well lands, in February and March, and 66 when the canals fill.

Shikarpoor. 22. In the Shikarpoor and Boordeka districts, some 12 maunds of New Orleans cotton had been produced of good quality, mostly, but it had been harvested in the native manner, and was very dirty. Much of the seed planted had failed to grow, and white ants had done damage among the plants in the Nowsbeia, Abra, and Meerpoor kardarates; little damage had been done by the boll-worm, and some few patches of plants had been withered by the hot winds.

23. In the Boordeka district, from Abad northwards, the river has encroached much. What was formerly a fine cotton country, was last year flooded entirely, and above 800 begahs of native cotton destroyed. The zemindars say they have abandoned sowing cotton entirely, the foreign cotton planted here was all destroyed by the floods.

24. I found most of the zemindars of these districts altogether unwilling to plant the foreign seed this season; several with whom I spoke on this subject, answered me with complaints and grievances, that their assessment was too heavy; that they were not paid properly for clearing the canals; that they had to plant and water trees by the roadside, &c. This especially in the Shikarpoor kardarate.

25. The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1555

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25. The proclamation issued by the collector of Shikarpoor (unlike those published in the other collectorates) was indefinite in its terms, and promised only partial indemnification in case of failure of the crops from providential causes. The unwillingness of the cultivators to plant, may perhaps be attributed in some degree to this, as well as the foregoing cause.

26. I regret to say that in consequence, I succeeded in getting only 55 beegahs of land signed for, of these, 36 beegahs to be planted on well lands in February and March, and the rest when the water in the canals serves.

27. In the districts of Sukkur and the Left Bank, about 45 maunds of New Orleans seed cotton had been produced chiefly in the Gotekee and Roree kardarates. This cotton was good, and had been carefully harvested, but it was a good deal discoloured. Most of this seed had been planted early in the season, and the plants had been fairly treated. From the partial failure of the seed, it is difficult to compute the yield; about 350 lbs. of seed cotton per acre, is an approximation for the fields that produced the cotton. Left Bank.

28. Some of the best samples I proposed to purchase, but the growers were unwilling to part with any, as they intended to have it all manufactured for their own use.

29. Some little damage had been done by the boll-worm in a few of the fields, most of the plants however had escaped without injury, the grub at the root had also destroyed a few plants here and there. The Aboura kardar's report says that the hot winds had withered many of the plants there; a good deal of the seed planted all over the districts had failed to come up.

30. The principal cultivators of these districts have engaged to plant 50 beegahs of land this season in February and March, with the imported New Orleans seed. About 27 maunds of the seed raised last year in the districts, Mr. Cowper, the deputy collector, informs me he is sanguine of having all planted. This quantity of seed is enough for 200 beegahs of land.

31. In the Sabitee districts, only about two maunds of cotton had been produced. The kardar's report says, they had only a small quantity of seed supplied to them, much of which did not grow, and that the grub at the root had destroyed many of the plants. At Taroolia, in Mr. Jamieson's, the deputy collector's garden, about half a beegah of fine New Orleans plants had produced a plentiful crop of good cotton, these plants had not suffered in any way. Sabitee.

32. The principal cultivators of this district agreed to plant 250 beegahs of land this season with the New Orleans seed; 150 beegahs on well lands in February and March, and 100 beegahs as soon as the water in the canals is available.

33. In the Halla deputy collectorate, only a few seers of New Orleans cotton had been raised. The cultivators told me that the canals filled late in the season, and that the water remained only for a short time and that their trials failed in consequence, as the plants had perished for want of water. There are very few wells used for cultivation in this district. Halla.

34. The principal cultivators agreed to plant 116 beegahs of land this season with the New Orleans seed, 110 beegahs as soon as the water is available in the canals, and 6 beegahs on well lands in the beginning of March.

35. In the Dooba about a maund and a half of New Orleans cotton had been won. This cotton was good, but much discoloured and dirty; it had been picked in a slovenly manner. Some of the seed sown had failed to grow, and some little damage had been done by the boll-worm. The principal cultivators of the district agreed to plant 50 beegahs with New Orleans seed this season, 20 beegahs in March, and 30 when the canals fell. Dooba.

36. In the Meerpoor and Mahomed Khan Ka Tanda districts no foreign cotton had been produced, from the great scarcity of water. This was an universal complaint. The cultivators informed me that the water was very scant in the canals, and remained only about two months, in some places even less time; and, in consequence, that not only the foreign seed had failed, but the native cotton also. This Mr. Lambert, the deputy collector, assured me was the case in his districts. On this account only 20 beegahs of land were engaged to be planted with New Orleans seed in both these districts, the cultivators asserting that it would be useless to plant the seed, as, from the defective state of the water-courses, the supply of water was insufficient for their crops. Meerpoor, Mahomed Khan's Tanda.

37. In the Shah Bunder districts no foreign cotton was produced; about 10 beegahs planted in May, on the banks of the Puzarree, was totally destroyed by the hot winds. In other parts of the district the trials failed chiefly from the floods. Shah Bunder.

38. The principal cultivators of this district have engaged to plant 187 beegahs with foreign seed this season; 12 beegahs with New Orleans, and 150 beegahs with Sea Island seed, as soon as the water is available, and 25 beegahs with Sea Island seed on good "silabee," in the latter end of October.

39. I have been led to give this experiment of planting on silabee a trial, partly from the representations of several intelligent zemindars who assure me that it will do well, and because I consider that the foreign plant will stand as much drought as the native, and that

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the moisture of both soil and climate in the Delta will be sufficient to raise good sized, though not perhaps large plants. Should this method of culture succeed, it will be a great advantage, as it is attended with little expense and no risk from the floods, for the crop will be harvested before the inundation sets in. If only middling crops be got, I have no doubt that a good deal of cotton will be produced this way.

40. Written agreements have been made with the principal zemindars to plant, this season, 1,046 beegahs of land with the foreign seed, on the terms proposed by the Government. These, together with land planted with the seed won in Upper Sindh last year, will make in all about 650 statute acres planted this year throughout the province; about 120 acres in the Delta with Sea Island seed from America, and the rest with New Orleans seed, naturalised in India.

41. The experiments hitherto can hardly be said to have been voluntarily made; the cultivators generally have undertaken to plant small patches, more because the Government wished it than from any interest they themselves took in the cultivation, and have regarded the endeavours used to induce them to plant rather in the light of commands than persuasion, so that if the planting was not compulsory, it was seldom taken in hand with a good will and a desire to succeed. This has been the case especially in Lower Sind; the planters here, in most instances, did as little as they could towards the culture consistently with showing that anything at all had been done, and the experiments generally have been neglected in most respects.

42. From all that I have hitherto seen the foreign plant is not obnoxious to more disasters, nor are there greater permanent obstacles to its well doing in Sind than in other countries. The chief of these that have shown themselves up to the present time are hot winds and insects, the boll-worm, the grub at the root, and the white ants.

43. Written instructions for planting have been furnished to each deputy-collector by me, and translated copies supplied to all the kardars and tappedars, with directions to give them all the publicity in their power among the cultivators. 450 lithographed copies have also been given out among the principal zemindars of the province.

44. All the cultivators who have engaged to plant the foreign seed this season, have done so voluntarily. I took care to impress on them that nothing like compulsion was intended, and that they were free to accept or refuse the terms offered by the Government. I also ascertained that they perfectly understood the terms on which they engaged to plant, before they signed the agreements.

45. From this season's operations, therefore, I look forward for satisfactory results, in Upper Sind and Middle Sind, particularly where the cultivators have taken most pains, and consequently succeeded best; and in spite of bad seasons and bad seed, are evidently taking an interest in the New Orleans cotton, and are fully aware of its superiority to their own, both in yield and quality, though they are cautious of expressing themselves too much in its favour as yet.

46. The cultivators of the Delta are not so tractable as those of the Upper Province; the Delta, they say, never was a cotton country, and it is very difficult to persuade them that it may become one. Their prejudices are strong against it. I trust, however, that they will do justice to the experiments this season, and that the results will tend to convince them that the American cotton will, if fairly dealt with, yield them good returns, and prove a profitable crop.

Kurrachee, 17 June 1854.

I have, &c.
(signed) T. G. Prince,
Supt. of Cotton Experiments.

V. 10,638.

RESOLUTION on a Letter, No. 247, dated the 5th August 1854, from the Commissioner in Sindh, submitting Copy of a Report by Mr. T. G. Prince, Superintendent of Cotton Experiments in that Province, of his proceedings during the past year.

GOVERNMENT requests that Mr. Frere will immediately institute inquiries as to the truth of the complaints stated by Mr. Prince in his 24th para. to have been preferred by the zemindars, the result of the inquires as well as the measures he may take to prevent the recurrence of any abuses he may find to have had existence, to be reported by the Commissioner to Government.

2. In para. 5 of Government Resolution of 4th August 1853, No. 4489, Mr. Frere was informed, "Government are opinion that favourable localities for cultivating the New Orleans and Egyptian cotton may best be ascertained, and the people be able to arrive at correct conclusions as to the advantages of producing one or both of those species, by Mr. Prince taking contracts on such terms as will ensure the cultivation being carried on in the manner indicated at close of para. 24 of Mr. Prince's report, and at the same time throw the loss on Government should the experiments fail through no fault of the grower."

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3. Government desire to know whether they are to understand by para. 25 of Mr. Prince's letter that these instructions were interpreted differently in the Shikarpoor collectorate from the manner in which they were read and acted on in Lower Sind.

4. The complaints mentioned by Mr. Prince, in para. 36, as having been made of the state of the water-courses in Meerpoor and Mahomed Khan's Tanda districts appear to require notice by the Commissioner.

5. Government notice with dissatisfaction that the cultivation of foreign cotton in Sind was not formerly voluntary; they trust Mr. Prince is correct (para. 44) in thinking that the agreements now obtained have been entered into by the people of their own free will.

EXTRACT from the Proceedings of Government in the Territorial Department Revenue, dated 3 March 1855.—V. 1785.

(No. 388 of 1854.)

From the Commissioner in Sind to the Right Honourable the Governor.

My Lord,

I HAVE received the Government resolution as per margin,* directing me to supply further information on certain statements contained in a report from Mr. Prince, employed by Government to introduce foreign cottons into Sind; and in obedience to your Lordship's instructions, I have the honour to report as follows:

V. 1785.

The complaints preferred by the zemindars, principally of the Shikarpoor district to Mr. Prince were:

Resolution para. 1.—Government request that Mr. Frere will immediately institute inquiries as to the truth of the complaints stated by Mr. Prince in his 24th para. to have been preferred by the zemindars. The result of the inquiries, as well as the measures he may take to prevent the recurrence of any abuses he may find to have had existence, to be reported by the commissioner to Government.

1st. That their assessment was too heavy:

This complaint was certainly well founded; much correspondence has taken place with the Collector, who has for a long time past devoted a large share of his time and attention to the subject; he has in a report just received proposed extensive reductions, which will, I hope, give the required relief. The details will be reported in due course.

2d. Complaint. That the zemindars were not paid properly for clearing the canals:

Statute labour, for a bare ration of grain, is, and has always been the rule throughout Upper Sind. It is a system open to grave objections, and under its cases of great hardship may often be met with, but it is easier to see the evils than to devise a remedy. The Collector, the consulting engineer, and the Commissioner have, however, all devoted much attention to the subject, with a view to get rid of the principal bad features and to amend the system, where it is difficult to substitute a better; and it may be hoped that now Government has sanctioned an efficient system of canal management, something effectual may be done, but no reform in a system of such antiquity can be so speedy as could be desired.

3d. Complaint. That the zemindars had to plant and water trees by the road side:

This grievance was much exaggerated by the zemindars. Individual cases of hardship, in consequence of some of the local officers misunderstanding orders on the subject, were brought to notice. These cases have been, as far as I am aware, redressed, and I do not think any valid ground of complaint any longer exists.

The

* No. 4968 of 4th November 1854, Territorial Department Revenue.

Resolution, para. 3.—Government desire to know whether they are to understand by para. 25, of Mr. Prince's letter, that these instructions were interpreted differently in the Shikarpoor Collectorate, from the manner in which they were read and acted on in Lower Sinda.

Government resolution, para. 4.—The complaint mentioned by Mr. Prince, in para. 36, as having been made of the state of the water courses in Meerpoor and Mahomed Khan's Ianda districts, appear to require notice by the Commissioner.

The instructions referred to were differently interpreted by different officers, and I had much difficulty in getting all parties to understand them, as I considered, correctly. This has, however, I hope, been now effected.

The complaints made to Mr. Prince by the zemindars of the want of water and the state of the water-courses in the Meerpoor and Mahomed Khan's Tanda districts were, no doubt, well founded.

The ruinous condition of the canals and water-courses throughout the Hyderabad collectorate, and more particularly in the districts specified, consequent on the mismanagement of the canals for many years past, has been repeatedly and strongly pressed on the notice of Government. Your Lordship in Council has this year sanctioned an entire change of system which will, I hope, help to apply a remedy to the evil, and many large works now in progress or in course of projection (*ex. gr.* the Narra Supply Channel and Bunds, the Fullalie Surveys and Works, &c.), will have a tendency immediately to benefit the particular districts named by Mr. Prince.

Government resolution, para. 5.—Government notice with dissatisfaction that the cultivation of foreign cotton in Sind was not formerly voluntary; they trust Mr. Prince is correct (para. 44) in thinking that the agreements now obtained have been entered into by the people of their own free will.

I have every reason to hope that Mr. Prince has good grounds for his belief that the agreements now made are voluntary. It should be borne in mind that a very great extent of the cultivation not only of cotton, but of every kind of produce, has, to a late period, been in a certain degree compulsory; and the settled habits of the native officials in this respect are among the most inveterate of their bad characteristics. But everything is now done to counteract their inclination to such practices, and to ensure cultivation being entirely voluntary. It will probably be some time before I can feel certain that the efforts of the Collectors and myself for the attainment of this object have been completely successful.

Commissioner's Office, Camp Mahree,
17 November 1854.

I have, &c.
(signed) H. B. E. Frere,
Commissioner in Sind.

LETTER from the Government of *Bombay* to the Hon. the Court of Directors, dated 1 November (No. 103) 1855.

WITH reference to the Proceedings (V. 9790 to 93), forwarded with our letter of the 14 November 1853, No. 113, we beg to annex copy of the papers as per margin, from which it will be seen that, consequent on the death of Mr. Prince, the superintendent of cotton experiments in Sind, and the unfavourable report made by Mr. Frere as to the success of these experiments, we have resolved on breaking up the establishment and discontinuing all further expense as soon as the accounts, &c. are wound up.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue.
V. 9193 to 95.

(No. 389 of 1855.)

V. 9193.

From the Commissioner in Sind to the Right Honourable Lord *Elphinstone*, G.C.H.,
Governor and President in Council, Bombay.

My Lord,

WITH reference to the Government letter in the Revenue Department, No. 6281, dated 27th September 1852, I have the honour to report, for the information of your Lordship in Council, the death at Kurraciee, on the 23d instant, of Mr. T. G. Prince, superintendent of cotton experiments in this province. He was ill but a few days, and died of an acute inflammatory disease of the respiratory organs.

2. His

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2. His report of his proceedings last season will be submitted shortly. It was so little encouraging that, on its receipt, I determined to recommend the discontinuance of the experiment, and had purposed to suggest other employment for Mr. Prince, who had shown much energy and ability in the discharge of the duty entrusted to him.

3. I propose to break up the establishment, and discontinue all further expense, as soon as the accounts, &c., are wound up.

Commissioner's Office, Kurrachee,
26 September 1855.

I have, &c.
(signed) *H. B. E. Frere,*
Commissioner in Sind.

RESOLUTION on a Letter from the Commissioner in Sind, No. 389, dated 26 September 1855, reporting the death on the 23d idem, of Mr. T. G. Prince, superintendent cotton experiments in that province, and proposing to break up the cotton establishment, and discontinue all further expense as soon as the accounts, &c., are wound up.

V. 9194.

MR. FRERE'S proposals approved, and to be acted on, a report being made to the Honourable Court.

EXTRACT from the Proceedings of Government in the Territorial Department, Revenue, dated 31 December 1855.—V. 10,770 to 73.

(No. 456 of 1855.)

From the Commissioner in Sind to the Right Honourable the Governor.

My Lord,

In forwarding the enclosed copy of the report of Mr. Prince, superintendent of cotton experiments, for the season of 1854-55, I have the honour to inform your Lordship in Council, that owing to the unfavourable prospects of any success attending these experiments, I had determined to recommend to Government that they should be discontinued and the establishment discharged. But before I had time to write on the subject, Mr. Prince died, as reported in my letter noted in the margin, and I have therefore only to state, for your Lordship's information, that the establishment has now been broken up since the 1st instant, which I trust will be approved.

V. 10,770.

No. 389 of the 27th
September last.

2. The want of success was in no degree owing to any fault of Mr. Prince's, who exerted himself with so much zeal and ability to carry out the views of Government, that I had intended to recommend his employment, on the same salary, in another department. The failure was solely owing to the adverse local causes which are fully detailed in Mr. Prince's reports, and which in no way diminish my hope that, when private enterprise is directed to the same object, it may yet be found possible to render exportable cotton a staple of this province.

Commissioner's Office, Kurrachee,
3d November 1855.

I have, &c.
(signed) *H. B. E. Frere,*
Commissioner in Sind.

From the Superintendent of Cotton Experiments to *H. B. E. Frere, Esq.*
Commissioner in Sind.

Sir,

I HAVE the honour to submit a report of my proceedings and observations during my recent journey through the province, and of what has been done in the cultivation of foreign cotton since the date of my last report.

V. 10,771.

2. In the Delta, as also in the Doaba, little or no cotton was produced from the causes stated in my report on those districts, dated 26th August 1854, the experiments had failed entirely from late sowing and neglected and careless cultivation.

3. Of the seed sown on "silabee," in the Shahbunder district, in October last, the kardars report that the plants had all perished, when quite small, from the cold, and other causes.

4. In the Halla deputy collectorate 66 beegahs had been sown with foreign seed in numerous small patches of a few biswahs each, in the Halla and Shadadpoor kardarates; many of these had been sown late in isolated spots, or amongst bajree and other crops, and were neglected and good for nothing; other patches had been planted beside, and at the same

same time as fields of native cotton had been treated exactly the same as the fields to which they were annexed; these had produced excellent plants that had borne, and were still bearing, abundantly; about 30 maunds of seed cotton had been yielded from these, and some larger patches on the river bank, and much more would doubtless have been produced had not the cultivation been so neglected, this district having escaped the ravages of the boll-worm. In the Lukkrund and Ghoramurree kardarates little or nothing had been done. The principal zemindars of this sub-collectorate agreed to plant 110 beegahs with foreign seed this season; those who had bestowed proper care on their cultivation had got good returns, and expressed themselves satisfied and pleased with the results of their work.

5. In the Nowshera deputy collectorate 160 beegahs were sown, with the acclimatised seed of which the greater part planted in the Mora and Nowshera kardarates had been destroyed by the inundation. The crops in the Kundara kardarate were very much damaged by the boll-worm, and from these causes, together with late planting and neglected cultivation, little or no cotton was produced. The zemindars of the Mora kardarate agreed to plant 30 beegahs with foreign seed this season; those of the other kardarates were wholly averse to planting this year; they, however, promised to prune and cultivate the plants on the ground for a second crop.

6. In the Rohree deputy collectorate 160 beegahs of foreign seed were planted, which yielded only about 27 maunds of seed cotton. The boll-worm was the principal cause of the failure of the crops in these districts, though other causes also contributed, as excessive moisture, of which there were many complaints in the Oouboura and Meerpoor Mattalée kardarates, late planting and neglected and careless cultivation. The seed sown on the "bosee" lands generally produced good plants, but they had yielded nothing on account of the boll-worm and too much wet.

The cultivators here were entirely averse to plant this season, except two or three, who promised to sow the seed they had won last year; they had, however, no objection to cultivate last year's plants for a second crop.

7. In the frontier districts 14 beegahs of foreign cotton had been planted, which had yielded about three and a half maunds of seed cotton. Boll-worm had greatly damaged the crops here, and some few patches had suffered from hot winds. The cultivators, with whom I spoke, were mostly unwilling to plant this season.

8. In the Shikarpoor deputy collectorate from 72 beegahs sown with the seed from India, only about six maunds of seed cotton had been won. The boll-worm had been even more destructive in this district than in others, all the early sown and best plants had yielded nothing in consequence of its ravages, a few of the late sown fields and patches had been somewhat less injured. Little or no damage had been done by the floods, nor had the crops suffered as far as I could ascertain from any other cause than the boll-worm. Two only of the principal zemindars of this district promised to plant a few beegahs, all the rest objected to sow the foreign seed this season, but they were all willing to prune and cultivate last year's plants for a crop this year.

9. In the Larkhana deputy collectorate, 112 beegahs of the imported seed had been sown, from which, owing principally to the boll-worm, only about five maunds of seed cotton had been won. On the low lands in the neighbourhood of the river, several beegahs had been inundated, and there was also a good deal of late planting and careless cultivation, in the Kumber kardarate particularly. Many fields of excellent plants in these, as well as in the Shikarpoor districts had been utterly destroyed by the boll-worm, the cultivators having assured me that not a pound of cotton had been picked from the most promising of the fields. The zemindars here promised to cultivate the plants on the ground, but were generally averse to plant afresh this season, five or six promised to sow this year the seed they won last, but the rest were quite unwilling.

10. In the deputy collectorate of Mehur, 18 maunds of seed cotton are reported to have been produced from 90 beegahs of seed sown, and this failure is attributed chiefly to the destruction of the crops by the boll-worm. Some of the seed sown is reported as not having come up, and several beegahs towards the river, as having been destroyed by the inundation. The plants had been pruned throughout the district, and the zemindars, though generally unwilling to plant this season, promised to cultivate with care the plants on the ground, for a second crop.

11. In the Sehwan deputy collectorate, 80 beegahs of land were reported to have been sown with foreign seed, and only about six maunds of seed cotton to have been produced, greater part of which was from the Kotree kardarate, 16 beegahs are returned in the kardar's reports as having been destroyed by the floods, and on about 14 beegahs in the Sehwan kardarate, the seed is said to have failed to come up.

The boll-worm had done great injury to the crops in the Kotree and Dadoo kardarates, where the best cultivation was. Last year's plants had been generally pruned, and in many fields where water had been given, the plants had thrown out fresh shoots, and were looking well.

12. Many growers of the foreign cotton last year, more particularly those of the districts on the left bank, complained of damage done to their crops by excessive moisture, "sake" is the native term for it. This, I have no doubt, is a well grounded complaint, the low lying lands,

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lands, though not flooded, were thoroughly saturated by the inundation, and retained the moisture for a long time, and too much moisture at the root cannot be otherwise than injurious to the maturing crop. In many of the fields on this description of lands, the plants were from this cause far too lusty, and had all run to wood.

13. The damage done to the foreign cotton crops by the floods throughout the province was inconsiderable in comparison to that occasioned by the boll-worm, except in the Sahitee districts, where between 60 and 70 beegahs are reported to have been inundated, on which the seed was sown early, and the plants were swamped when in full flower.

14. The seed sown in July and August produced only very small plants, and little or no cotton. No representations of the disadvantages attending late sowing avail with some cultivators, nor is it easy to make them sensible that good crops cannot be expected where the seed is put in the ground six weeks or two months after the proper time for planting.

15. The foreign cotton produced throughout the province was generally a bad sample, from the damage done by the boll-worm; where this was not the case, it had been picked native fashion, and was full of impurities.

16. Throughout Upper and Central Scinde, with the exception of the Halla district, the boll-worm had almost entirely destroyed the crops of foreign cotton, nearly all the first-formed bolls having perished. As the cold weather set in, its ravages were less destructive and the bolls then yielded an inconsiderable quantity of inferior cotton towards the close of the season. The plants that had thus suffered were, generally speaking, good; in many instances very good indeed, several of the principal zemindars in each district having sown early, and taken great pains with the cultivation, and this unfortunate failure is the more to be regretted, as from the promising appearance of the plants up to the time the boll-worm attacked them, the planters expected to realise good crops, and their disappointment is commensurate to their previous expectations. They are now generally much disheartened, and with few exceptions strongly object to plant this season, they are almost all, however quite willing to prune and to cultivate the last season's plants in the same way that they are accustomed to do with the native cotton, and if the season prove favourable, I am in hopes that they may get good crops, the foreign plant, like the indigenous, answering well as a biennial, though not yielding so much cotton the second year as the first.

Kurrachee, 4 June 1855.

I have, &c.
(signed) T. G. Prince,
Supt. of Cotton Experiments.

RESOLUTION on a Letter, No. 456 of 1855, from the Commissioner in Sind, forwarding copy of a Report by the late Mr. Prince, Superintendent of Cotton Experiments at that Province, for the season of 1854-55.

V. 10,772.

Mr. FRERE'S proceedings approved.

EXTRACT Para. 6, of Revenue Letter, from the Hon. the Court of Directors, dated 3 December (No. 14 of 1856), alluded to in Revenue Letter, dated 29 August (No. 62 of 1857).

6. We regret the failure of the attempts to cultivate New Orleans cotton in Sind, which the Commissioner attributes entirely to "adverse local causes," and expresses "his hope that when private enterprise is directed to the same object it may yet be found possible to render exportable cotton a staple of this province." We trust that this may not prove a too sanguine expectation on the part of Mr. Frere. From the reports of the late Mr. Prince, it appears that the main causes of failure were the excessive moisture, and in some cases, inundation of the low-lying lands, and the injury done to the bolls by insects. The latter was also found to be extensively the case in Lower Bengal, and we shall be glad to learn that some measures have been devised for preventing the ravages of insects. We fear that it may prove an insuperable bar to the general cultivation of New Orleans cotton in this province.

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REVENUE LETTER from the Government of Bombay to the Hon. the Court of Directors, dated 29 August (No. 62) 1857.

WE have the honour to forward, for the information of your Honourable Court, the accompanying copy of a letter from the Commissioner in Sind, No. 215, dated the 7th instant, being a reply to a reference made to him consequent on the observations contained in para. 6, of your Honourable Court's Despatch, No. 14, dated the 3d December last, on the subject of the failure of attempts to cultivate New Orleans cotton in Sind.

No. 215 of 1857, Revenue Department.

From *H. B. E. Frere*, Esquire, Commissioner in Sind, to the Right Honourable Lord *Elphinstone*, G. C. R., Governor and President in Council, Bombay.

My Lord,

No. 771, of the 19th
February 1857.

WITH reference to Mr. Secretary Young's memorandum as per margin respecting the culture of New Orleans cotton in Sind, I have the honour to report, for the information of your Lordship in Council, that hitherto no means have been devised for preserving the bolls from the attacks of insects, and that the extent of ground under cultivation with foreign seed during last season shows a marked decrease.

2. Major Preedy, in his report on the subject, remarks that, "in places where the indigenous and American plants have been sown together, the former has exhibited a healthy condition, while the latter has been almost entirely destroyed by the worm."

3. "Two reasons are assigned by the natives as the probable causes of injury to the latter. The indigenous plant they say pods and ripens earlier in the autumn than the foreign species, and thus escapes the worm which generally appears in the damp warm weather of October. 2d. That the foreign cotton being more luxuriant in its growth, appears particularly to attract the insect."

4. "If the former be the real cause, the evil might perhaps be prevented by planting the American cotton at an earlier period of the season, so as to admit of its ripening a month earlier. Some good might possibly result from mixing lime with the soil at the time of ploughing, or by afterwards sprinkling it on the young plants. The experiment has never been tried in Sind; but in England, I believe, the fly which does so much injury to turnips is prevented by these means."

5. How far these suggestions, if acted on, may prove of practical utility, I am unable to judge; but it is clear from the success which with careful cultivation attended the operations of Mr. Wright at Mehur, that in many places the soil is well adapted for the luxuriant growth of the plant, and that the ravages of insects is the only evil for which a remedy has to be discovered, which it will be, I have no doubt, in time, when private agriculturists of intelligence direct their attention to the matter.

Commissioner's Office, Kurrachee,
7 August 1857.

I have, &c.
(signed) *H. B. E. Frere*,
Commissioner in Sind.

(No. 919 of 1858.)

From the Deputy Collector, Customs, Kurrachee; to *H. B. E. Frere*, Esq.,
Commissioner in Sind.

Sir,

HAVING been favoured with a perusal of the reports relating to cotton experimental cultivation in Sind from 1853 to 1857, I venture to offer a few remarks on the subject.

2. The experiments which were made with New Orleans and Egyptian seed appear to have been generally unsuccessful, apparently from three causes, viz., rude and careless cultivation, excessive moisture, and the boll-worm; the latter especially destructive where
too

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too much moisture has forced the plant to run into wood, and thus weakened its powers of bearing fruit.

3. In some instances the New Orleans seed appears to have succeeded, proving that even the above deteriorating and destructive causes can be avoided; and perhaps in no other province in India is the regulation of moisture so much under human control as in Sind. Exotic cotton will, with a little care and attention to its requirements, succeed, especially in the central and lower districts of the province, whose soil and climate seem well suited to the growth of cotton; the indigenous cotton being extremely productive in these localities, the average yield being in excess of the best cotton districts of Western India, if the returns of the Sind collectorates, from which my calculations have been deduced, are to be relied on.

4. Annexed is a tabular statement, showing, in pounds, the average yield of cotton per acre in Sind in the years 1854-55, 1855-56, 1856-57, with seed and freed from seed.

5. In the Shikarpoor collectorate, the average yield of indigenous cotton for the above period is shown to be 136 lbs. of kupas or seed cotton per acre, producing 33 lbs. of clean cotton, or 24 per cent. of cotton to kupas.

6. Of exotic cotton, the average yield was only 16½ lbs. of kupas, giving 4 lbs. of cotton; but it is represented in almost every report of the district officers that the cotton was swamped and destroyed by the inundation, or attacked by the boll-worm.

7. The return of indigenous cotton is so small, 33 lbs. per acre, as to entail, apparently, a loss to the cultivator in cultivating it, which I shall presently show; yet, singular to say, the extent of land under cotton cultivation in the Shikarpoor collectorate greatly exceeds the extent of land similarly occupied in the rest of the province, although the average produce of cotton per acre in both the Hyderabad and Kurrachee collectorates more than trebles that of Shikarpoor.

8. In the former collectorate (Hydrabad) the average yield of kupas per acre is 395 lbs., giving 102 lbs. of clean cotton, or 26 per cent. of cotton to kupas.

9. In the Kurrachee collectorate, the average yield of kupas per acre is 479 lbs., giving 106 lbs. of pure cotton, or 22 per cent. of cotton to kupas.

10. The greatest yield of clean cotton obtained in any one of the three years under notice was, in Shikarpoor, 39 lbs.; Hydrabad, Meerpoor district, 224 lbs.; in Kurrachee, Sehwan district, 159 lbs.; and in the Delta, 124 lbs. per acre.

11. If the above results are correct, Middle and Lower Sind as a cotton-growing country rivals the best cotton districts of the Western Presidency.

12. The produce of Broach cotton cultivated at Dharwar gave, on an average of three years, 72 lbs. of clean cotton per acre—*Royle*, page 351; and the Collector of Broach has stated, that the produce of a Broach beegah of cotton freed from seed, in a fair year and a fair soil, may be taken at 60 lbs. per beegah, or 120 lbs. to the acre, nearly. Assuming, however, an average year and an average soil, my inquiries do not support a higher general average than 40 lbs. of wool to the Broach beegah, that is, 80 lbs. per acre.—*Royle*, p. 452.

13. Taking Middle and Lower Sind, the average produce per acre of indigenous cotton for the three years referred to is 437 lbs. of kupas, yielding 104 lbs. of clean cotton, so that the agricultural labourers in Middle and Lower Sind would seem to be much more bountifully rewarded than in either of the cotton-growing districts of Broach or Dharwar.

14. In the Hyderabad district, the produce of exotic cotton in 1856-57 is represented to have been 784 lbs. per acre of kupas, giving only 98 lbs. of clean cotton; but this I think must be an error, as the lowest per-centage of cotton to kupas seldom, if ever, falls short of 24 per cent., or one-fourth; in this instance it is one-eighth.

15. In the Kurrachee collectorate, the returns of exotic cotton are very small, in the Sehwan district, 51 lbs. of kupas per acre giving 12 lbs. of clean cotton. In the Shahbunder district, 23 lbs. of kupas and 15 lbs. of cotton. Excepting in the Hyderabad district of that collectorate, no foreign cotton seems to have been grown in the province in 1856-57.

16. At these results I am not surprised, as the cotton seems to have been generally grown on inundation lands, apparently under native supervision, and the official reports of the revenue officers almost invariably represent that the floods and the boll-worm chiefly have been the destructive agents, the latter encouraged, if not in some measure generated, by excessive moisture.

17. It is not surprising then that the Sind agriculturist discountenances the cultivation of cotton, especially the foreign species, beyond what is required for home consumption. That he cultivates it at all in Shikarpoor is remarkable, as it would be cheaper for him to purchase it than to produce it, at the expenses represented to attend its cultivation, which for the three collectorates are shown to be as follows:—

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18. Shikarpoor—

	Rs.	a.	p.
Assessment per acre	2	3	3
Cultivation, &c., Bossee land	3	12	9
Cleaning 136 lbs. of kupas, at 13 rupees a candy	2	4	1
Expenses per acre	8	4	1
Deduct price of 33 lbs. cotton, at 93 rupees a candy	3	14	8
Price of 100 lbs. of cotton seed	1	-	-
	4	14	8
Loss to cultivation per acre	3	5	5

19. Here is shown a loss to the cultivator of Rs. 3. 5. 5. per acre. But the Collector reports that the plant being a biennial, the first year's expense of cultivation is very little exceeded in the second; but dividing the first year's expense with the second year, there would still be a loss of Rs. 1. 7. per acre.

20. On well land the expense of cultivation is said to be Rs. 6. 3. 4. per acre; cultivating on well land in Shikarpoor must, therefore, be out of the question.

21. The returns must, I think, be erroneous; either the expenses of cultivation, cleaning, &c., are given at too high an average, or the produce of an acre must be very much greater than it is represented to be, for it is impossible to believe that whilst the Hyderabad collectorate yields on an average 395 of kupas, or 102 lbs. of clean cotton per acre, Shikarpoor gives only 136 lbs. of kupas, or 33 lbs. of clean cotton.

22. The Hyderabad returns show,—

	Rs.	a.	p.
Assessment, average per acre	2	11	2
Cultivation, &c.	8	14	10
Cleaning 395 lbs. kupas, at Rs. 12. 10. a candy	6	5	9
	17	15	9
Deduct price of 102 lbs. of cotton, at 89 rupees a candy	11	9	3
293 lbs. of seed	2	14	10
	14	8	1
Loss per acre	3	7	8

23. Here is also shown a loss to the cultivator of Rs. 3. 7. 8. per acre; but if the expenses of one year's cultivation be divided between two years, as in Shikarpoor, there would remain a small profit of 15 annas 9 pies per acre.

24. The Kurrachee returns show—

	Rs.	a.	p.
Assessment, average	2	14	4
Cultivation, ditto	9	1	5
Cleaning 477 lbs. of kupas, at Rs. 9. 11. per candy	5	14	9
Expense per acre	17	14	6
Deduct price of 106 lbs. of cotton, at Rs. 82. 7. per candy	11	2	4
Price of 373 lbs. of seed	3	11	8
	14	14	-
Loss per acre	3	-	6

25. Allowing the expenses of one year's cultivation to cover two years, there would be a gain to the cultivator of Rs. 1. 8. 2. per acre.

26. By a division of the expenses of cultivation between two years, we find in the Shikarpoor collectorate a dead loss to the cultivator of Rs. 1. 7. per acre. In Hyderabad, a profit of

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of 15 annas and 9 pies; and in the Kurrachee collectorate, a profit of Rs. 1. 8. 3. per acre, proving, contrary to expressed opinion, that Lower Sind is better adapted for cotton cultivation than any other part of the province.

27. But the prices of cotton on which these calculations are made, are more than 30 per cent. under the average market price of ordinary native cotton in Bombay, so that, supposing the cotton to have been grown for export, the cultivator's profit, supposing the Bombay prices to be obtainable at Kurrachee, which they should be now that we have direct export to England, would have been as follows:—

Shikarpoor	-	-	-	-	-	-	-	-	-	Rs.	-	4	1	Loss.
Hydrabad	-	-	-	-	-	-	-	-	-			4	7	3 Gain.
Kurrachee	-	-	-	-	-	-	-	-	-			4	13	7 "

28. The above rates are exclusive of the carriage to Kurrachee, which might average about two rupees a candy. Whilst, then, Shikarpoor could not export its cotton, Hydrabad and Kurrachee could, gaining pretty fair returns; and these returns might be more than doubled by producing a better quality of cotton and reducing the expenses of cleaning, &c., within practicable limits.

29. If Dharwar, nearly 100 miles distant from the sea, whose average yield of clean cotton is said to be 72 lbs. to the acre, finds it profitable to export it to Bombay, costing 10 rupees to 12 rupees per candy in land carriage to the sea board, how much more profitable would Middle and Lower Sind find it, whose average yield of clean cotton is shown to be 102 lbs. per acre, and where the expense of conveyance to the sea board would not exceed two rupees a candy.

30. Grain, seeds, &c., are produced in Sind as cheaply, if not cheaper, than in any other province of the Western Presidency; why should cotton be an exception? There seems to be no good reason that it should be, and probably there is none in reality.

31. It may be asked, why then has cotton not been grown for export? Probably because the cultivators have never been accustomed to do so; they have been content to supply their own wants, and hitherto have not looked beyond them.

32. If Middle and Lower Sind can produce on an average 102 lbs. of clean cotton per acre, under the most rude and careless cultivation, where the same seed has been in use from time immemorial, what might not the results be under a different system? It is the nature of all seeds to deteriorate if constantly reproduced in the same locality. I would, therefore, begin by distributing fresh seed, say good Broach seed, to as many cultivators as would undertake to grow it, confining, for the present, the experiments with foreign seed to the deputy collectors.

33. Each deputy collector might select a spot of ground not peculiarly favoured, as compared with the rest of his district, say five acres, in a locality convenient to his personally superintending it. The cultivation might be given to some of the neighbouring cultivators, under specific terms of agreement as to ploughing, watering, weeding, &c. An account of the expenses of cultivation should be carefully kept, and a monthly report submitted to each collector, or to a person who would take an interest in the experiments, of the progress of the cultivation and the processes it has undergone. The experiments should not be confined to foreign cotton; it should be also shown what can be done with native cotton by attention to its cultivation.

34. Thirteen rupees is stated by the collector of Shikarpoor to be the average expense of cleaning a candy of cotton by the foot-roller. In India, the average is about half that amount; and by the saw gin, from 3½ rupees to 4 rupees a candy.

35. I would provide every deputy collector with a saw-gin; cost about 100 rupees; at the time of cleaning the produce of his little farm, he might call together a few of the neighbouring zumeendars, and prove to them that cotton can be freed from its seed at less than one-third what it now seems to cost them. He could show them the results of careful cultivation, and the profits they might derive by adopting a similar course.

36. These little meetings repeated, could not fail to interest the cultivator and make him alive to the advantage of careful cultivation; at all events, the importance of the subject warrants a fair trial.

37. There can be no doubt that sea air is beneficial to almost every description of cotton, and the dews of heaven; so much complained of, can never be injurious, when there is not already an excess of moisture in the soil. The cotton plant requires comparatively little water, and is capable of enduring long droughts; water should never be allowed to lodge about its roots; it should not therefore be planted on inundation lands, except perhaps on the very outskirts; canal or well cultivation would be best suited to the plant; and the culture should depend on the seasons of the country in which it is carried on, and not on rules deduced from its culture in other countries.

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38. The beginning of June, when the canals are full, would perhaps be the best time for sowing the seed. Two or three waterings, with the dews that fall at that season, would carry it on till the rains set in; and their sufficiency or otherwise would regulate the further supply of moisture, which should be diminished as the crop approaches maturity.

39. The experiments should not be confined to American seed only; Sea Island, Egyptian, Bourbon and other seeds should be tried.

40. The cultivation of native cotton in Sind seems to be gradually falling off. In 1854-55, it amounted to 32,156 acres; in 1855-56, to 28,590 acres, and in 1856-57, to 24,696 acres, exclusive of Jacobabad, which grows very little cotton.

41. Taking the latter years, extent of cultivation and the average yield of clean cotton at 62 lbs. per acre, it gives little more than $\frac{2}{3}$ of a lb. to each inhabitant of the province; a consumption so small, where cotton is used not only in manufactures, but generally, for bedding, quilts, &c., &c. as considerably to shake my faith in the correctness of the returns of cultivation rendered by the revenue officers. The produce and extent of land under cultivation, must, I think, be much greater than it is shown to be, or Sind imports cotton to a much greater extent than I have any idea of. By sea, the imports are very trifling.

42. But until the deputy collectors set to work in real earnest themselves, and become experimenters, we shall not I fear have any data of practical value regarding the cultivation, &c. of this most valuable staple, the extended growth of which in Sind is of the utmost importance to the commercial interests of the province.

Kurrachee Custom-house,
30 August 1858.

I have, &c.
(signed) P. M. Dalzell,
Deputy Collector, Customs.

STATEMENT showing the Average Yield of Cotton per Acre in Sind, in the Years 1854-55, 1855-56, and 1856-57, and the Proportion of Clean Cotton to Seed Cotton, or Kupas.

	NATIVE.						EXOTIC.					
	With Seed.			Cleaned.			With Seed.			Cleaned.		
	1854-55.	1855-56.	1856-57.	1854-55.	1855-56.	1856-57.	1854-55.	1855-56.	1856-57.	1854-55.	1855-56.	1856-57.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Mehur - - - -	119	106	140	28	24	29	17	14	-	4	3	-
Larkhana - - - -	121	127	119	80	32	30	4	7	-	1	2	-
Rohree - - - -	137	154	147	34	39	36	25	30	-	6	8	-
Shikarpoor - - - -	148	157	132	87	39	32	23	9	-	6	2	-
SHIKARPOOR Collectorate	131	143	133	32	35	32	16	17	-	4	4	-
Hydrabad - - - -	640	641	613	159	160	154	121	-	784	-	-	98
Nowahera - - - -	369	277	230	91	71	55	-	-	-	-	-	-
Halla - - - -	333	313	198	85	81	69	37	-	-	12	-	-
Meerpoor - - - -	439	883	571	110	224	149	-	-	-	-	-	-
Mahomed Khan's Tanda -	266	390	455	75	110	119	-	-	-	-	-	-
HYDRABAD Collectorate -	380	469	335	95	122	89	24	-	784	5	-	98
Jerruck - - - -	494	448	-	124	112	-	2	3	-	$\frac{1}{2}$	$\frac{1}{2}$	-
Shahbunder - - - -	271	263	-	108	118	-	-	23	-	-	15	-
Sehwan - - - -	141	693	612	31	128	159	42	51	-	11	12	-
KURRACHEE Collectorate	142	684	612	32	128	159	16	9	-	4	3	-

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STATEMENT showing the Average Yield of Cotton per Acre in Sind, in 1854-55, 1855-56, and 1856-57, &c.—continued.

	PER-CENTAGE OF CLEANED COTTON.						RATE OF ASSESSMENT PER ACRE.			COST OF CULTIVATION PER ACRE.		
	Native.			Exotic.			1854-55.	1855-56.	1856-57.	1854-55.	1855-56.	1856-57.
	1854-55.	1855-56.	1856-57.	1854-55.	1855-56.	1856-57.						
Mehur - - - - -	24	23	21	24	21	-	2 3 3	2 3 3	2 6 1	3 12 9	3 12 9	2 6 -
Larkhana - - - - -	25	25	25	25	29	-	2 3 3	2 3 3	2 3 3	3 12 9	3 12 9	1 15 -
Rohree - - - - -	25	25	24	24	27	-	2 3 3	2 3 3	2 4 2	3 12 9	3 12 9	5 2 3
Shikarpoor - - - - -	25	25	24	26	25	-	2 3 3	2 3 3	1 15 5	3 12 9	3 12 9	5 4 -
SHIKARPOOR Collectorate	24	24	24	25	24	-	2 3 3	2 3 3	2 3 8	3 12 9	3 12 9	3 10 10
Hydrabad - - - - -	25	25	25	-	-	12	3 - -	3 - -	3 - -	15 - -	15 - -	12 - -
Nowshera - - - - -	25	26	24	-	-	-	2 14 8	1 10 -	3 2 -	12 - -	5 8 -	8 14 -
Halla - - - - -	26	26	35	32	-	-	1 7 4	3 - -	3 - -	10 - -	5 14 8	8 9 -
Meerpoor - - - - -	25	25	26	-	-	-	2 14 8	3 - -	3 - -	10 - -	5 2 6	6 - -
Mahomed Khan's Tanda -	26	28	26	-	-	-	1 7 4	3 - -	3 - -	8 - -	5 7 3	8 7 -
HYDRABAD Collectorate -	25	26	27	20	-	12	2 5 7	2 11 7	3 - 5	11 - -	7 - 1	8 12 5
Jerruck - - - - -	25	25	-	25	25	-	2 14 -	2 14 -	- - -	12 - -	12 - -	- - -
Shahbunder - - - - -	40	44	-	-	65	-	2 14 6	2 14 6	- - -	8 7 6	9 6 7	- - -
Schwan - - - - -	22	18	26	26	24	-	3 2 -	2 15 8	14 10	19 12 2	10 - 6	3 5 4
KURRACHEE Collectorate	23	19	26	25	33	-	2 15 6	2 12 8	2 14 10	13 6 6	10 8 4	3 5 4

	COST OF CLEANING.						Average Price of Clean Cotton per Candy of 784 lbs.		
	1854-55.		1855-56.		1856-57.		1854-55.	1855-56.	1856-57.
	Per Candy.	Per Lb.	Per Candy.	Per Lb.	Per Candy.	Per Lb.			
Mehur - - - - -	12 6 6	- - 3	12 6 6	- - 3	12 13 9	- - 3	93 3 3	93 3 3	103 3 3
Larkhana - - - - -	12 6 6	- - 3	12 6 6	- - 3	12 12 -	- - 3	93 3 3	93 3 3	96 - 6
Rohree - - - - -	12 6 6	- - 3	12 6 6	- - 3	13 10 -	- - 3	93 3 3	93 3 3	94 - 4
Shikarpoor - - - - -	12 6 6	- - 3	12 6 6	- - 3	12 8 -	- - 3	93 3 3	93 3 3	94 13 4
SHIKARPOOR Collectorate	12 6 6	- - 3	12 6 6	- - 3	12 14 10	- - 3	93 3 3	93 3 3	97 - 4
Hydrabad - - - - -	18 - -	- - 4	18 - -	- - 4	18 - -	- - 4	81 - -	80 - -	95 - -
Nowshera - - - - -	9 - -	- - 2	9 8 -	- - 2	18 - -	- - 4	103 - -	98 - -	96 8 -
Halla - - - - -	5 - -	- - 1	3 5 1	- - 1	16 5 -	- - 4	81 - -	76 6 -	90 - -
Meerpoor - - - - -	24 - -	- - 6	7 11 2	- - 2	21 11 -	- - 5	114 - -	78 15 9	77 5 4
Mahomed Khan's Tanda -	5 - -	- - 1	4 14 4	- - 1	10 12 -	- - 3	99 - -	76 11 6	94 8 -
HYDRABAD Collectorate -	12 3 2	- - 3	8 10 11	- - 2	16 15 2	- - 4	95 9 7	82 - 5	90 10 8
Jerruck - - - - -	17 8 -	- - 4	17 8 -	- - 4	- - -	- - -	69 - -	69 - -	- - -
Shahbunder - - - - -	10 2 -	- - 2	8 1 -	- - 2	- - -	- - -	83 - -	91 12 -	- - -
Schwan - - - - -	2 10 -	- - 1	9 13 9	- 2 2	7 4 5	- - 2	80 - -	82 8 6	88 15 8
KURRACHEE Collectorate	10 1 4	- - 2	11 12 11	- - 3	7 4 5	- - 2	77 5 4	81 1 6	88 15 8

(signed) P. M. Dalzell, Deputy Collector.

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(No. 2250 of 1858.)

REVENUE DEPARTMENT.

From *H. B. E. Frere*, Esq., Commissioner in Sind, to the Deputy Collector of Customs,
Kurrachee.

Sir,

I HAVE the honour to acknowledge your letter as per margin,* and to inform you that I am much obliged to you for the very clear and useful report regarding the cultivation of cotton in this province, on which the following remarks occur to me.

- Para. 3. 2. You observe that exotic cotton will, with attention, succeed in the central and lower districts of the province. This belief quite accords with the results of my own observations, and with the opinion of the late Mr. Prince, who was, as you are aware, employed for several seasons in conducting inquiries and experiments on account of Government.
- Para. 4. 3. With regard to the tabular statement of average yield of cotton per acre in Sind, which accompanies your report, I would remark that all such general returns must be received with caution. The vernacular returns from which they are framed are prepared by our local native officials with but little discrimination, and are never so trustworthy as the results of inquiries made by men of practical experience. As far as my recollection goes, the experiments with exotic seed were very seldom made in a manner to entitle the results to much confidence, as guides for the future.
- Paras. 5 to 7. 4. As to the result apparently deducible from the return of indigenous cotton in the Shikarpoor Collectorate, that the cultivation entails loss on the cultivator, I have no doubt that the produce is very much understated. The zemindars in Upper Sind all readily admit that cotton pays well, when they are able to cultivate it, which depends much on the season, and the early rise of the river.
- Para. 14. 5. The very small yield of clean cotton from the produce of exotic seed in the Hyderabad district, (viz., 98 lbs. of clean from 784 lbs. of kupas) is doubtless owing to exotic cotton having never had a fair trial in that district.
- Para. 33. 6. With respect to your suggestion that Deputy Collectors should undertake the cultivation of cotton experimentally on a small area, I do not think that any good result can ever be expected from such trials made by Government officials, beyond showing that with care, skill and capital, success is possible, and this has been already proved by the late Mr. Prince and others. Government officers have rarely the skill and leisure to ensure success, and when they do succeed, their success still leaves a doubt as to the chance of a private speculator being equally fortunate. The possibility of success having been already proved, it is better to leave the further prosecution of the experiments to private enterprise. Any extent of land can be secured in Sind on very reasonable terms, and every encouragement would be given to parties willing to undertake experiments on a large scale.
- Para. 35. 7. The remarks contained in the previous paragraph apply to your proposition to supply saw-gins and other implements to the local officers for carrying out the experiments above adverted to.
- Paras. 35 and 36. 8. On the subject of interesting the cultivators, I would observe that the Sindee cultivators are certainly not backward in taking up any new sort of cultivation which they find answer; but experience shows us that the injudicious interference of one over-zealous Government official does more harm than is counterbalanced by any amount of actual success in cultivation; I believe we shall best encourage agriculture by abstaining from all interference, and giving assistance only when it is asked for.
10. With regard to the discrepancy noticed in your 41st paragraph, between the extent of cotton cultivation in the province, and the probable consumption, I would observe that much cotton is now produced in the Khelat portion of what was once the desert near Jacobabad, and considerable quantities are imported overland from Rajpootana across the desert, and from Mooltan and the Punjaub and Bhawalpoor districts by river.
11. Adverting to your last paragraph, I believe that the best way for the Deputy Collectors to afford help in the extension of cotton cultivation is to aid in fixing the land tax so as to secure the cultivator from its being raised if he improves his farming, and so to give fixed and settled tenures.

Kurrachee Commissioner's Office,
8 September 1858.

I have, &c.
(signed) *H. B. E. Frere*,
Commissioner in Sind.

* No. 919, of 30 August 1858, remarking on the reports of cotton cultivation in Sind.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1569.

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From *H. Young*, Esq., Chief Secretary to the Government of Bombay, to *R. B. Chapman*, Esq., Officiating Under-Secretary to the Government of India, No. 4889; dated 12th November 1857.

I AM directed by the Right honourable the Governor, in Council, to acknowledge the receipt of your letter, No. 1753, dated the 30th ultimo, and to forward an extract (paragraphs 1 to 4) of the letter from the late Collector of Broach, No. 346,* dated the 11th June 1855, therein referred to, expressive of his opinion as regards the injurious effects of artificial irrigation on the cotton crop.

2. On receipt by this Government of the Honourable Court's despatch, No. 9, dated the 9th September last, copies of it and of its accompaniment were forwarded to the Revenue Commissioners, Northern and Southern Divisions, and they were requested to obtain and submit the judgment of the Collectors most conversant with the culture of cotton on the opinion expressed by Mr. Inverarity, and also whether that opinion is correct to the extent to which he has laid it down.

3. The Government of India and Honourable Court will, in due course, be placed in possession of the result of above reference, and of the proceedings which may be adopted by this Government consequent thereon.

EXTRACT Paragraphs 1 to 4, of a Letter from the Collector of Broach, No. 346; dated 11th June 1855.

Paragraph 1. I HAVE the honour to acknowledge the receipt of your endorsement, No. 120, under date the 19th January last, upon a letter to Government from the Secretary to the Western India Canal and Irrigation Company, explanatory of the plans and views of that association in respect to the extension of irrigation throughout this Presidency.

2. The greater part of the land of this collectorate being composed of a deep black soil, and rendered annually sub-eivient to the cultivation of cotton, for which it is peculiarly adapted, there will not, I apprehend, be found many facilities for the construction of canals within its limits; as irrigation supplied artificially far from improving the growth and staple of the cotton crop, acts injuriously towards it, weakening the fibre and reducing its value to a corresponding extent. The only land upon which I have ever seen cotton improved by a supply of water from artificial sources, is in some parts of Scinde: but there the deep alluvial deposit differs widely from the heavy black soil of Guzerat, and there is no degree of assimilation between the two, which would render the latter capable of the same treatment as the rich tracts skirting the banks of the Indus.

3. It cannot I imagine be in contemplation to attempt the supersession of the cotton growth here by other crops, for though possibly these might, to some extent, be capable of producing a higher market value, they could never wholly, or even more than partially, take the place of the present staple of the collectorate, and that I am assured can never here be improved by the adventitious means adverted to. There is no doubt that in seasons of drought the security of the cotton crop would in some degree be maintained by the supply of water which would be poured over it from the canals, but the indifferent yield which would result from that mode of preservation, would seldom cover the increased amount of assessment which would be leviable.

4. The Company therefore will not, I presume, initiate their proceedings by breaking ground in this collectorate, for I have no doubt other portions of the Presidency will be found to provide a far more profitable field of speculation, and therefore one more worthy of their early efforts on its behalf; there is however one small tract of country lying between the Myhee and Dhadur rivers, formed partly of red soils, which, I am told might be found well suited to the purpose in view, and which I shall bring more fully hereafter to the Company's notice when I have had an opportunity of personally surveying it.

From *J. W. Dalrymple*, Esq., Under-Secretary to the Government of India,

To the Secretary to the Government of Fort St. George, No. 1911	} dated 25th Nov. 1857.
To the Secretary to the Government of Bengal, No. 2497	
To the Secretary to the Government of N. W. P., No. 1912	
To the Secretary to the Government of C. P., No. 1913	

I AM directed to transmit the accompanying extract from the 13th paragraph of a despatch, No. 13 of 1857, dated the 9th September, from the Honourable the

* To the address of the Revenue Commissioner, Northern Division.

III.

Boimba

*Right Honourable
the Governor in
Council,
Honourable the
Lieutenant-
Governor,
Chief Commissioner.

† Madras Presidency,
Lower Provinces,
North-Western
Provinces,
Central Provinces.

the Court of Directors, and a copy of Mr. Inverarity's letter therein referred to, as to the injurious effects of artificial irrigation on cotton crops, and to request that you will, with the permission of the* _____, be so good as to obtain and furnish this Government with the views of such persons in the † _____ as are most conversant with the culture of the plant, with reference to Mr. Inverarity's opinion.

No. 2474.

ORDERED, that a copy of the above letter, and of the documents therein referred to, be communicated to the Foreign Department, whence the administrative authorities, under the control of that department, will also be called upon to procure the information required by the Honourable the Court of Directors.

From *R. B. Chapman*, Esq. Under-Secretary to the Government of India,
To Secretary to the Government of Fort St. George,
No. 635 - - - - - } dated 17th April
To Secretary to the Government of Bengal, No. 1017 - - - - - } 1858.
To Secretary to the Government of N. W. Provinces,
No. 634 - - - - - }

‡ 1911
2497.
1912.

I AM directed to call attention to my letter, No. ‡ _____, dated the 25th November last, and to request that the information therein required as to the injurious effects of artificial irrigation on cotton crops may be furnished as early as practicable.

(No. 1087.)

REVENUE.

From *A. R. Young*, Esq., Secretary to the Government of Bengal, to the Under-Secretary to the Government of India, Home Department; dated Fort William, the 8th May 1858.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 1017, dated the 17th ultimo, and in reply to state, for the information of the Supreme Government, that the attention of the Board of Revenue having been called to the subject of the supposed injurious effects, of artificial irrigation on the cotton plant, they have explained that, on the receipt of the orders of Government of November last, they addressed the Secretary to the Agricultural and Horticultural Society, by whom no reply has as yet been given. They have again addressed the Society, and, on the receipt of a reply, will submit it to Government.

I have, &c.
(signed) *A. R. Young*,
Secretary to the Governor of Bengal.

From *A. R. Young*, Esq., Secretary to the Government of Bengal, to
C. Beadon, Esq., Secretary to the Government of India, No. 1305; dated the
1st June 1858.

In continuation of my letter, No. 1087, dated the 8th ultimo, I am directed to forward, for the information of the Honourable the President in Council, the accompanying copy of a letter, No. 194, dated the 21st instant, from the Secretary to the Board of Revenue, submitting the required report on the effects of artificial irrigation on the cotton plant.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1571

III.
Bombay.

From the Secretary to the Board of Revenue, to the Secretary to the Government of Bengal, No. 194; dated Fort William, the 28th May 1858.

In continuation of my letter No. 154, dated 30th ultimo, I am directed by the Board of Revenue to submit the accompanying copy of a report of the Cotton Committee of the Agricultural and Horticultural Society, on the subject of artificial irrigation of the cotton plant, together with extracts* from letters on the same subject from Colonel Hannay and Mr. J. W. Masters, deputy collector of Seesaugor.

LAND REVENUE,
W. Dampier and
H. Stainforth, Esqrs

In Bengal, perhaps, the Board remark, artificial irrigation is not required, but in the districts of Behar such means would, they think, be useful.

REPORT of the Cotton Committee of the Agricultural and Horticultural Society, on the subject of Artificial Irrigation for Cotton Plantations.

THE Board of Revenue through their Secretary submit, by desire of the Government of India, a communication from the Collector of Broach, on the injurious effects of artificial irrigation on the cotton plants, and solicit the aid of the Agricultural Society in procuring information on the subject.

At the meeting at which this letter and its enclosure were read, a resolution was passed to the effect that they be published *in extenso* in the proceedings, with the view of attracting the attention of persons interested in the matter; it was further resolved, that these papers be circulated for the opinion of the members of the cotton committee.

The committee having duly considered the subject, beg to report as follows :

Referring to the accompanying extract of letter from the Collector of Broach, they would observe that it is extremely difficult, nay, almost impossible, to lay down any fixed general rules in regard to the artificial irrigation of the cotton plant. Much, of course, must depend upon the nature of the soil and climate where the culture is carried on. In some localities, where the soil is sandy and light, frequent irrigation will probably be found necessary for the successful growth of the plant; in other places, a moderate degree of moisture only is essential; while again, in other localities, it may not be at all necessary, but, on the contrary, may prove hurtful to the plant, as would appear to be the case from Mr. Inverarity's letter to the Collectorate of Broach, for he observes that "irrigation supplied artificially, far from improving the growth and staple of the cotton crop, acts injuriously towards it, weakening the fibre, and reducing its value to a corresponding extent."

In those parts of the North Western Provinces and Central India, where cotton forms one of the principal staples, the seed is sown at the commencement of June; and, if the season be favourable, the plants grow well and attain maturity during that and the following rainy months, "which terminate just when the drying up of the soil, the dryness and clearness of the atmosphere are most necessary to check vegetative vigour, and determine the secretions towards the formation of fruit and the perfecting of the seed."—"Royle's Him. III.") If, however, the season prove a dry one, and no means of artificial irrigation are available, which is generally the case, the plants suffer considerably and the yield is very partial. Even in those parts of Lower Bengal where cotton is cultivated, the plant suffers occasionally from drought, though the rainy season is almost always more protracted, and the soil more retentive of moisture than in Upper and Central India. In some places the natives obviate the shortness of the favourable season by irrigating both before and after the rainy season. Mr. Duncan mentions that at Benares the Burowch or Barreah is the best cotton produced, giving one-fourth of clean cotton. This cotton is always cultivated by itself; it is sown in August, and the crop reared in March or April; it requires a good rich soil, and to be near some means of irrigation, as it must be equally attended to and watered. The Chinese cultivator is fully sensible of the benefit the cotton plant derives from artificial irrigation. We are, moreover, informed ("Porter's Trop. Agricult.") that when they wish to appropriate to the production of cotton, land which is poor and approaching to sterility, they keep the field covered with water during the winter, which practice proves, they say, an admirable preparation for this kind of plant. They maintain that this inundation is as sure a means of amelioration to poor and dry lands, as draining is to such as have been subjected to a lengthened inundation. In Egypt, moisture is, we know, supplied artificially; in fact, the cotton is grown on the banks of the Nile or some canal near it, where there is water the whole year. And though the culture of the long stapled kind is of a recent introduction within the last 30 years, Egyptian cotton takes a high rank in the Manchester market, second only to American "Sea Island."

But if artificial irrigation is frequently found to be beneficial in most parts of India, for indigenous cotton in adverse seasons, it is still more necessary for the culture of exotic kinds. Of this we have abundant evidence scattered over the pages of the Society's transactions and journals, in experiments made during the last quarter of a century. The general

* Paragraph 1 from Colonel Hannay's letter to the Commissioner of Assam, dated 4th January 1858. Paragraphs 2 and 3 from Mr. Masters' letter to the Commissioner of Assam, No. 175, dated 8th January 1858.

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general complaint is, that crops were destroyed by excessive drought at unseasonable times. The American planters, who were engaged by the Court of Directors in 1840, to improve the culture of foreign kinds of cotton, attributed their failure in the Doab and Bundelkund, principally to the absence of all means of irrigation. The climate was found to be too dry without such aid. Dr. Irvine is of the same opinion as regards the climate of Gwalior, for he advises that two waterings be given early in the season, before the rains are heavy, and three copious waterings after the rains cease, at proper intervals; and he adds, "under this treatment, I venture to say that there will be no obstacle found to the successful culture of American cotton of the common, though most superior species." So Mr. D. Macleod, when in charge (1839) of the Saugor district, found that foreign cotton planted close to the water-courses had yielded a crop, and flourished with a vigour far surpassing all other crops grown under his superintendence. Colonel Colvin, of the Bengal Engineers, at that time (1834) superintendent of the Delhi Canal, wrote to the Society that the weight produced of cotton raised from foreign seed furnished by the Society, in various places along the canal, where artificial irrigation was available, was at least equal, if not superior to that of the native cotton, and the quality much better. Dr. Royle states ("Culture of Cotton in India," p. 525) that he had seen in August 1850, some specimens of cotton grown by Sir P. Cantley, in the neighbourhood of the Doab Canal, which was valued at Manchester at 8½d. per lb., while the indigenous cotton of the district was only considered worth 6½d., "a striking instance of the beneficial effects of moisture in the soil and climate, due, in this case, no doubt, to the extensive effects of irrigation."

But leaving that part of the country, we find evidence of the beneficial effects of irrigation in the territories of the Nizam, and in portions of the Bombay and Madras Presidencies generally, as quoted in the Journal of the Society, and in Royle's work above cited. Captain Reynolds, in alluding to the Berar valley, observes that "it consists of an alluvial soil of great depth, is more intersected with rivers than, I suppose, any part of India, Bengal Proper excepted; there is no part of India so well irrigated, and it is admirably adapted for the culture of cotton and dry grain." The cotton raised in this quarter is considered superior to the bulk of indigenous cotton. Mr. Elphinstone, the Collector of Rutnagherry, found the cultivation of foreign kinds of cotton expensive, from the necessity of irrigation, but he adds, "the advantage to be obtained from irrigation with both the Sea Island and Conkanee cotton seed is, that the plants continue bearing nearly the whole year round; whereas, if left to nature, they would cease to bear before the end of the cold weather." In regard to the experimental culture at Coimbatore, carried on for a series of years under the superintendence of Dr. Wight, he tells us of having lost more than one fine plantation from drought. Though rather lengthy, we think it desirable to introduce the following extract from a paper published by Dr. Wight, in November 1849:—

"To adapt the American cotton plant to the course of the seasons, is indispensable to success. For this purpose, two methods suggest themselves:

"1st. The one already sketched, that of employing the earlier weeks of the autumnal period as our spring, the latter ones and part of winter as our summer, and the conclusion of winter and part of spring as our autumn; or,

"2d. To render ourselves comparatively independent of the seasons by having, as in Egypt, recourse to irrigation, and thereby securing for the growing plant a rising in place of a falling range of temperature, by sowing in October or November, according to the season.

"This idea suggested itself while studying the American meteorological tables, and shortly after I succeeded in obtaining a small piece of ground, about an acre, with a well attached. It was sown at the end of January; on the 4th February the young plants began to show themselves; on the 10th March many of them were upwards of a foot high, all very healthy and already showing abundance of forms or coming flowers, and that too, with the thermometer in the shade, daily above 90, once or twice, 96; proving clearly that high temperature, when there is sufficient moisture in the soil, is not injurious to Mexican cotton.

"This experiment will, I anticipate, be only partially successful, as we may, in the ordinary course of the seasons, expect cloudy weather and rain in May, which is adverse to the perfect maturation of the crop; but already it goes far towards establishing the principle for which it was undertaken; and, had the sowing been in October, when our rains ceased, would have proved most successful, as it would now, in that case, have been in full crop.

"Fortunately this is not the only experiment of this kind in progress. While drafting this paper, I received from Captain Lawford, Civil Engineer, 6th Division, a note informing me that he had engaged in a similar experiment some months ago, in the hope of being able to show the natives of Tanjore, that cotton so cultivated would yield at least as profitable returns as rice, which he states is, there, hardly worth planting. He says, I hope you will approve of the plan of irrigating all cotton, as it will in a great measure render the crop independent of season. Since I sowed the seed received from you in October, we have had scarcely any rain, but I have a splendid crop in good soil, where the plants are four feet high and the pods very large. This I consider a most valuable experiment, and will, I trust, find many imitators, especially in those parts of the country where the rains are scanty and uncertain. The seed was sown in November, the picking commenced about the middle of February, and now (15th March) the plants are in full growth, covered with crop in all stages from forms up to open pods.

"Up

“Up to this time we have had no experience in this mode of cultivating cotton; but I would suggest as a precaution, that water should be rather sparingly supplied;* that little or none should be given from the time the picking commences, or rather, perhaps, for some time before, as the plant when grown in rich moist soil, is apt to become too luxuriant, in which case the produce is not properly ripened. If in active and luxuriant growth, when the crop is ripening the pod does not open at the proper time, the cotton being highly hygrometric, absorbs moisture from the enclosing capsule, and gets spoiled before it bursts. The very bright warm weather of March, April and May, the harvest months of irrigated cotton will do much towards counteracting this evil, but not altogether, if the plants are kept freely watered and growing.” Dr. Royle also alludes to some cotton raised in 1850, by Dr. Wight, from Sea Island seed, by means of irrigation, which was valued at 14½d. per pound, and he adds, “this is a very important fact, proving that with the aid of a little irrigation, cotton very superior to any that has been grown, may yet be produced in the Madras Presidency, when the peculiarities of different localities and the kinds of culture best suited to each have been carefully ascertained.” In another year, Dr. Wight, alluding to certain experiments with foreign seed, remarks that his mode of cultivating with the aid of irrigation, was attracting the attention of the natives; he at the same time mentions that as a general rule, the natives do not approve of irrigation, as luxuriant plants, they say, never yield a proportionate return of cotton. “But this,” adds Dr. Wight, “like many other questions, is one of degree; a certain quantity of watering or of manuring is useful to plants, and an excess of either, injurious. A farmer, as a gardener, shows his skill in giving just as much of either as is sufficient in the locality or suitable to the season.”

But we might go on multiplying instances of a similar nature if space and time permitted. The advantages of irrigating the cotton plant are alluded to in many parts of Royle's work, and allusion made to the facilities for doing so in Upper India, that is now afforded by means of the Great Ganges Canal. Reference is likewise made to the comparative returns per acre, of cotton grown in the Jullunder Doab, on irrigated and unirrigated lands, much to the advantage of the former. Dr. Royle concludes a chapter on the subject with the following remarks:—Draining and open planting are not more useful in Louisiana and Bengal, than irrigation and moderate shelter are in Egypt, the Deccan, or in North-western India. Nothing can be more important, therefore, for the development of the resources of a country where the supply of rain water is deficient or irregular, than the extension of works of irrigation, such as have been and now are carrying out in North-western India, and as have been constructed with much benefit in Tanjore, and are now constructing on the Godavery River in the Madras Presidency. The supply of water on the table land of the Deccan is small, but the necessity is greater of preserving that which falls either in tanks, or by damming up some rivers, and using under-ground watercourses, as is practised in the dry climates of the Punjaub and of Afghanistan.

On the whole, then, we think it may be assumed, that though artificial irrigation may, under a certain peculiarity of soil and climate, act injuriously on the cotton plant, yet in most localities it will be found beneficial alike to the indigenous and exotic kinds; and that it should be carried out more extensively whenever the means for doing so are available at a moderate cost.

EXTRACT from a Letter from Colonel *Hannay*, to the Commissioner of Assam; dated the 4th January 1858.

Paragraph 1. I HAVE the honour to acknowledge the receipt of your letter, No. 360, of the 19th ultimo, forwarding copy of a letter, No. 477, of the 4th of December 1857, from the Board of Revenue, relative to cotton cultivation, and requesting information as to the supposed injurious effect of irrigation in the culture of cotton. In reply, I beg leave to state that there is a generally received opinion, that water is injurious to the root of the cotton plant, and so far as my own experience goes, irrigation would not answer in Assam; in fact, on the contrary, the “Kopas Tollahs,” or tracts selected for the growth of cotton, are high and well drained. A certain humidity is no doubt required in a cotton soil, and this I think the suitable soil of Upper Assam naturally possesses, without being retentive of moisture from external causes; if a cotton crop fails, it is from excess of moisture at the root, or too much continuous rain after the boll has formed.

* The above field, on which picking will commence in a few days, was four times watered; once preparatory to the last sowing; once immediately after sowing; once after the first hoeing; and lastly, had one shower of short duration, when about two months old. The ground between the rows was ploughed when about six weeks old. No more water is required. The plants are healthy and vigorous, not large, but in the proportion to their size, covered with an uncommonly abundant crop. The hottest season of the year, therefore, is clearly the best season for the cultivation of Mexican cotton in India, so long as moderately humid soil can be secured. The aggregate quantity of water supplied to this field has not, I believe, exceeded two inches between the 20th of January and the 15th of April.

III.
Bombay.

EXTRACT from a Letter from Mr. *Master*, to the Commissioner of Assam, No. 175; dated the 8th January 1858.

Paragraph 2. IN reply, I would beg leave to remark, that artificial irrigation is but sparingly, if at all, practised in this province for any kind of crop, and for cotton cultivation, I consider it is quite unnecessary, as we get abundance of rain generally on all the low lands where little cotton is cultivated; and on the low hills and even higher peaks, where the principal portion of cotton cultivation is carried on, there is still a greater rain-fall, as the water runs off rapidly, the ground about the roots of the plants does not become saturated by moisture, and consequently the plants are not injured, as would be the case were the rain-fall equally heavy on cotton lands in the plains. On dry and sandy soils, where it may be desirous to cultivate the cotton plant, irrigation may, if judiciously applied, be partially beneficial, but in the province of Assam, there is not sufficient demand to warrant the expense of constructing canals for that purpose.

Paragraph 3. The Collector of Broach observes: "The greater part of the land in the collectorate being composed of a deep black soil, irrigation supplied artificially, far from improving the growth and staple of the cotton crop, acts injuriously towards it, weakening the fibre, and reducing its value to a corresponding extent. This view of the case is undoubtedly correct, when taken with regard to soils of a similar description to that above alluded to; and I have often observed on similar lands, immediately under the Nagah hills, which are frequently drenched by the water from the hills, that the soil becomes saturated, and the plants rendered weak, and the fibre deteriorated, while the plants immediately in their vicinity, on higher and drier ground, appear healthy and strong, and the staple far superior."

From *W. Muir*, Esq., Secretary to the Government of the North-Western Provinces, to *C. Beadon*, Esq., Secretary to the Government of India, Home Department, No. 502; dated Allahabad, the 11th May 1858.

IN reply to Mr. Under-Secretary Chapman's letter, dated the 17th ultimo, No. 634, I am directed by the Right honourable the Governor-General to forward, for the purpose of being laid before the Honourable the President in Council, the returns, as marginally noted,* to the call made by the Central Province Government on the 8th December last, relative to the injurious effects of artificial irrigation on cotton crops.

2. I am also to add that the copy of the orders, intended for the North-Western Province Government, was not received here till the middle of February, when his Lordship determined that in the present state of the provinces, the inquiry should lie over for the present.

3. The pressure upon the civil officers throughout these provinces renders it, in the opinion of his Lordship, very unadvisable to impose any extra duties upon them at this time.

From *H. C. Tucker*, Esq., Commissioner 5th Division, to Lieutenant-Colonel *R. Strachey*, Secretary to Government, Central Provinces, No. 29; dated Benares, 18th January 1858.

WITH reference to your circular, No. 45, dated 8th ultimo, calling for report relative to the artificial irrigation of cotton, I have the honour to submit a letter, No. 9, dated 16th instant, from the Deputy Collector of Mirzapore, to the effect that cotton is never irrigated in that district.

2. I believe that the small quantity of cotton sown on ordinary soil is irrigated, but that the cotton sown on the regular black cotton soil is not irrigated.

From *James Simson*, Esq., Deputy Collector, Mirzapore, to *Henry Carre Tucker*, Esq., Commissioner, 5th Division, Benares, No. 9; dated the 16th January 1858.

IN reply to your d. cet, No. 293, dated 22d December 1857, I have the honour to inform you, that all the Canoongoes in this district report that cotton is never irrigated in this district.

2. The Collector, Mr. Tucker, before his departure into the district, recorded it as his impression, from memory, that in the Nerbudda territories, cotton grown on black soil is never irrigated.

* From Commissioner, Benares Division, dated 18th January 1858, No. 29, with enclosure. From Officiating Commissioner, Allahabad Division, dated 10th February 1858, No. 102. From Commissioner, Jubbulpore Division, dated 2d April 1858, No. 163, with enclosures. From ditto, ditto, dated 5th idem, No. 167, with enclosures.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1575

III.
Bombay

From *F. B. Gubbins*, Esq., Officiating Commissioner, Allahabad Division, to *W. Muir*, Esq., Secretary to the Government of the North-Western Provinces, Allahabad, No. 102; dated the 10th February 1858.

I HAVE the honour to acknowledge your circular letter, No. 45, of the 8th December last, and in reply to inform you, that the cotton plant is so little cultivated in this part of India, that it would be impossible for me to submit an opinion as to whether irrigation produces an injurious effect upon the fibre or not.

2. Bundelcund is the only part of this division where cotton is extensively cultivated, and there the nature of the soil precludes the use of irrigation—it is never had recourse to.

3. My experience of the North-Western Provinces teaches me, however, that in that part of India, the cotton crop is invariably irrigated whenever a want of rain is likely to prove injurious to the plant, and I have never heard it even hinted, that this process in any way deteriorated the fibre.

From Major *W. C. Erskine*, Commissioner, Jubbulpore Division, to *W. Muir*, Esq., Secretary to the Government of the North-Western Provinces, Allahabad, No. 163; dated Camp Chendwara, the 2d April 1858.

WITH reference to the circular, No. 45, dated the 8th December 1857, from the Secretary to Government, Central Provinces, calling for reports on the effects of irrigating cotton land, I have the honour to enclose the letters as per margin,* being all I have yet received.

2. From my own knowledge of the subject, I can state that in this division, cotton land is very seldom irrigated, as the natives consider the effects bad, and that the periodical rains are sufficient.

From Captain *A. H. Ternan*, Deputy Commissioner, 1st Class, to Major *W. C. Erskine*, Commissioner, Saugor Division, Jubbulpore, No. 52; dated Nursingpore, the 25th January 1858.

I HAVE the honour to acknowledge receipt of circular, as per margin.

Circular for report,
20th January,
No. 17, of 1858.

2. I beg to state in reply, that in this district the cotton plant is not irrigated by artificial means; the malgoozars say that such irrigation would enfeeble the plant, and make it yield but a very indifferent crop.

3. The black soil appears to preserve, throughout the year, moisture sufficient for its preservation, &c.

4. Again, irrigation becomes in a manner impossible in such soil, for the fissures caused by a hot sun on it measure often six feet or more in depth, and would each absorb a well.

5. Though cotton is mostly grown in black soil, yet I have often seen the finest pods on plants growing in light clay soils on the banks of the Nerbudda and other rivers, which would prove that the black soil is not indispensable for its culture.

From Lieutenant *W. B. Thompson*, Officiating Deputy Commissioner, to Major *W. C. Erskine*, Commissioner, Jubbulpore Division, No. 158; dated Seonee, the 8th February 1858.

I HAVE the honour to report, with reference to your docket, No. 17, of 1858, dated 21st January, that there is very little cotton cultivation carried on in this district, and that when it is carried on, the objections to artificial irrigation, stated in extract paragraph, No. 2, of a letter from the Collector of Broach, No. 346, dated 11th June 1855, are applicable.

From Captain *H. F. Waddington*, Deputy Commissioner, 2d Class, to Major *W. C. Erskine*, Commissioner, Jubbulpore Division, No. 30; dated Mundlah, the 16th February 1858.

IN obedience to your docket, No. 17, of 20th ultimo, with enclosures, on the subject of cotton crops, I have the honour to report, that cotton is not grown in large quantities in this district, but the farmers, from whom I have made inquiries, all agree that artificial irrigation would not act injuriously towards it.

From

* 1. No. 52, dated 25th January 1858, from Deputy Commissioner, Nursingpore. 2. No. 158, dated 8th February, from Deputy Commissioner, Seonee. 3. No. 30, dated 16th February, from Deputy Commissioner, Mundla. 4. No. 6, dated 20th February, from Deputy Commissioner, Baitool. 5. No. 66, dated 22d February, from Deputy Commissioner, Hoshungabad. 6. No. 79, dated 23d February, from Deputy Commissioner, Saugor.

III.
Bombay.

From Lieutenant *C. Baldwin*, Officiating Deputy Commissioner, 2d Class, to Captain *G. G. Maxon*, Personal Assistant to Commissioner, Jubbulpore, No. 6; dated Baitool, the 20th February 1858.

WITH reference to your docket, No. 17, dated 28th January 1858, I have the honour to state that but little cotton is grown in this district, and the opinion here given should have proportionate weight—that of the cultivators, from whom I have inquired, agrees with the opinion of Mr. George Invearity, that cotton would not be benefited by irrigation.

From Lieutenant *J. C. Wood*, Deputy Commissioner, 1st Class, to Major *W. C. Erskine*, Commissioner, Jubbulpore Division, No. 66; dated Hoshungabad, the 22d February 1858.

IN reply to circular of the Government, Central Provinces, No. 45, dated the 8th December last (received with your circular of the 20th January), I have the honour to state that cotton would be entirely damaged by irrigation. Even when the monsoon is heavier than usual, the black soil becoming unduly saturated, yields an indifferent crop of cotton. Indeed the out-turn of cotton is best when a little less than the ordinary rain has fallen on black soil.

2. There is a very small proportion of red soil in the Hoshungabad district. In red soil, the cotton crops are best when the rains have been heavy.

3. A little rain usually falls in the Hoshungabad district during the cold season (in addition to the regular monsoon of June, July, August, September.)

4. If this fall is continued for any length of time, the cotton cultivated on black soil is considerably injured.

5. On the other hand, the cotton cultivated on red soil is rather improved than otherwise, by the winter rain.

From Major *W. C. Western*, Deputy Commissioner, 1st Class, to Major *W. C. Erskine*, Commissioner, Jubbulpore Division, Camp Saugor, No. 79; dated Saugor, 23d March 1858.

WITH reference to your circular docket, No. 17, of the 20th January last, calling for information as to the effect of artificial irrigation on the cotton crop, I have the honour to inform you, that in this district cotton is only grown in rich black soil, and I am informed by persons who grow it, that in their opinion, artificial irrigation would not improve it.

From Major *W. C. Erskine*, Commissioner, Jubbulpore Division, to *W. Muir*, Esq., Secretary to the Government of the North-Western Provinces, Allahabad, No. 167; dated the 5th April 1858.

IN continuation of my letter No. 163 of the 2d instant, I have the honour to submit, for the information of the Right Honourable the Governor-General, in original, a letter No 129 of the 31st ultimo, from the Deputy Commissioner of Jubbulpore, regarding the irrigation of cotton.

From Lieutenant *W. Nembhard*, Officiating Deputy Commissioner, 1st Class, to Major *W. C. Erskine*, Commissioner, Jubbulpore Division, No. 129; dated Jubbulpore, the 31st March 1858.

I HAVE the honour to acknowledge receipt of your docket No. 17, dated 20th January last, forwarding printed correspondence, relative to the injurious effects of artificial irrigation on cotton crops.

2. In this district, cotton cultivation is entirely dry, and I cannot find out that irrigation has ever been attempted, consequently I can neither offer an opinion myself, nor can I obtain any from natives of experience, whether irrigation would injure the fibre, or be in other respects injurious to the plant or not.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1577

From *R. B. Chapman*, Esq., Under Secretary to the Government of India, to *T. Pycroft*, Esq., Secretary to the Government of Fort St. George, No. 1043; dated the 3d July 1858.

III.
Bombay.

I AM directed to call attention to my letters noted in the margin,* and request that, as all the other Governments have furnished the information required as to the injurious effects of artificial irrigation on cotton crops, the reply of the Government of Fort St. George on the subject may no longer be delayed.

From *T. Pycroft*, Esq., Chief Secretary to the Government of Fort St. George, to *C. Beadon*, Esq., Secretary to the Government of India, No. 1056; dated the 29th July 1858.

I AM directed to acknowledge the receipt of Mr. Under Secretary Dalrymple's letter of the 25th November 1857, transmitting extract from a despatch† from the Honourable the Court of Directors to the address of the Government of India, and a copy of Mr. Inverarity's letter therein referred to, in which he alludes to the injurious effects of artificial irrigation on cotton crops, and requesting to be furnished with the views of such persons in this Presidency, as are most conversant with the culture of the plant, with reference to Mr. Inverarity's opinion.

2. Previous to the receipt of Mr. Dalrymple's letter, this Government had been furnished by the Honourable Court with a copy of their despatch to the Government of India above referred to; and in an extract from the Minutes of Consultation, dated 31st October 1857, the Board of Revenue were requested to place themselves in communication with the Collectors of the cotton-growing districts, and with parties who largely invest their capital in the cotton trade, and to submit information on the effect of irrigation on the plant. Accordingly, with their proceedings of the 3d March 1858, the Board submitted the information they had received from certain Collectors, and from Dr. Cleghorn, the Conservator of Forests, and Mr. McIvor, the Superintendent of the Government gardens at Ootacamund; and in an extract from the Minutes of Consultation of the 15th May, the Government stated that they would be glad to be favoured with the replies of the Chamber of Commerce and the Trade Association, who had also been consulted by the Board, as well as with a report from the Collector of Bellary on the views of the principal cotton producers in his district, on the subject of irrigating the plant.

3. On the 14th July 1858, the Board submitted the report of the Chamber of Commerce; and on the 19th idem the Government received Mr. Chapman's letter, communicating the wish of the Government of India, that the information called for in letters of the 25th November 1857, and 17th April 1858, may no longer be delayed.

4. I am therefore directed to transmit extracts‡ from the report received, which relate to the question of cotton irrigation, together with the reports of Dr. Cleghorn, Mr. McIvor, the Chamber of Commerce, and the Collector of Bellary, and extracts from the proceedings of the Board of Revenue and of the Government. Any other report on the subject which may be submitted by the Board will be laid before the Government of India as soon as received.

* No. 1911, dated 25th November 1857. No. 635, dated 19th April 1858.

† 9th September 1857, No. 13, para. 13.

‡ From the Officiating Agent at Kurnool, 12th December 1857, para. 3. From the Collector of Coimbatore, 2d January 1858, para. 3. From the Acting Collector of South Arcot, 8th January 1858, para. 12. From the Acting Collector of Madura, 5th February 1858, para. 4. From the Collector of Nellore, 8th February 1858, para. 5, clause 4. From the Collector of Vizagapatam, 10th March 1858, para. 5, and paras. 6 to 8 of its enclosure from the Acting District Engineer. From Mr. McIvor, dated December 1857. From Dr. Cleghorn, 23d December 1857, with enclosure to be returned. From Board of Revenue, 3d March 1858, para. 14. Extract Minutes of Consultation, 15th May 1858, para. 15. From Chamber of Commerce, 22d June 1858. From Collector of Bellary, 6th July 1858.

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No. 69.

EXTRACT from a Letter from the Officiating Agent to the Governor of Fort St. George, at Kurnool.

Para. 3. With reference to the query as to whether cotton is the better for irrigation, I have the honour to state, that after consulting many different parties, it would appear that in this district the cotton crop is always grown without any irrigation. The ground should be thoroughly soaked till the young plants are a few inches above the ground, after which rain is not required, the dews being sufficient to bring the plant to maturity. Cotton is never grown on red soils, but in mussub, which is a black stony soil, and in regur, which is the regular black cotton soil. In these soils it is very common to see dholi, cotton, and some crop that requires plenty of rain, growing in the same field. The reason for which is, that in event of the rains failing, and the koraloo or cholom suffer, the ryots are sure to have a good crop of dholi and cotton to fall back on. In cases of breaches in the banks of tanks and canals, I have often observed that the cotton has been killed or greatly injured, while other crop (red-rice perhaps) has grown up most luxuriantly, although the native cultivators all assert, that irrigation will injure cotton. I do not think this proves that it would not be improved by water being artificially applied to it in proper quantities and at the right time; for the ryots are liable to say a plan is impossible, merely because they have not tried it. I have heard that irrigation has been successfully used in some parts of India; but am inclined to think that if due inquiry be made, it will be found the experiments have always been made with Mexican and not with country seed.

Kurnool District,
Govt. Agent's Office on Circuit, Siwell, } (signed) J. G. Russell, Captain,
12 December 1857. } Officiating Agent to the Governor.

No. 1.

EXTRACT from a Letter from the Collector of Coimbatore.

Para. 3. SUGAR-CANE is only grown to a large extent where there is a foreign market or merchant on the spot, to ensure a large and certain demand for it; the home Indian consumption of cane or sugar is trifling. It is not all produce, moreover, which will bear or requires irrigation. Some crops (like cotton,* I believe, without doubt) would be deteriorated or quite spoiled by over-moisture; they thrive better on a dry soil, with only the natural rains to mature them.

Coimbatore Collector's Office, } (signed) E. B. Thomas,
2 January 1858. } Collector.

No. 2.

EXTRACT from a Letter from the Acting Collector of South Arcot.

Para. 12. WITH regard to the culture of the cotton plant, my inquiries among those who are competent to afford information on the subject, lead me to believe that artificial irrigation to any great extent is decidedly injurious; very little cotton is grown in this district, and the plant is of an inferior description. It thrives best on ordinary dry land, and requires slight moisture of soil and occasional moderate showers to bring it to maturity. Mr. Inverarity's opinion probably referred to what is called black cotton soil, which will not bear much irrigation; but the plant grows, I believe, in a great variety of soils, and different treatment must, no doubt, be required for the American and Bourbon species, from that which is found to answer for the indigenous plant. The attempts hitherto made in this district to grow the superior kinds of cotton have met with little or no success.

South Arcot Collector's Catcherry, } (signed) G. A. Taylor,
Cuddalore, } Acting Collector.
8 January 1858. }

No. 37.

EXTRACT from a Letter from the Acting Collector of Madura.

Para. 4. WITH reference to the 4th paragraph of the first extract, I beg to state that in the opinion of some experienced native agriculturists and merchants who have been consulted, irrigation is injurious to cotton crops, which are what is termed dry crops, and depend upon the periodical falls of rain.

Madura, } (signed) A. Hathaway,
5 February 1858. } Acting Collector.

* Irrigated cotton looks well, but has often more leaf than pod.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1579

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EXTRACT from a Letter from the Collector of Nellore; dated the 8th February 1858.

Para. 5, Clause 4. As to the alleged injurious effect of artificial irrigation on the cotton crop, I beg to observe that the cotton cultivation of this district is, as has been before shown, comparatively limited. It is sown wholly on dry lands, and artificial irrigation is not practised. I am not aware that there are any cotton merchants here, European or native, of intelligence from whom to obtain any valuable information on the subject, which will probably be better understood where cotton is a staple of the district. It is probable that much depends on the nature of the soil on which the cotton is grown; black soils would be hardened by being irrigated, and thereby injured, or, at least, more labour would be required to open out the roots, while on red and sandy soils irrigation would, I think, be beneficial.

To Board, 16th
January, 1858,
No. 6.

No. 41.

EXTRACT from a Letter from the Collector and Agent to the Governor of Vizagapatam; dated the 10th March 1858.

Para. 5. IN regard to the alleged injurious effects of artificial irrigation on the cotton crop, I would observe that the months of June and July are those in which the cultivation of cotton is carried on in this district, and the ryots depend almost exclusively on the monsoon rains for the realization of these crops. Cotton does not usually require as much water even as many of the common dry grains of the country; but to one uninitiated as myself in the mysteries of agricultural science, it seems a singular question to propound, as to whether artificial irrigation would be injurious to any crop, when it would be utterly impossible to raise such crop without a due proportion of water, whether supplied from the heavens or by artificial means; and as the seasons in India, as elsewhere, do occasionally fail, and at all events vary in their supply of this necessary element, so it follows that to call in art to meet such deficiency must be rather beneficial than prejudicial in its effects on the crop, which could never otherwise reach maturity.

No. 982.

EXTRACT from a Letter from the Acting District Engineer of Vizagapatam.

Para. 6. WITH regard to paragraph 4 of the Board's circular, I may remark that from inquiries I have made, I find the prevalent opinion rather in favour of irrigating the cotton crop than otherwise.

Para. 7. One thing, however, seems pretty certain, that cotton is always grown on high lands from which there is a natural drainage, and never in valleys or in low lands, where water may be for some time on account of there being no means of draining it off. In such latter lands, cotton would never thrive; but it would be all the same whether the rain were directly rain-water, or brought from a channel or tank. Cotton does not require much water, but it must have a certain quantity, and where the cultivation is on a very large scale, it would be, of course, a great thing to ensure that this quantity be obtained, and artificial irrigation will alone do this. There is no necessity, because means of supplying artificial irrigation exist for giving the crop so much water as will prove injurious to it; but it is of immense importance to ensure it a sufficient supply.

Para. 8. I consider, then, the argument against artificial irrigation, as applied to the cotton crop, absurd, and this view is supported by the *prima facie* evidence afforded by the description of soil on which cotton is best produced, viz., the black cotton or alluvial soil.

District Engineer's Office,
Vizagapatam, Camp Demilay, }
9 December 1857.

I have, &c.
(signed) T. Vertue, Lieutenant,
Acting District Engineer, Vizagapatam.

From W. G. McIvor, Esq., Superintendent, Gardens, Ootacamund, to J. D. Sim, Esq., Acting Secretary to the Board of Revenue.

WITH reference to your Circular No. 3913, dated the 31st October last, I have the honour to submit the following observations on artificial irrigation of cotton crops.

2. From an experimental cultivation of the Pernambuco variety of the cotton plant conducted for four years in the branch garden attached to this establishment, at Kulhutti, I am of opinion that artificial irrigation, when properly applied, and at the right stages of growth, is highly beneficial to the cotton plant.

3. While conducting the experiments above mentioned, I found that under the following treatment the cotton plant grew admirably, and produced very heavy crops of cotton, fine in texture, long in staple, and valued, in 1854, at 5½ d. per lb.

Detail

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Detail of Treatment which proved most successful under Artificial Irrigation.

4. The seedling plants were reared in beds in an open and airy situation. The plants were transplanted when about six inches high, in well prepared ground, in rows six feet apart; the plants the same distance apart, and alternate in the rows. The young plants were then irrigated by small water-channels made along one side of the rows, and within about eight inches of the stems of the young plants. This irrigation was continued every six or eight days, for two months after planting. The water-channels were then cut in the centre of the rows, and these new channels were filled with water every eight or ten days, until the most forward of the plants began to show flower buds. The irrigation was then stopped entirely for a month, by which time the whole of the plants were in flower. The artificial irrigation was then renewed; the water-channel in the centre of the rows were filled with water every ten or twelve days, until the crop began to ripen, when the water was withheld altogether.

CIRCULAR.

To

Sir,

Coimbatore, 20 March 1849.

In my circular under date 6th March 1848, on the subject of cultivating American cotton in India, I had the honour to submit some remarks on what was then by some considered an insurmountable obstacle to success, viz., the excessive heat of the climate, and solicited aid towards having the question solved by submitting it to the test of experiment over a wide extent of country, by sowing portions of seed with the first rains, following the hot season, and communicating the result. I further stated, that my own impression with regard to the most suitable sowing season, had reference rather to securing a suitable season for harvesting the crop than to the heat of the weather while growing.

2. The replies to my circular have not been so numerous as I expected; but still the information thence obtained, added to that derived from my own previous experience, and much drawn from our recent experiments and from other sources is, I believe, sufficient to enable me to suggest some general rules for our future guidance of easy application to practice, and such as, I trust, will be found to insure as certain and uniform success in growing American cotton, as now attends the cultivation of the indigenous plant, with the advantage of producing a raw material, yielding about 8 per cent more of the marketable article (clean cotton), and that again returning in the English market a higher price by at least 20 per cent., making together 30 per cent. higher profits to the cultivator, provided he obtains his fair share from the first purchaser. Native seed cotton (Purthee) cleaned by the American gin, yields between 21 and 22 per cent. of cotton (Pungee) to seed, American between 29 and 30. When "good, fair" native cotton is selling in Liverpool for 4*d.*, New Orleans of the same denomination fetches from 5*d.* to 5½*d.* (In December 1848, they were respectively 3½*d.* to 3¾*d.*, and 4½*d.* to 4¾*d.*.) These data I mention as showing the advantage attending the cultivation of American cotton.

3. In my last circular I stated, that it had been confidently asserted by Mr. Mercer, an intelligent American planter, that the supply of Indian grown American cotton must necessarily be limited, as it could only be grown in certain localities favoured by having a very "mild" climate. By this term he means a cool climate, and therefore considers the plains of India generally unfit for its production, as being much too hot for the culture of that species of cotton. From the first, taught by much previous observation, I was led to question the soundness of that doctrine. I am now, I rejoice to say, in a position not merely to prove it erroneous, but to show that we have more to fear from deficiency than from excess of heat; or in other words, that the climate of the Carnatic during the cold months, our cotton-growing season, is actually colder than the summer of Mississippi, their cotton-growing season. They cultivate from April to November, we from September until April; the following Table exhibits the mean temperature of Vera Cruz, 19. 12. north latitude (the native country of Mexican cotton), of Mobile, in Alabama, 30. 12. north latitude, of Natchez in Mississippi, and Madras, 13. 4. north latitude, during these two periods:—

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1581

TABLE of Monthly Mean Temperature during the Cotton-growing Seasons in Vera Cruz, Mississippi, and the Carnatic.

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	April.	May.	June.	July.	August.	September	October.	November.	December.
Vera Cruz - - -	77.18	80.42	81.86	81.50	82.40	80.96	78.44	75.38	71.6
Mobile - - -	70.00	76.36	82.17	82.41	82.73	78.94	69.97	61.50	55.50
Natchez - - -	69.93	72.72	80.62	81.78	80.13	74.99	64.58	55.23	49.09
Madras - - -	August. 84.6	September. 83.7	October. 82.2	November. 78.9	December. 76.3	January. 75.5	February. 77.7	March. 80.8	April. 83.7

4. This table at once disposes of the assumption that excessive heat stands in our way, by showing that the main impediment to our success is not that (our crops being matured under a mean temperature lower by several degrees than those of America), but to our having to contend with a diminishing in place of a rising temperature during the growing season.

5. Mr. Finnie, another American cotton planter now in the service, has started a new difficulty. He asserts that the climate is much too dry, and that we need not expect to succeed in the culture of American cotton, unless in such places as partake of the rains of both monsoons. This opinion I am now also enabled to prove erroneous on nearly equally conclusive data. Last year, and again this year, my sowings commenced before the south-west monsoon set in, namely, in April and May. The monsoon followed in June and July; my harvest was in active progress in October when the northern rains commenced: all the crop still on the ground, and nearly ready to open, amounting to much the larger half, was injured or altogether lost; while fields sown between the 20th of July and 10th of August, which came into pick in November, after the rains, yielded good crops.

6. The following Table, exhibiting the monthly mean falls of rain in Florida and Madras for the same series of months as above, further tends to confirm my view, by showing that, as compared with Florida, a cotton-growing country, our climate is the more humid of the two.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Florida -	1.09	6.34	2.39	2.84	3.30	4.35	3.33	1.49	1.13	26.26
Madras -	August. 5.24	September. 4.76	October. 10.0	November. 12.42	December. 3.25	January. 1.33	February. 0.23	March. 0.36	April. 0.36	38.22

7. These tables leave no room to doubt that it is neither excessive heat nor excessive drought with which we have to contend in the naturalisation of the American cotton plant in India, but with a diminishing in place of a rising temperature during the cultivating season. In a single word, cold, not heat, is our enemy. This unlooked-for fact being at length clearly ascertained, the question immediately suggests itself—how is this to be met?

8. The course that suggests itself to me is simple, and I believe will be found effective. We learn from the very correct meteorological tables of Madras, that the Madras mean temperature at the beginning of September is 84°, and that at the end of October it is still as high as 81°. If the sowing is effected between the middle of August and the middle of September, the plant will be well grown, and sufficiently strong to bear the cold weather of November and December; while there is reason to believe the cold of these months will only so far retard the maturation of the crop as to prevent its coming to perfect maturity before the middle of January, when, though the nights are cold, causing a low mean temperature, the days are bright, warm, and dry,* well-suited to commencing the harvest, which will last through three or four months.

9. By following this course, as closely as the course of the seasons will permit, it is my firm belief there is scarcely a field on which water does not lodge so as

* The mean temperature of January at sunrise is 72°; at noon, 81°.

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as to become flooded after every fall of rain in any part of the Carnatic (watered by the north-eastern monsoon) on which, with due attention to agricultural management, Mexican cotton may not be as successfully grown as the indigenous now is. Soils as well as seasons vary; some will be found more, some less productive, and a few where the plant will not thrive under any treatment; but such cases do not invalidate the correctness of the general principle as regards the fitness of our climate for its culture.

10. Before quitting the subject of heat and cold, I may as well adduce an example of each. Mr. J. Bird, Sub-Collector of Tanjore, had some seed sown the end of April or beginning of May, which vegetated favourably, bore unharmed the hot land winds of June, and was in crop in September. My trials in Coimbatore are nearly equally conclusive. From Mysore Mr. Meppen writes me, that he had planted in two places, the one Chickamoogloor, enjoying a cool climate, the other Cuddoor, a warm one. Of the result he says:—"The climate of Chickamoogloor is mild, almost similar to Dharwar, yet the plants there did not thrive or bear so well as here, but like those of Dharwar were small, and produced but little; the quality of cotton also I think inferior to that of Cuddoor [it is so]. Calculating from the result of this experiment, an English acre will produce nearly 850 lbs." His field was sown two feet between the rows, and 18 inches from plant to plant in the rows. The plants rose to from 20 to 30 inches, and a month after picking commenced presented an average of about seven pods per plant, a low average for plants of that size; but doubtless there were many young ones not reckoned in that average.

11. Hitherto I have confined my remarks to the Carnatic under the influence of the north-east monsoon, I shall now say a few words bearing on those parts of India, partaking more largely of the south-west one.

12. I have not at hand satisfactory registers of the rain, but the following approximations may serve the purpose of enabling me to explain the general principles which ought to guide us:

	June.	July.	August	September.	October.	November.	December.	January.	February.
Calcutta - - - -	11·46	12 14	16·23	7·70	4·94	0 13	0 81	0 50	0·25
7 years.									
Bombay - - - -	22·92	25·14	19 64	12·64	1·64	—	—	—	—
Almanac.									
Trevandrum - - -	16 4	8·14	4·2	5·3	14·97	12 0	1 9	0·4	0·05
4 years.									
Colombo - - - -	2·3	16 7	3·3	8·2	7·1	7·1	18 6	1·6	0·4

13. Assuming that these are all approximations to the averages of the different stations named, it appears that the growing season would in the two first continue to the end of October; in Trevandrum, until the end of November; in Ceylon, to the end of December. From the date of sowing, until the crop is in a state of maturity and picking fully established, requires from 16 to 20 weeks. At this rate, in Bengal and Bombay, advantage should be taken of occasional breaks in the weather to sow between the middle of July and middle of August; in Trevandrum, between the middle of August and middle of September; and in Ceylon, in September. The weather is still warm enough to promote rapid growth, and, ere the cold nights of November commenced, the plants would have attained their full size, with strength enough to bear the cold, if supported by adequate warmth and bright sunshine during the day, it being now a well-ascertained fact, that tropical plants are capable of enduring much nocturnal cold, provided they have plenty of light and heat during the day.

14. These suggestions are, of course, to be understood as mere hints for others to work upon, as my position here prevents my acquiring accurate information on this branch of the subject.

15. A reference to the first of the preceding tables will show, that in America they are enabled in their cultivation to follow the natural course of the seasons, having the mild spring for sowing, the warmer and showery summer for their growing season, and the clear dry autumn for harvesting the crop. Here the
case

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case is altogether different. The spring months of southern India are dry and parched with intense heat, the summer ones cooled and refreshed with occasional showers, and the autumnal ones deluged with rain, and quite unfit for harvest operations. To adapt the American cotton plant to this course of the seasons is indispensable to success. For this purpose two methods suggest themselves :

1st. The one already sketched, that of employing the earlier weeks of the autumnal period as our spring, the latter ones and part of winter as our summer, and the conclusion of winter and part of spring as our autumn ; or,

2d. To render ourselves comparatively independent of the seasons, by having, as in Egypt, recourse to irrigation, and thereby securing for the growing plant a rising in place of a falling range of temperature, by sowing in October or November, according to the season.

16. This idea suggested itself while studying the American meteorological tables, and shortly after I succeeded in obtaining a small piece of ground, about an acre, with a well attached. It was sown the end of January ; on the 4th of February the young plants began to show themselves ; on the 10th of March many of them were upwards of a foot high, all very healthy, and already showing abundance of "forms," or coming flowers, and that too with the thermometer in the shade daily above 90°, once or twice 96°, proving clearly that high temperature, when there is sufficient moisture in the soil, is not injurious to Mexican cotton.

17. This experiment will, I anticipate, be only partially successful, as we may in the ordinary course of the seasons expect cloudy weather and rain in May, which is adverse to the perfect maturation of the crop ; but already it goes far towards establishing the principle for which it was undertaken, and had the sowing been in October, when our rains ceased, would have proved most successful, as it would now in that case have been in full crop.

18. Fortunately this is not the only experiment of this kind in progress. While drafting this paper, I received from Captain Lawford, civil engineer, 6th division, a note, informing me that he had engaged in a similar experiment some months ago, in the hope of being able to show the natives of Tanjore, that cotton so cultivated would yield at least as profitable returns as rice, which he states is there hardly worth planting. He says, "I hope you will approve of the plan of irrigating all cotton, as it will in a great measure render the crop independent of season. Since I sowed the seed received from you in October, we have had scarcely any rain ; but I have a splendid crop in good soil, where the plants are four feet high and the pods very large." This I consider a most valuable experiment, and will, I trust, find many imitators, especially in those parts of the country where the rains are scanty and uncertain. The seed was sown in November, the picking commenced about the middle of February, and now (15th March) the plants are in full growth, covered with crop in all stages, from "forms" up to open pods.

19. Up to this time we have had no experience in this mode of cultivating cotton ; but I would suggest as a precaution, that water should be rather sparingly supplied ;* that little or none should be given from the time the picking commences, or rather perhaps for some time before, as the plant, when grown in rich moist soil, is apt to become too luxuriant, in which case the produce is not properly ripened. If in active and luxuriant growth when the crop is ripening the pod does not open at the proper time, the cotton being highly hygro-metric absorbs moisture from the enclosing capsule, and gets spoiled before it bursts. The very bright warm weather of March, April, and May, the harvest months of irrigated cotton, will do much towards counteracting this evil, but not altogether if the plants are kept freely watered and growing.

20. Having thus briefly, but, I trust, clearly, explained the principles which ought to guide us in the cultivation of American cotton in India, I shall, in conclusion, say a few words on the practical details which demand our attention.

21. The

* The above field (*see* para. 16), on which picking will commence in a few days, was four times watered ; once preparatory to the last ploughing ; once immediately after sowing ; once after the first hoeing ; and lastly, had one shower of short duration when about two months old. The ground between the rows was ploughed when about six weeks old. No more water is required. The plants are healthy and vigorous, not large, but in proportion to their size, covered with an uncommonly abundant crop. The hottest season of the year, therefore, is clearly the best season for the cultivation of Mexican cotton in India, so long as a moderately humid soil can be secured. The aggregate quantity of water supplied to this field has not, I believe, exceeded two inches between the 20th January and 15th April.

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21. The first point relates to the choice of soil when selection is in our power. The best crops I have yet seen have been obtained from dark-brown very light sandy loams, mixed with much kunker limestone, a kind of soil easily worked, very permeable to rain, and easily penetrated to a great depth by the roots. Red soils, having a large admixture of sand, securing for them the above properties, also answer well, and are easily cultivated. The stiffer clayey soils have not answered so well, except in seasons when we have had frequent showers, keeping them in an easily workable state, as they are liable to bake, and become very hard in dry weather. The black cotton soils were a good deal tried at first, and I now think rather prematurely condemned, as unsuitable for the American plant. Subsequent consideration has led me to some extent to doubt the justice of the verdict, and I would like to be in a more favourable position to test the correctness of the conclusion, by a second trial, with our additional practical knowledge and skill.

22. The second point to which I would call particular attention is the preparation of the ground for the reception of seed. Too much care cannot be bestowed on this. The land should be well ploughed, the deeper the better, if possible from four to six months before the time for sowing, and allowed to lie fallow. If there is rain in the interval, it should have a second ploughing, so as to keep it thoroughly open, and freely exposed to the conjoint action of the air and sun, which, while it prevents excessive absorption of heat, greatly promotes fertility, and cleans the land, by exposing and killing the roots of such perennial weeds as may be in it. Lastly, it should have a final ploughing just before sowing. If sown in drills, according to the American practice, it should, while the plant is still small, be ploughed once or twice between the rows. If broadcast, this cannot be so conveniently done; the hoe must then suffice. After the third leaf has appeared the ground is hoed, and the plants thinned out to six or eight inches between them; this will leave enough to allow of considerable destruction during the subsequent ploughing. A second hoeing is always deemed necessary in both American and native practice, when the "stand" should be further thinned, to from a foot to 18 inches between the plants. If the growth is vigorous, not less than an average distance of 18 inches should be allowed; otherwise, a foot may suffice. In moderately fertile and high and dry lands from 2½ to 3 feet between the rows is enough, but for moist low lying rich soils, 5 feet is not too much, as in such circumstances the bushes will still fill the ground, it being a very strong growing plant, and unless it has plenty room the crop blights. So managed, I have seen it produce from 1,000 lbs. to 1,100 lbs. per acre, but half of that may be considered a fair crop, which is double the amount of what, in this district, is considered a good native cotton crop, and yields, owing to the higher per-centage of cotton to seed, 100 lbs. more of clean cotton. The labour and care bestowed in cultivation is greater, but the return much more than covers it, even leaving out of consideration the higher value of the article produced, which, of itself, would afford a compensation, supposing the quantity of seed cotton, weight for weight, was simply the same.

23. The last point to which I would direct attention is, that however promising in appearance, we have never succeeded in obtaining a really good second crop off the same bushes. I would, therefore, always recommend the plan of cultivating the Mexican cotton plant as an annual; and never to sow the same land oftener than every third or fourth year, as it seems a very exhausting crop.

24. In illustration of these views, and to facilitate their application, as well as for the convenience of easy reference, I have appended Meteorological Tables of several places. That for Madras, as being the one which most concerns us, is for every 10 days throughout the year, the others are monthly. The Madras one is for both temperature and rain, the others for one or other, as I could find them.

25. I have only further to add, that I can furnish seed to those requiring it for further experiment, having several thousand pounds available for the purpose. July and August being the time for sowing under both monsoons, there is still ample time for supplying it.

I have, &c.
(signed) *Robert Wight*, Surgeon,
Superintendent, Cotton Farms.

METEOROLOGICAL REGISTER for Madras, extracted from the Madras Almanac for 1848.

Date.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.	Th.	Rain.
1st to 10th	75.3	0.55	76.8	0.03	79.8	0.02	82.7	0.06	85.9	0.32	88.5	0.34	86.2	1.00	84.6	1.77	84.5	1.40	83.1	2.65	79.7	4.49	77.3	2.23
10th to 20th	75.5	0.53	77.8	0.00	80.7	0.11	83.7	0.08	86.8	0.11	88.4	0.49	85.1	1.21	84.6	1.51	83.4	1.25	82.0	2.43	78.8	50.9	76.1	1.80
20th to 30th	75.9	0.11	78.5	0.01	81.8	0.58	84.7	0.26	87.7	0.65	87.3	0.63	84.8	1.52	84.6	1.48	83.2	1.65	81.1	6.04	78.2	4.55	75.7	0.58
Mean -	75.5	1.19	77.7	.4	80.8	.71	83.7	.40	86.8	1.8	87.70	1.46	85.3	3.73	84.6	4.76	83.7	4.00	82.02	11.12	78.9	14.13	76.3	4.61
Maximum	86.0	-	87.0	-	90.2	-	94.7	-	99.2	-	98.2	-	95.2	-	92.4	-	92.9	-	91.5	-	87.0	-	84.0	-
Minimum	65.0	-	66.0	-	69.7	-	75.4	-	78.5	-	79.4	-	73.5	-	73.4	-	72.3	-	70.6	-	67.6	-	65.8	-

REGISTER of Monthly Mean Temperature for the following Cotton-growing Districts.

	Lat. N.	Long. W.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mean of Year.
New Orleans, Louisiana	29.58	90.7	56.75	58.39	66.58	72.41	77.26	81.18	82.22	82.12	79.42	69.71	58.71	52.26	69.80
Houston, Texas	31.54	95.58	65.2	60.5	68.7	72.7	85.5	80.1	84.2	81.4	83.5	72.3	62.3	60.0	73.03
St. Augustine, Florida	29.50	81.27	60.73	64.97	67.55	70.06	76.89	81.41	82.81	82.67	80.16	73.83	63.55	60.92	72.13
Savannah, Georgia	32.5	81.10	52.15	53.74	61.19	67.36	73.14	77.89	82.23	82.09	75.90	66.92	57.20	50.50	66.70
Columbia, Carolina	34.0	80.58	37.7	42.9	47.3	62.2	67.3	72.4	76.1	76.5	66.3	53.2	43.7	39.5	57.09
Madras - { 10 A.M. } { 10 P.M. }	13.4	80.14	{ 78.9 } { 75.5 }	80.6 77.0	84.3 80.7	87.2 83.7	90.3 86.1	89.7 86.3	87.0 85.0	86.1 84.3	86.0 83.5	84.2 81.7	80.6 77.8	79.1 76.2	-

MONTHLY REGISTER of Rain.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Florida	1.82	1.34	1.98	1.09	6.34		2.84	3.30	4.35	3.33	1.49	1.13	
Madras mean of 22 years	1.33	0.23	0.36	0.63	1.03	2.03	3.20	5.24	4.76	10.09	12.43	3.25	Between 1822 and 1843, both inclusive.
Trevandrum, 4 years	.40	.05	2.28	3.04	7.60	16.40	3.14	4.20	5.30	14.97	12.	1.90	
Calcutta mean of 7 years	0.50	0.25	1.18	3.37	5.08	11.46	12.14	16.23	7.70	4.94	0.18	0.81	
Coimbatore, 7 years	1.33	.03	1.22	2.50	2.15	.85	.18	.11	.81	6.32	3.0	2.46	

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1586 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

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SUPPLEMENT to Circular; dated 20th March 1849.

To

Sir,
Dated Coimbatore, Cotton Experiment Office, 13th May 1852.
1. SINCE I had the honour of publishing my circular under date 20th March 1849, circumstances have occurred, in connexion with the experiment for the introduction and naturalisation of the American cotton plant in India, which throw some additional light on the subject, and tend to impart greater confidence to the ryot who has the courage to plant his field with the comparatively little known exotic, in preference to the old established native plant.

2. During the first four or five years of the existence of the farms in Coimbatore, experiments to ascertain the comparative advantages attending the cultivation of the two plants were annually made, and invariably ended in favour of the exotic. But still the native lookers-on would not be persuaded to believe our report, at least to the extent of satisfying themselves by a repetition of our trials; they would not in short see the matter in the same light that we did. The case is now altered; the objectors have at length made the experiment, and are becoming convinced by their own experience of the truth of what we have so long laboured in vain to satisfy them, viz., that the exotic is a less precarious and more profitable crop than the native cotton.

3. Within the last two years the farms have ceased to operate practically, and the cultivation of American cotton has passed into the hands of the ryots. In the course of that brief period the quantity grown by them has augmented from about 10 to upwards of 100 bales, and doubtless if they only find a steady demand for this article they can and will, indefinitely, enlarge the amount. It is to be hoped, therefore, that the demand will continue and increase until the staple has acquired an understood market value, and become one of the established products of the country. This is all the encouragement, at least in Coimbatore, it now requires, and it is to be hoped it will not be withheld.

4. Last season (1850-51) was not a peculiarly favourable one for either kind, but those who cultivated both found the American gave them, acre for acre, heavier, and altogether more profitable returns. Thus encouraged, they repeated the experiment this one (1851-52), which has been one of the most unfavourable seasons for cotton growing experienced for several years, and with more marked success. Two nearly adjoining fields, similarly cultivated and sown at the same time with the exotic and native seed, have respectively from equal areas produced 1,250 and 500 lbs. of seed cotton—the one (exotic) worth in the present state of the market 50 rupees, and the other about 15 rupees. The former is still in full vigour, and will, in the course of two months, give another, and I expect much larger crop (there has been much rain of late), while the native plant is quite done, and the land cleared for a new rotation. In this instance the native cotton was sown on highly assessed black land, the American on red sandy soil. The preceding season both kinds were sown on black soil, and the proceeds were so far in favour of the American plant, that I am told 50 rupees were received for the crop of a field, which under native cotton would not have realised 20. Under these circumstances I trust I am not drawing too strong an inference in assuming, that, had equal areas, all over the district, been annually cropped with these two kinds of cotton, the average out-turn, as regards both weight and value, would have greatly preponderated in favour of the exotic: an inference supported alike by the many comparative trials on the Government farms, and by the experience acquired, on a very large scale, in Dharwar, where the exotic cotton is rapidly supplanting the indigenous, and, it is to be hoped, soon will altogether drive it out of cultivation, seeing that one use to which it is now applied is the adulteration, so far as that can be accomplished, of the American staple.

5. I pointed out in my former circular that the supposed excessive heat of our climate, at first assigned as the principal cause of failure in this portion of India, had no existence; on the contrary, that the mean temperature of the Carnatic during the latter months of the year, our cotton cultivating season was actually lower than that of the cotton-growing provinces of America. This I illustrated by the following table, which, to save the trouble of reference, I repeat here.

TABLE of Monthly Mean Temperature during the Cotton-growing Seasons in Vera Cruz, Mississippi, and the Carnatic.

	April.	May.	June.	July.	August.	September.	October.	November.	December.
Vera Cruz - - -	77.18	80.42	81.86	81.50	82.40	80.96	78.44	75.38	71.6
Mobile - - -	70 00	76.36	82.17	82.41	82.73	78.94	69.97	61.50	55.50
Natchez - - -	69 93	72.72	80.62	81.78	80.13	74.99	64.58	55.23	49.09
Madras - - -	August. 84 6	September. 83.7	October. 82 2	November. 78.9	December. 76.3	January. 75.5	February. 77.7	March. 80.8	April. 83.7

It was next asserted that the dryness of the climate was the cause of failure, and that therefore the American plant could not be successfully cultivated except in those portions of India which partook of both monsoons. This I met by reference to trials made here, showing

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showing that if sown during the prevalence of the south-west monsoon, the crop was liable to be seriously injured by the rains of the north-east one; but if taking advantage of the occasional falls of rain in August and September, the sowing was completed in the course of these two months, that then the growing season was prolonged to the end of the north-east monsoon, and the harvesting of the crop commenced in January, and usually continued until arrested by the rains of April and May, which we had generally observed produced a second crop in June and July. This is illustrated by the following Rain Table of Florida and Madras:—

	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Florida	1.09	6.34	2.39	2.84	3.50	4.35	3.33	1.40	1.13	26.26
Madras	August. 5.24	September. 4.76	October. 10.	November. 12.42	December. 3.25	January. 1.33	February. 0.23	March. 0.36	April. 0.63	33.22

6. These tables prove that, in the Carnatic at least, neither excessive heat nor excessive drought can with justice be assigned as the causes of failure, if indeed we are entitled to make use of the term with reference to the numerous experimental trials which have been instituted in different parts of the country.

7. The propriety of the term "failure" I am not prepared to admit in so far as it originates in comparing dissimilar things. We have assumed that we have failed, because our crops have generally fallen short of those realised in the most fertile tracts of America, possessing both a rich soil and a genial climate. Had we, with greater justice, compared them with those obtained from the indigenous plant, growing in its native soil and climate, we should, I am convinced, have arrived at a different conclusion.

8. The season of 1851-52 was in this district a peculiar one. In the immediate neighbourhood of Coimbatore there was not a shower during the months of August, September, or October. In November there were a few days' rain during which both native and American cottons were sown. The American cotton has in one instance yielded at the rate of two to one, and in another in the proportion of five to two. In both the crops were miserably small; in the case of the American, under 60 lbs. per acre, and of the native, about 22, or, to be more precise, two fields, each of 22 acres, yielded respectively 500 lbs. of native, and 1,250 lbs. of American seed cotton.

9. Another portion of the district, the south-western talooks, was more fortunate; there they had rains in August, of which they took advantage to sow American cotton: subsequently they had a scanty north-east monsoon in November, the same as at Coimbatore. The crops in that quarter were, in some of the more fertile lands, as high as 400 lbs., and 250 per acre will probably fairly represent the average. The out-turn in these talooks of the native cotton has not been so accurately ascertained, but is reported much below the average standard, because as the growers said, they waited according to custom for the monsoon, which was a bad one, i.e., fell greatly below the average. Had the usual rains fallen here in August or September, or had the monsoon extended over December, the indigenous crops would have reached the average weight, ranging according to the fertility of the soil, from 150 to 250 lbs. per acre. The latter is always looked upon as a full crop of native cotton; while from 350 to 500 is by no means unusual in the case of American in the richer sandy loams.

10. These two examples were entirely under native management; the only departure from their own habitual system of culture being the adoption, in the case of the exotic, of drills in place of broadcast sowing, and to this method they now seem to give the preference on principle, as they are thereby enabled to plough and "cool" the land between the rows, thus placing it in better condition for the succeeding grain crops, while it improves the cotton one.

11. If the weather is favourable for the operation, it may be repeated twice or even three times, and, on the principle of increasing the fertility of the land, proves very beneficial to both the crop on the ground and that which is to follow—very few plants are injured by it, as the roots penetrate deeply, and are not in the way of the plough, while any plant trodden down by the bullocks, the roots being uninjured, soon recovers.

12. The first hoeing is a most important operation, and should never be delayed beyond the appearance of the third proper leaf, not counting the two seed leaves. Superfluous plants should at the same time be thinned out, so as to give those that are left ample room to spread and fill the ground. In a month or two, when the flowers begin to open, a second hoeing is wanted to clean the ground, otherwise it gets foul and weeds choke the plants. This is the native practice, so that they may be safely left to cultivate in their own way. In the course of this interval is the time for ploughing between the rows, but is not restricted to that period, for, if the plants are not too large, I have often repeated it with evident benefit when the first of the crop was coming to maturity, or even when picking cotton.

13. From three and a half to four feet between the rows I consider a good medium distance, as it allows of the free use of the plough. I formerly thought they might be closer, but now, I think,

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I think, that, even in indifferent soils, heavier crops are thus obtained than from closer sowing. This may, perhaps, appear paradoxical, but still I believe it is the case, as the fruit sets and ripens better, and fewer flowers blight and drop off unproductive.

14. On the subject of irrigation I have no further experience, and can add nothing to what I have already said on the subject, but my impression is, that it will be found to answer best in sandy soil, that does not cake on the surface after the absorption of the water.

15. Since the date of my last circular the experiment for the naturalisation of the American cotton plant has been extended to a new locality, namely, to the sandy soil along the sea, coast, and so far as the trials have yet gone promise to succeed far beyond what I should, *à priori*, have anticipated.

16. This branch of the experiment originated with David Lees of Manchester, at Trichendore, and is now being carried out there on a large scale by his relative, Mr. Arthur Lees, and by two Messrs. Longshaws (brothers); and at Madras by Mr. Kenrick. Several other gentlemen at Tuticorin also tried it to a moderate extent, but have since, in a great measure, relinquished it, owing to their success falling much below what Mr. D. Lees led them to anticipate.

17. Judging from what I saw, I feel disposed to think favourably of the locality, so favourably, that I already begin to anticipate that these coast soils, bad as they seem, will yet be found, under good management, to hold about the same relative position to the American plant that the black cotton soils do to the Indian one. This, however, so far as Mr. D. Lees' operations extended, they can scarcely be said to have enjoyed, for though, as cultivator, he was full of zeal, he wanted experience; and, being misled by appearances, his sanguine mind induced him greatly to over-estimate the probabilities of success, so much so, that in a letter of his, read to the Commercial Association of Manchester, and published in their proceedings, he gives it as his deliberate opinion that these sandy soils will, when "rightly cultivated," produce "many times" 112 lbs. of clean cotton per acre. Perhaps he forgot at the time of writing, that 112 lbs. of clean cotton is the equivalent of nearly 380 lbs. of seed cotton. I do not advert to this circumstance in either an unfriendly or invidious spirit, but simply to guard myself against the charge of having tacitly admitted the correctness of his views by passing over in silence this most exaggerated estimate of the capabilities of these soils.

18. My own opinion is, that his management was not skilful, but I go further and say, that if, under the best management, 300 lbs. per acre are on an average obtained from the fields I visited, it is a heavy crop; and that cotton on the lands in question will, in that case, prove the most remunerating poonjay or dry crop grown in India, both because of the largeness of the crop, and the collateral advantages derived from easy and cheap cultivation and unexpensive transit to the port of exportation.

19. These light sandy soils can be cultivated at all seasons and in nearly all states of the weather, whether wet or dry; they offer no impediment to either the hoe or plough. It is not so with those in the interior, which a single week of warm dry weather often renders too hard to be worked by either. A small farming establishment therefore suffices for the one, while a large one, competent to do much work in a short time, is required for the other. I have never cultivated such land, and may be mistaken, but my impression is, that I could cultivate as much coast land with five pairs of cattle as I could, such as I have been accustomed to, with 15 or perhaps even 20 pairs, and do it better. This is a matter of much consideration, for, in the former case, the land can always be kept ready for the reception of seed, and a single shower, not enough to soften the surface, here would then moisten it sufficiently for sowing. Here heavy rains are required adequately to soften the ground for the plough, and often before the ploughing can, with every exertion, be completed, the land has become too dry for sowing, while the success or comparative failure of the crop may depend on the seed being got into the ground at that time. On the coast half an inch of rain will often prove of greater service to the farmer than an inch and half, or perhaps even two inches in the interior.

20. On the coast, the course to be followed in the cultivation of American cotton is the same as in the interior. The soil requires to be well ploughed, the deeper the better, and as much as possible freed from weeds, and if uneven, its inequalities reduced. The sowing should, when practicable, be completed between the middle of August and beginning of October, in which case the plants will be sufficiently advanced to derive the fullest advantage from the November rain.

21. In sowing the seed may be either thinly dropped in light furrows about two inches deep, and covered in with a harrow or a hurdle drawn over the ground, or, if thought preferable, it may be sown in holes. In no case should the depth exceed two inches, but if it is simply covered, that is enough. If the soil is moderately humid and the seed good it begins to show itself about the fourth or fifth day, at which time the roots are from three to four inches long.

22. When the second or third proper leaf has appeared it is the proper time for hoeing and thinning. This important operation should not be delayed, for otherwise the plant is apt to receive a check in its growth, from which it does not readily recover, and, unless the weather and soil are very favourable, may be permanently dwarfed and proportionably less prolific.

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prolific. Nearly all the recently sown fields I saw were suffering from want of early hoeing, a large proportion of the plants not having advanced beyond the hoeing stage, though others, sown at the same time, which had continued to grow, were already coming into flower.

23. Mr. Lees, in the letter above referred to, indicates two sowing seasons, namely, April and November. So far as my experience here and the rain table above enable me to offer an opinion, I cannot approve of either. April is too early, November too late. If sown in April the plant is exposed to the risk of receiving a severe check from the land winds in June and July, and if it survives them uninjured it is in full harvest in September, October, and November, the three most dark and rainy months of the year; bright clear weather being of all things most desirable for harvesting cotton. If, again, it be sown in November it is too late, as the rains of the season usually end in the course of that month, and its proper growing season is shortened for want of rain. And then, again, the crop, when at its best, is exposed to wet weather in April and May, all of which risks are avoided by sowing, when the weather will permit, in August or September. But in this, as regards coast cultivation, in which I have had no experience, it may turn out I am in error. Experience is wanted on this point.

24. My attention was directed to the beneficial effect of shelter, as indicated by the great luxuriance of the plants under the lee of hedges and enclosures. At Trichendore and Tuticorin, during one portion of the year the wind is strong from the sea, south-easterly; at another it is very strong from the land, and both are more or less injurious. I therefore took the liberty of suggesting that the fields should be intersected, at intervals of about 20 or 30 yards, with rows of the castor oil plant, which I observed growing with great luxuriance quite unaffected by the winds, and apparently not at all injurious to the cotton which was growing beside. I mention this, as similar protection may be required in other places as well as at Trichendore; and as the oil plant bears freely, and the produce finds a ready sale, its introduction may serve a double purpose.

I have, &c.
(signed) Robert Wight,
Superintendent, Cotton Experiments.

EXTRACT from an Extract from the Proceedings of the Board of Revenue, No. 790;
dated the 3d March 1858.

Para. 14. As regards the effect of artificial irrigation on the cotton plant, the Board gather from the letters of Dr. Cleghorn and Mr. McIvor, that artificial irrigation may be applied with benefit to the cotton plant under careful supervision, but that it is fatal to it if indiscreetly used. The remarks of Dr. Cleghorn and Mr. McIvor have reference, the Board believe, not to the indigenous cotton of India, but to the foreign varieties which it has been sought to introduce from time to time, though they are also doubtless generally applicable to the former. From the information supplied by Mr. McIvor it is clear, the Board think, that in heavy soils the plant would not flourish under irrigation even of the most careful kind, while in sand and light red soils it might be much benefited. At present the cotton crops of the country are raised, the Board believe, without any attempt to improve the plant by irrigation.

(signed) G. S. Forbes,
Secretary to the Board of Revenue.

EXTRACT from the Minutes of Consultation, No. 926; dated the 15th May 1858.

Para. 15. It only remains to notice the replies received regarding the advisability of irrigating cotton. Of the authorities applied to for information by the Board of Revenue, replies have been received from two only, Dr. Cleghorn, the Conservator of Forests, and Mr. McIvor, the Superintendent of the Government gardens at Ootacamund. The remarks of those two officers have reference, the Board think, not to the indigenous cotton of India, but to the foreign varieties which it has been sought to introduce from time to time, though they are doubtless generally applicable to the former. From those remarks it appears, that artificial irrigation may be applied with benefit to the cotton plant under careful supervision; but that it is fatal to it if indiscreetly used, and Mr. McIvor's letter leads to the conclusion that in heavy soils the plant would not flourish under irrigation even of the most careful kind, while in sand and light red soils it might be much benefited. Irrigation is not used at present in cotton cultivation, and on referring to a letter from the Collector of Madura, inclosed in the Board's proceedings of 3d March, the Government observe, that in the opinion of some experienced native agriculturists of that district, irrigation is decidedly injurious to the cotton plant. The Government will be glad of replies from the two societies noted in the margin,* in order that full information on this question may be transmitted to England.

* Madras Chamber of Commerce, and Trade Association.

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England. The Board will also be good enough to request the Collector of Bellary to report the views of the principal cotton producers in his district, on the subject of the irrigation of the plant. The Government will look for a reply to this call at an early date.

(signed) *W. H. Bayley,*
Acting-Secretary to Government.

From *John Vans Agnew, Esq.,* Chairman of the Chamber of Commerce, to *G. S. Forbes, Esq.,* Secretary Board of Revenue, Fort St. George; dated the 22d June 1858.

I HAVE the honour, by desire of the Chamber of Commerce, to acknowledge receipt of extracts from the proceedings of the Board of Revenue, under date of 12th November and 27th May last, on the question of allowing private companies to undertake directly remunerative public works, such as those of irrigation and navigation, and as regards the effects of artificial irrigation on the cotton crop, upon which latter subject the opinion of the Chamber is sought for at the request of Government.

The Chamber cannot do better than give the observations of one of their body, who has made experiments with both foreign and indigenous cotton.

In regard to irrigating the cotton plant I may state, that from some pretty extensive experiments I made in the Tinnevely district in 1848, water applied to the roots only benefits the plants grown from New Orleans seed. This must only be done in very dry weather and to a moderate extent, otherwise the plant runs into leaves and the pods become discoloured. The indigenous cotton will not stand water at the roots, either in the black or red soils. The New Orleans seed I allude to was sent to me by Dr. Wight of Coimbatore, and the surface sown was from 5 to 700 acres. Much was written and said at this time about the dryness of the climate affecting the growth of the plants. The difference of quality between American and Indian cotton was attributed to this cause; in order to test the accuracy of this, I caused experiments to be made on both wet and dry soils. The results indicated rather the poverty of the soil as a cause of the difference between American and Indian cotton than the absence of moisture. Irrigation would, therefore, I think, be thrown away upon the cultivation of the cotton plant in India.

From *C. Pelly, Esq.,* Collector of Bellary, to *G. S. Forbes, Esq.,* Secretary to the Board of Revenue, Fort St. George, No. 119, dated the 6th July 1858.

I HAVE the honour to acknowledge the receipt of extract from the proceedings of the Board of Revenue, under date the 27th May last, No. 1882, communicating copies of extract minutes consultation, dated 15th idem, No. 926, and of the Board's proceedings of the 3d March, also copy of Mr. McIvor's letter of December last, and directing me to report the views of the principal cotton producers of this district on the effect of artificial irrigation on the cotton crop.

2. The cotton grown throughout this district is the white cotton, and all of one kind, and is chiefly raised in black or regur lands. The principal regur land talook in this district is Gollem. Some of the cotton producers of this talook were present at the Hoozoor when this report was preparing, and the process of Mr. McIvor's experiments was fully explained to them, and I beg to report the views obtained from them.

3. It is not customary to water cotton by artificial means, nor would the application of irrigation be beneficial for the crop sown in the regur or black land; but irrigation may perhaps be advantageous for the cotton grown in red land and sandy soils.

4. The extent of cotton cultivation in this district is shown below.

		Extent of Cultivation in Acres.	
Dry Land	In black or regur land	-	2,28,805
	Mixed or masub	-	20,677
	Red or lawl	-	11,022
	Irrigated land	-	2,60,504
			73
TOTAL		-	2,60,577

The black lands in this district generally retain their moisture at a depth of half a yard under the surface; when sufficient rain has fallen to soak the upper surface to a depth of half a yard, and so to connect it with the undermost soil, it is then considered that the land has received a sufficient supply, and seed is accordingly sown in the lands previously prepared for the purpose. Cotton is sown by itself or with corraloo; if sufficient rain has fallen by the month of August, it is sown mixed with corraloo, but if the rain sets in later, cotton is sown by itself about September. If the ground has been previously fully moistened,

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moistened, the crop is not dependent at all on any further fall of rain after sowing, but if it rains at any time within one month, no injurious effects will arise; a fall of rain after one month will injure the crop, and even if the weather is cloudy after that period, the crop will be less, and should it rain much, it will destroy the crop.

5. The cotton cultivators, for these reasons, are of opinion that artificial irrigation could not be successfully employed for the cotton crop raised in the black land, as it is not at all dependent on water after it is sown, but is rather injured if much rain falls.

6. It is not stated in what description of land the treatment, which proved successful under artificial irrigation, was tried by Mr. McIvor, the Superintendent of Government gardens, but probably not the regur or black lands. There is a great difference between the treatment detailed by Mr. McIvor and that pursued in this district. He states that "the seedling plants were reared in beds in an open and airy situation, and the plants were transplanted when about six inches high, in well-prepared ground, in rows six feet apart, and the plants the same distance apart, and alternate in the rows." But in this country, seeds are sown at once, the distance between each not being more than two or three inches; the distance between each row of cotton intermixed with corraloo does not exceed two feet; but when cotton is sown by itself, the rows are about half a yard apart from one another. If the land is overgrown with weeds and grass within one month after sowing, it is cleared by hand; after one and half or two months' growth, it is weeded with an implement called "junthaloo;" 10 or 12 days afterwards, it is again weeded. After it has been weeded twice, as above stated, no further labour is bestowed upon the plant, which by that time grows one foot high. The crop begins to flower in the 3d month, and it comes to maturity in the 4th month. Then the picking of cotton commences, and is completed by the end of the 5th month after sowing. The season for the growth of cotton crop is generally between August and December.

7. The extent of cotton cultivation, in mixed and red soils, does not exceed 32,000 acres. The crop generally produced in these soils will be about one quarter of the black land crop. The cotton grown in these soils is always used for consumption of the producers, and not for export or sale, and, therefore, it does not appear to call for special consideration.

8. On receipt of the Board's order, dated 12th November last, wherein I was called on to report the effects of artificial irrigation of cotton plants, I caused water to be applied in pots to a few plants which had previously been sown in the usual manner; but as it was not conducted in a regular process from the beginning, it was not possible to ascertain the effect, as the crop yielded as usual. It may be remarked that water is scarcely to be found in the black land districts to enable me to conduct a regular experiment; but I may be able with the aid of some ryots to select one or two suitable spots in the different descriptions of dry land, for conducting the experiment according to the treatment detailed by Mr. McIvor; and should I succeed, I will report the result of the same in due course for the information of the Board of Revenue.

9. Lieutenant Hutchinson, the Commissariat Officer at this station, has grown two species of American cotton in red land mixed with sand, I believe under the same treatment as is laid down in Mr. McIvor's letter; but it did not appear to have grown well, and produced a poor crop; but it will probably improve.

10. The value of artificial irrigation for raising cotton in the regur lands would, I think, be to give the land a moistening at the best time, should the rains fail then; but to do this effectually over such a vast area, would involve a very heavy expenditure, and it is from the above observations very questionable whether it would be successful.

From *H. Young*, Esq., Chief Secretary to the Government of Bombay, to
R. B. Chapman, Esq., Officiating Under Secretary to the Government of
India, No. 2070; dated 19 June 1858.

With reference to my letter, No. 4889, dated the 12th November last, I am directed to forward, for the information of the Government of India, the accompanying summary of replies to references made by this Government, to ascertain the correctness or otherwise of the opinion expressed by Mr. George Inverarity, the late Collector of Broach, relative to the injurious effects of artificial irrigation on the cotton crop; as also copy of a resolution passed by Government under this date, No. 2069.

2. The necessary communication has been made to the Honourable Court by this day's mail.

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SUMMARY.

WITH the Government Resolution, No. 4699, dated 31st October 1857, the two Revenue Commissioners were furnished with copy of a despatch from the Honourable Court, No. 13, dated 9th September 1857, forwarding copy of one addressed by them to the Government of India, in paragraph 13 of which, allusion was made to an opinion expressed by Mr. G. Inverarity, Collector of Broach, in a letter dated 11th June 1855, to the address of the Revenue Commissioner, Northern Division, as to the injurious effects of artificial irrigation on the cotton crop.

2. As directed by the Honourable Court, the Revenue Commissioners were instructed to obtain and submit to this Government, the judgment of such Collectors as were most conversant with the culture of cotton on Mr. Inverarity's opinion, and whether that opinion was correct to the extent to which he laid it down. These replies have now been received.

3. Mr. Goldfinch, Collector of Sholapoor, states that artificial irrigation is considered altogether unnecessary, if not injurious to the cotton plant, and that he has seen some New Orleans cotton planted in irrigated land as an experiment, that failed completely, though the plant thrived well in the same neighbourhood and on the same description of soil, without irrigation, so that, so far as his experience goes, artificial irrigation is injurious.

4. The Collector of Belgaon, Mr. Seton Karr, states that he does not remember ever to have seen cotton grown under irrigation. He observes that a good fall of rain is of course necessary for the land in the first instance, that is before the seed is put in, but that the time at which the sowing is made, viz., towards the commencement of the cold weather, or when the monsoon is nearly over, is a circumstance which seems sufficiently to indicate, that after the plant has sprung up and has attained a few inches of growth, moisture would be injurious.

5. Dr. Gibson, Conservator of Forests, states that he cannot from experience speak of the effect of irrigation on country cotton grown in black soil, but that he has seen moderate irrigation applied to the Barbadoes and the upland cotton grown in such land with good result. He intimates that he can readily have the matter put to the test of experiment in the ensuing rains, by raising half a beegah in the garden at Dapooree, where the soil is mostly second black, and comparing the produce as to staple and quality, with that of a similar extent of cultivation at Broach or Dharwar; Dr. Gibson adds—

"In the mean time, I may state my impression, which is this: that the regular irrigation may not be found well suited to country cotton, but that, if water be applied, as is done in the case of wheat and some other grains grown in stream-watered land, the effect on the staple would be beneficial.

"This application consists in flooding the fields containing the plant once or twice during its growth, viz.:

"In the event of the latter rains being scanty, such a submersion of the ground would be required once in November and again in January, while the boll is filling.

"In the event, however, of the rains being abundant in October and November, one watering only would be required, and that late in January.

"It is, I conceive, with this view that the tanks, described by the traveller Hove, as being common in the Broach districts between 1780 and 1785, must have been kept up.

"That traveller speaks of irrigation as being then the rule, but I conclude that he uses the term in the same sense as that which I have above expressed; as it must be obvious that a single tank of earth material, as these seem to have been, could not have afforded a supply of water at all adequate to the immense consumption of the element which regular irrigation in a cracky black soil must have caused."

6. The Collector of Ahmednuggur, Mr. Tytler, reports that although cotton is but little grown in that collectorate, all that he can hear fully bears out Mr. G. Inverarity's opinion as to the effect of irrigation on cotton crops.

7. Mr. Ogilvy, Collector of Dharwar, states that he does not find on inquiry, that irrigation is used for cotton in any part of that collectorate, and observes that this may be owing to the fact that the plant is invariably grown in black soil, which is rarely irrigated, and is not considered so suitable for the purpose as other kinds. Mr. Ogilvy intimates that Mr. Channing, late of the Dharwar cotton experiments, having tried irrigation on a small scale, the crop of cotton was increased both in quantity and quality, and that he has himself seen New Orleans and other kinds of cotton, successfully cultivated in a private garden, and in soil which would probably not be selected for the purpose by the native grower: remarking that it would thus appear that it has been determined by experiment, that cotton can, by judicious management, be irrigated with success, both in black and other soils.

8. Several ryots who have command of water have, Mr. Ogilvy states, promised to try the irrigation of New Orleans cotton to a limited extent in the ensuing season, in different descriptions of soil; and he observes that many natives in his collectorate grow in the small gardens attached to their houses a few plants, each of two descriptions of Deo Kuppas, which they water with the hand; that these plants grow into shrubs of some size, and are said to live for as many as ten years; and that he is not at present aware whether these varieties

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varieties are sufficiently valuable to be worth irrigating on a large scale, but he has sent some specimens to the cotton gin factory at Dharwar, with a view to determine the point.

9. The question appears to the Revenue Commissioner, Southern Division, never to have been fairly and fully tested, and he therefore submits that Dr. Gibson be requested to have the matter put to the test of experiment in the gardens at Dapooree, as suggested by him, and that Mr. Ogilvy be instructed to watch carefully, and report the result of the experiments which he states several ryots who have command of water have promised to try in the Dharwar collectorate in the ensuing season.

10. Mr. Hadow, Collector of Ahmedabad, forwards copy of a communication from the Superintendent of Cotton Experiments in his collectorate, and states that he inclines to Mr. Daley's views, that irrigation by occasional floodings at seasonable periods, would be likely to prove beneficial to the crop, both as regards quantity and quality. Mr. Daley states—“Mr. G. Inverarity's remarks relative to the deterioration of the growth and staple of the cotton crop by means of irrigation, apply, to a certain extent, to a cold heavy black alluvial soil, which retains water by its gelatinous property much longer than any description of soil; but even in this soil, when the pods are being formed on the cotton plants, the rain water having either evaporated or percolated to a depth of from two to four feet below the surface, I beg respectfully to state, that if the plants were watered at this period, the growth and staple of the cotton crop would in general be improved, instead of deteriorated. These occasional floodings, however, would entail too heavy a water rate to justify its adoption to the culture of cotton alone on such a soil.”

11. Mr. Gray, Acting Collector of Kaira, states that cotton is cultivated to a very small extent in this collectorate, and is seldom or never sown by itself, but is always intermixed with the ordinary dry-monsoon crops, and that he is enabled to state from inquiries which he has made, that the cotton produced in his collectorate is never artificially irrigated, and that if it were so, the young plant (as is supposed by those most experienced and best informed on the subject) would get rotten and fail to attain maturity. He observes—

“It appears that formerly, when Europe cloths were not in general use amongst the natives of Guzerat, a sort of vegetable wool called Narma, much superior to the cotton wool, used to be sometimes produced, and that very fine cloths were manufactured therefrom for the higher classes of native community. This Narma plant, unlike cotton, was irrigated, and the crops which Dr. Hove describes as having been seen by him at the beginning of page 42 of the printed account* of his travels in Guzerat, &c., in 1787-88, were most probably Narma (and not cotton) plantations, and this supposition is further strengthened by the fact, that he describes the colour of the plantations he saw as being yellow, which is the colour of the Narma plant above alluded to. Should this conjecture be deemed to account satisfactorily for the statement of an eminent traveller, made about 70 years ago, that at Amode in the Broach collectorate ‘the cotton plantations were watered from wells, &c. ;’ it would seem unnecessary to make further inquiries as to the probable effect of irrigation on the cotton crop, unless different or contrary opinions be entertained by persons of experience in its culture, in which case, experiments to a small extent in the Broach collectorate would, I should think, settle the question more correctly and expeditiously than the conflicting opinions of different officers consulted on the subject.”

* Bombay Government Records, New Series, No. XVI.

12. Mr. L. H. B. Tucker, Collector of Broach, observes that the belief appears to be universal among native cultivators, that to irrigate the ordinary indigenous annual when growing in the deep black soil which forms the great mass of the arable land of these districts, would be injurious rather than beneficial; and that a reference to the very interesting narrative of Dr. Hove's tour in Guzerat in A. D. 1787-88, for the purpose of inquiring into the system of cotton cultivation then existing, clearly shows that it was at that time the practice to water some sorts of cotton; but that the inference drawn by Dr. Gibson, in paragraph 8 of his preface to the tour, that as a general rule, two waterings were deemed essential to the proper development of the fruit, and the requisite length of fibre, is hardly, in Mr. Tucker's opinion, borne out by the details given in the work. He adds—

Selections from Bombay Records, No. XVI., New Series.

“The cotton to which Dr. Hove's attention was more particularly directed, was that species which yielded the long delicate fibre used in the manufacture of the filmy muslins for which India was in those days so famous. The plant which produced it was cultivated as a biennial, if not as a perennial, was generally raised in red or sandy soil, and undoubtedly required great care and a supply of water to ensure its yielding wool of the desired fineness. Its cultivation has been long extinct here, as the demand for it ceased, when the muslin weavers of India were, as a class, ruined by the manufactures of England. The more intelligent of the Broach cultivators admit, that cotton may have been irrigated in Dr. Hove's days, but maintain stoutly that the use of water was confined to the fine variety of cotton planted in red soil.

“I have never heard of the irrigation of indigenous cotton in the black soil, though I have seen it growing chance-sown by watercourses, and have been struck by its increased size and luxuriance, and the universal presence of insects in the bolls. It would appear to be irrigated in the Punjab and in Sind, but as explained by Mr. Inverarity, the rich alluvial soil on the banks of the Indus and its tributaries, differs altogether from the black cotton soil of Guzerat. Wherever, however, irrigation has been had recourse to with the exotic varieties, it would seem to have been attended with success, and I cannot help thinking

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thinking that were it fairly tried with indigenous species, the prejudice against it, which is by no means confined to the Broach district, might prove to be as unfounded as was the belief entertained by the ryots of the Southern Mahratta country on the first introduction of the American saw gins, that their cattle would not eat the seeds of cotton which had been cleaned by the gin."

13. Mr. G. Inverarity, who is now Collector of Surat, after referring to the remarks made by him as Collector of Broach, and which led to the present calls, states that there is further strong *prima facie* evidence of the fact stated by him, that irrigation is injurious to the cotton crop, in the circumstance that cotton is never found grown upon land subordinate to wells, even where the assessment is light, which would scarcely be the case were the growth in such a position found to be a favourable one. He observes that he is aware that the facts stated by him are in entire opposition to what is published by Dr. Hove, who indicates very extensive means to have existed in those days for the irrigation of the cotton plant, but that it is very strange that no remains exist of the works which must have been used for such a purpose, and that the system of cotton cultivation adopted at the close of the last century should have been so soon lost to the people of Guzerat, the more so being of a nation who are slower than any in abandoning customs or prejudices. Mr. Inverarity intimates that he had frequent opportunities of conversing with Mr. Landon at Broach on the subject, and that he quite agreed with him on the unfitness of cotton for irrigation, and considered that Dr. Hove must have been greatly misled by his inexperience of the people and the country, before he could have recorded the result of his observations in so erroneous a manner.

14. Mr. Mansfield, Collector of Khandeish, intimates that it is not the practice to use irrigation in the cultivation of cotton in Khandeish, and that there is no tradition among the people of its ever having existed. He observes that in the western districts of Khandeish, there are a large number of irrigational works, and that a considerable area of land is under irrigation, in which sugar-cane, rice, wheat, grain, and different kinds of vegetables are grown, but never cotton, notwithstanding its value in the market is much greater than any of the above products, excepting sugar-cane and rice.

15. The Revenue Commissioner, Northern Division, states that the purport of Dr. Hove's account of the cultivation of cotton by irrigation, attracted his notice when the book was first published, and as the following season his tour comprehended a great portion of the ground that Dr. Hove mentioned, he made frequent inquiries on the subject, and found that the people, almost without exception, ignored the idea of watering cotton, and mostly had never heard of such a thing. The explanation given by Messrs. Gray and Tucker, appears to Mr. Fawcett to be the probable solution of the matter, and he observes that irrigation was probably confined to some particular kind grown in the sandy soil, which commences near Ahmodee, and prevails generally to the northward of that place.

(signed) H. Young,
Chief Secretary to Government.

Territorial Department, Revenue.—No. 2069; dated Bombay Castle, 19th June 1858.

Copy of the resolution passed by Government on letters from the two Revenue Commissioners, noted in the margin.*

It is certain from the reports now received, that agricultural practice under this Presidency is opposed to the irrigation of cotton crops, and the general belief is, that with the indigenous variety, at all events, irrigation would be injurious.

2. It seems probable, nevertheless, that the flooding of the land once or twice during the growth of the crop, would improve the produce both in quantity and quality. Dr. Gibson should be instructed to carry out the experiment suggested by him at Dapooree, with the view of testing this point, and Government are of opinion that it would be well, for the purpose of comparison, to plant an adjoining half beegah also with cotton, and to leave it unirrigated. The produce grown upon these two half beegahs would be a fairer test of the effect of irrigation, than the comparison between the produce of the irrigated half beegah at Dapooree, with that of the unirrigated black soil of Broach and Dharwar. The Collectors of Surat and Broach should also be requested to make the same experiment during the ensuing season.

3. If not very inconvenient, the experiment should be tried on different soils (both red and black), in each of the cotton growing collectorates, a beegah of each divided, as proposed above, into half beegahs; Government paying the ryots, whenever necessary, the cost of the experiment, or such compensation as may be deemed just.

4. The

* Letter from the Revenue Commissioner, Southern Division, No. 3609, dated the 17th December 1857; Ditto from the Revenue Commissioner, Northern Division, No. 770, dated the 28th April 1858.

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4. The Collectors and Dr. Gibson to be requested to give the experiment, now ordered, a very careful trial. In the meantime the accompanying summary of the replies given by the officers to whom the subject was referred, may be forwarded to the Government of India, in reply to their letter, No. 1753, of the 31st October last, and to the honourable Court, with reference to its despatch, No. 9, of 1857.

(signed) *H. Young,*
Chief Secretary to Government.

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No. 1426.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council, in the Foreign Department, under date the 9th April 1858.

From Lieutenant-Colonel *Cuthbert Davidson*, Resident at Hyderabad, to *C. Beadon*, Esq., Officiating Secretary to the Government of India, Foreign Department, No. 57; dated Hyderabad, the 24th March 1858.

I HAVE the honour to acknowledge the receipt of your office circular No. 4826, dated the 2d December last, forwarding an extract from a despatch from the honourable the Court of Directors, relative to the injurious effects of artificial irrigation on cotton crops, and requesting to be furnished with the views of such persons in Hyderabad as are most conversant with the culture of the plant with reference to the above opinion.

2. Having referred the matter to the Commissioner of the Hyderabad assigned districts, I have the honour to submit the reports received by him from the local officers on the subject. Enclosure No. 1.

From *F. N. Maltby*, Esq., Commissioner, Hyderabad Assigned Territories, to Captain *A. R. Thornhill*, First Assistant Resident, Hyderabad, No. 462; dated Camp Kamgaon, the 15th March 1858.

WITH reference to circular letter No. 4826, from the Secretary to the Government of India to the address of the Resident, under date the 2d December last, relative to the effect of artificial irrigation on cotton crops, I have the honour to forward the reports received from the Deputy Commissioner of these districts on the subject.

I do not think any just conclusion can be come to, without a fair experiment being made.

From Captain *Meadows Taylor*, Deputy Commissioner, North Berar, to *F. N. Maltby*, Esq., Commissioner, Hyderabad Assigned Districts, No. 34; dated Camp Hewarkheir, the 25th January 1858.

IN reference to your circular letter of the 20th December, as per margin, I have the honour to report as follows, in regard to the effect of irrigation of cotton.

No. 158.
Enclosing copy of despatch from Secretary to Government, Foreign Department, No. 4826, of 2d ultimo, with regard to effect of irrigation of cotton.

2. I am of opinion with Mr. Inverarity, that irrigation of the plant on deep black soil would prove injurious both to fibre and produce. The black or "regur" soil, on which cotton is almost invariably sown, is very deep and retentive of moisture, and though the surface appears dry, and no doubt is so to the extent of a few inches as far as the plough or hoe has disturbed it, yet the sub-soil, after proper monsoons, always retains moisture, not only beyond the time at which the cotton ripens, but for the whole of the hot weather. The roots of cotton strike very deep, and in specimens lately prepared for America, I have found them as long as eight feet for the tap root; and usually from two feet as a minimum, to three and four feet; the lateral roots also having a tendency to dip lower as the moisture recedes from the surface. In all cases the roots were within sufficient moisture for the nourishment of the plant.

3. Again, a certain amount of dryness in the soil is apparently needed to bring the fibre to perfection, and to cause the bolls to open. The provision of nature seems adequate for the plant, without artificial means, in this deep soil; for it is observable that the whole growth of the plant, and, for the most part, its buds, flowers, and green bolls are produced while the sub-soil is wet; and that as it dries, the stem hardens, the bolls become hard and ripen, and the cotton bursts forth. It would not be so, I think, if the ground continued wet; the plant would perhaps be stimulated to put forth more green shoots, and possibly, more flowers, but the ripening effects of the gradual drying of the soil would be lost.

4. In the Sholapore country, where cotton is abundantly cultivated, the year 1848-49 was a very wet one. The monsoon continued late, and at the period at which cotton begins to ripen, February and March, there were heavy rains. The consequence was, that the ground never dried sufficiently for ripening the plant; the bolls remained green, and did not open generally, and of what did open, the cotton was soft, flaccid, and hardly worth gathering; the bolls also were filled with insects. If irrigation, therefore, were employed, and the ground kept wet, I consider it would have a similar effect, at least on indigenous short-stapled cotton.

5. When I was at Sholapore I made many trials of exotic cotton seed of various kinds, with and without irrigation. The seed was New Orleans, Sea Island, and Hybrid varieties. The New Orleans plant, when watered, did not appear to answer; the leaves were curled and the bolls soft, and the fibre weak; when sown in unirrigated land, at a proper season, the plant grew remarkably well, and the cotton, cleaned with a saw gin, was very favourably reported on in Glasgow, where it was sent, the value being given at 5.2*d.* per lb., a price then largely in advance of Guzerat or Berar cotton. Sea Island cotton, I found, succeeded best upon reddish sandy soil; it was irrigated partially, that is, if I now think aright, it had three waterings. This cotton reached a great height, and as the plants were thinned the lateral branches spread out, covered with flowers and bolls weighing them to the ground; the produce was also very large, and was ginned and sent to Glasgow with the New Orleans, and valued at 10½*d.* to 11½*d.* per lb. It was objected to only on one ground, that the fibre, though long and silky, was weaker than the real Sea Island cotton, and I attributed this to the irrigation. The plants were cut down after the cotton was ripe, and after being ploughed between the rows, were allowed to rest; during the monsoon the plants put out new stems and branches, and the growth was surprisingly great and luxuriant, even surpassing the first year. Irrigation was freely continued, I must say, against the advice of the natives, who saw and were interested in my experiments; and the result was that the bolls were very small, imperfect, and remained green and soft; they did not, for the most part, ripen and open, or only partially so, and were perforated by insects, which destroyed the fibre. From this I assumed that partial irrigation of the Sea Island cotton was advantageous, but that continued irrigation of the soil was injurious.

6. A small portion of New Orleans seed was sown at Akote this year, too late for the full effect of the monsoon. It was being irrigated; but it was evident that the plant was not much benefited by it. The leaves were curled, and in December last it did not appear to me thriving. I shall, however, have an opportunity of seeing it again, and will report on its condition.

7. Though, as I have above stated, I should consider irrigation unnecessary, and indeed hurtful in deep black soils, like the majority of Guzerat and Berar, yet there is a good deal of shallow and stony soil in Berar, and generally in the Deccan, to which one or two waterings could be applied with advantage. It is evident, from the growth of the plant up to October, or as long as there is general moisture, that what is sown on deep soil and on shallow or stony soil is pretty equal in growth; but after that, while the roots of plants in deep soil strike down to the subsoil moisture, and progress in height and lateral extent, those on the other soils stop short, lacking moisture, and assume that stunted withered appearance which is often seen, the plant being not more than eighteen inches or two feet high; while in deep soil it is ordinarily from five to six feet, and upwards. I therefore consider, both on my own experience with exotic seed, and on the ordinary

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ordinary results in shallow, stony, or sandy soils, that irrigation to a certain extent, say two or at most three waterings, according to season, between the end of October and 15th December, would be found advantageous to the growth of the plant. After that, that would be hurtful to any kind of seed or any kind of soil.

8. In any case, however, irrigation would, I think, reduce the crispness of the fibre, though it might increase its length, and on shallow basalt soils, where the fibre is naturally very short and very harsh, it might thus improve it. On other soils it would decidedly injure it, and also the plant itself; keeping the bolls green, stimulating it too much to green shoots and flowers, retarding the ripening of the cotton, and possibly exposing it to the attacks of insects.

9. I have been daily in communication with great numbers of practical cotton farmers since the receipt of your letter, and have asked their opinion on the subject of irrigation freely. They all agree that it would be injurious to water fields which have sufficient subsoil moisture; but that on dry shallow soils one watering or two might be of use. They have never employed irrigation themselves; and all agree in stating, that when the ground is too wet from a late monsoon, both the rate of produce and the staple of the cotton are much injured in Berar.

10. It would be interesting, with a view of practically testing this subject, to make experiments on the same kind of soil, part of the same field, of an acre of cotton of the indigenous kind, irrigated and unirrigated. The land should be ploughed, manured, and the cotton not irrigated sown, so as to be without the influence of moisture from the irrigated portion. The effect of result would then be evident in the yield of each acre and the quality of the cotton.

From *J. Allardyce*, Esq., Officiating Deputy Commissioner, South Berar, to *F. N. Maltby*, Esq., Commissioner, Hyderabad Assigned Territories, No. 35; dated Camp Jowlka, the 9th February 1858.

I HAVE the honour to acknowledge the receipt of your letter, No. and subject, as per margin.

Circular, No. 158.
Requests opinion relative to the artificial irrigation of cotton crops.

2. I have not met with any persons in this district who are conversant with the cultivation of cotton on irrigated lands, and from all inquiries I have made it does not appear that a trial has ever been given to the artificial irrigation of the plant; I am therefore unable to give any opinion upon the subject.

From Lieutenant *W. Cadell*, Assistant Commissioner in charge, Nuldroog Districts, to *F. N. Maltby*, Esq., Commissioner, Hyderabad Assigned Territories, No. 592; dated Camp Nuldroog, the 29th December 1857.

I HAVE the honour to acknowledge the receipt of your letter of the 21st instant.

Circular, No. 158.
Calling for opinion regarding the effects of irrigation on cotton.

2. There is very little cotton grown in this district, but it is invariably sown on dry land. Were artificial irrigation advantageous there is little doubt that we should find cotton among the garden products, as the crop is a very valuable one, and the people are good practical agriculturists.

From *R. N. Taylor*, Esq., Deputy Commissioner, Raichore Doab, to *F. N. Maltby*, Esq., Commissioner, Hyderabad Assigned Territories, Hingolee, No. 40; dated Camp Deodroog, the 11th February 1858.

I HAVE the honour to acknowledge the receipt of office memorandum, Financial No. 210 of 1858, requesting the expedition of reply to your letter, No. 2363 of 21st December 1857.

2. I conceive

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2. I conceive that Circular No. 158 of 1857, is alluded to, as no letter of the above No. was received with the cotton report referred to.

3. On the subject of the growth of cotton under irrigation I have had no personal experience, and regarding the different descriptions of staple produced I should be diffident in advancing my opinion.

4. The report upon an experiment by Mr. Viccajee, which I had lately the honour to submit, seemed to show distinctly that water certainly caused the plant to grow much larger, and to yield a far greater quantity of cotton; but whether the quantity of the latter deteriorates or not, I am unable to say; if not, there can be no doubt as to the good effects of irrigation, and I shall be happy to forward samples shortly of the same cotton grown on dry and wet lands, and the question of quality, I am sure, will be the only one requiring solution.

ORDERED, That a copy of the above despatch be sent to the Home Department, with reference to the office memorandum from that department, No. 2474; dated 25th November last.

(True extract.)

(signed) *R. B. Chapman,*
Officiating Under-Secretary to the Government of India.

No. 1803.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council, in the Foreign Department, under date the 11th May 1858.

From Lieut.-General Sir *M. Cubbon*, K.C.B., Commissioner for the Government of the Territories of his Highness the Rajah of Mysore, to *R. B. Chapman*, Esq., Officiating Under Secretary to the Government of India, No. 36; dated Nundydroog, the 25th April 1858.

I HAVE the honour to acknowledge the receipt of Mr. Edmonstone's letter, No. 4826, of the 2d December last, and in reply to state, for the information of the Government, that there are no persons in Mysore qualified to give a thoroughly reliable opinion as to the correctness or otherwise of Mr. G. Inverarity's views as to the injurious effects of artificial irrigation on cotton crops.

2. There is only one person in the Mysore country whose practical experience gives him any pretension to be considered an authority in the matter, and it is his opinion that the Bourbon is the only variety of cotton plant which derives benefit from artificial irrigation, and that of this the produce is not satisfactory.

3. It may not be out of place to remark, that although every encouragement has for years been given to the introduction of New Orleans, Sea Island and Bourbon cotton into the Mysore country, even to the extent of granting land rent-free for five years, the result has given no ground to hope that cotton cultivation will ever be carried to any extent worthy of notice, as every foreign variety has been proved to degenerate in length of staple, and the seed to be covered with down or fur. Little country cotton is grown, as it is found cheaper to import it from the Bellary and Southern Mahratta districts than to grow it internally for home consumption. In short, except in a few congenial localities, cotton cannot be profitably cultivated in the Mysore country. This is the general belief at present; but after all it may turn out to be unfounded, for in these days difficulties seem to vanish whenever real science is brought to bear on experience and experiment.

4. The

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1599

4. The specimens of cotton called for by the Honourable the Court of Directors, in their despatch of the 22d July 1857, are being collected, and will be forwarded in a few days. The delay has arisen from its being necessary to wait for the season when the plants are in a proper state to supply the specimens.

III.
Bomby.

ORDERED, that a copy of the above letter be sent to the Home Department, for information, with reference to the office memorandum from that department, dated 25th November last, No. 2474.

(True extract.)

(signed) *R. B. Chapman*,
Officiating Under Secretary to the Govt. of India.

No. 224.

EXTRACT from the Proceedings of the Right Honourable the Governor-General of India in Council, in the Foreign Department, under date the 15th January 1858.

From Major *A. Fytche*, Officiating Commissioner, Pegu and Martaban Provinces, to *G. F. Edmonstone*, Esq., Secretary to the Government of India, Foreign Department, No. 481, dated Moulmein, 21st December 1857.

WITH reference to your circular letter, No. 4826, of date the 2d instant, with its enclosures, I have the honour to report that irrigation is not employed in the culture of the cotton plant in these provinces.

2. The cultivation of cotton here is of very small extent, and what is grown is produced on the rich alluvial deposit of the mountain streams, or on the sides of hills, from which the jungle has been cleared and burnt, and the ground manured with its ashes, and on such rich soil a supply of water from artificial sources is not considered necessary.

3. I have inquired, from persons employed in the culture of cotton, whether they consider that irrigation would improve or otherwise the growth and staple of the plant; and they consider that its yield might be increased by irrigation, but not to a corresponding extent to justify an extra outlay on that account. They are not aware that irrigation would tend to weaken the fibre.

ORDERED, that a copy of the above letter be sent to the Home Department, for information, with reference to the extract received from thence, dated 25th November last, No. 2474.

(signed) *R. Simson*,
Officiating Under Secretary to the Govt. of India.

No. 2785.

EXTRACT from the Proceedings of the Honourable the President of the Council of India in Council, in the Foreign Department, under date the 13th August 1858.

From Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, to *Cecil Beadon*, Esq., Officiating Secretary to the Government of India, Foreign Department, No. 143, dated Rangoon, the 2d August 1858.

WITH reference to Mr. Secretary Edmonstone's despatch, No. 4826, dated the 2d December 1857, forwarding extract from a despatch from the Honourable the

the Court of Directors in the Revenue Department, dated 9th September 1857, together with copy of a letter from the Collector of Broach, relative to the injurious effects of artificial irrigation upon cotton crops, and instructing me to obtain and furnish the Government with the views of such persons in Pegu as are most conversant with the culture of the cotton plant, I have the honour to forward, for submission to the Honourable the President in Council, the accompanying copies of letters* from the Deputy Commissioners in the Province, and from the Superintendent of Forests, Pegu and Tenasserim.

2. The opinions of the above officers are briefly as follows :

In the districts of Rangoon and Bassein very little cotton is grown, but what is grown is said to be always upon a dry soil, and is never watered by artificial means. The Deputy Commissioner of Bassein, Captain Brown, from his former experience in the Tharawaddy district, adduces an instance in support of the theory, that cotton plants, watered by artificial means, are not so vigorous as those nourished only by rain-water.

3. The Deputy Commissioner of Prome states, that cotton is sown in his district generally in hill clearings, about the commencement of the periodical rains, and that artificial irrigation is never resorted to.

4. The Deputy Commissioner of Henzada states, that in his district the cotton is sown towards the end of the rains, generally on high ground, and that the plant is never watered.

5. The Deputy Commissioner of Tharawaddy states, that in his district the cotton plant is never irrigated.

6. The Deputy Commissioner of Tounghoo states, that the cotton grown in his district is of two kinds, one being confined to the plains, and the other to the hills, but that neither species is ever watered by artificial means. The cotton of the plains is planted in the damp soil of alluvial deposit, upon the river bank, and when the plant has partly grown, sunshine and dry weather are more advantageous to it than rain. The cotton of the hills on the contrary is sown after the periodical rains are over, upon exposed and sunny spots of ground, and would appear to receive no moisture, except from the dews.

7. Dr. Brandis, Superintendent of Forests, to whose letter I would beg to draw particular attention, as containing the most useful information on the subject, states that the cotton plant of Pegu while grown, as it now generally is upon the banks of rivers, or the fertile soil of hill clearings, does not require water; but if an attempt is made to cultivate it in either localities, artificial irrigation is useful for the proper moisture of the plant. As to whether artificial irrigation has a specific injurious effect upon the strength and fibre of the cotton, Dr. Brandis considers it could be best ascertained by a series of properly conducted experiments.

ORDERED, that a copy of the above letter, and the reports in original, be sent to the Home Department, with reference to the office memorandum thence received, dated the 25th November last, No. 2474.

(True Extract.)

(signed) *R. B. Chapman,*
Officiating Under Secretary to the Govt. of India.

* Deputy Commissioner, Rangoon, No. 167, dated 3d February 1858. Deputy Commissioner, Bassein, No. 245, dated 26th December 1857. Deputy Commissioner, Prome, No. 114, dated 9th February 1858. Deputy Commissioner, Henzada, No. 75, dated 30th January 1858. Deputy Commissioner, Tharawaddy, No. 46, dated 26th March 1853. Deputy Commissioner, Tounghoo, No. 6, dated 10th February 1858, Superintendent of Forests, No. 23, dated 14th January 1858.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1601

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From Captain *C. D. Grant*, Deputy Commissioner of Rampore, to Major *A. P. Phayre*, Commissioner and Agent to the Governor General in Pegu, No. 167, dated the 3d February 1858.

WITH reference to your revenue letter, No. 304, of the 19th December last, forwarding copy of correspondence as noted in the margin,* and calling upon me to submit my views touching the effects on irrigation on cotton crops, I have the honour to report that, owing to there being very little cotton cultivation in this district, my inquiries on the subject have been very limited; but from what I can learn it appears that irrigation would be most injurious to the cotton plant and lessen its yield most materially; the plant in this district is always grown on dry soil, and all water kept from it; each plant yields on an average from 40 to 50 ticals of cotton.

From Major *D. Brown*, Officiating Deputy Commissioner, Bassein, to Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, Rangoon, No. 245; dated the 26th December 1857.

IN reply to your letter, No. 304, of the 19th instant, I have the honour to inform you, that I have had no opportunity of watching the different effects produced on the cotton plant by irrigation, or by leaving it to the chances of rain and dew supplying it with sufficient moisture for its growth and maturity. In this district the quantity of cotton grown is very small indeed: in parts of it there is a little sown in the Tongeyas; this is not irrigated by artificial means. In the Tharawaddy district, on the banks of the Irrawaddy, I have seen a considerable extent of cotton cultivation, but this also is left to the chances of rain and dew. Some Pernambuco cotton seed, which I sowed at the commencement of the monsoon last year, grew up to be trees seven and eight feet high, and produced a great many pods; while the seed sown later, and towards the end of the monsoon, only produced plants two to three feet in height, although they were in the absence of rain regularly watered. From this it would appear that there is some property in rain-water which invigorates the plant, and gives it greater strength than well or tank-water.

From Captain *R. D. Ardagh*, Deputy Commissioner of Prome, to Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, Rangoon, No. 114; dated the 9th February 1858.

WITH reference to your revenue letter, No. 304, of the 19th December 1857, and its enclosures, as per margin,† calling for an opinion on a report of Mr. George Inverarity, to the effect that the growth of cotton by artificial irrigation is injurious to the plant, I have the honour to state that nearly the whole of the cotton grown in this district is cultivated on toungee or hill paddy cultivation, with which it is sown in the months of June and July, and consequently depends upon the periodical rains for its growth.

From careful inquiries I have ascertained that irrigation has never been resorted to either on the hills or plains.

I am therefore unable to give an opinion on that advanced by Mr. Inverarity.

From Captain *E. J. Spilsbury*, Officiating Deputy Commissioner of Henzadah, to Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, Rangoon, No. 75; dated Henzadah, the 30th January 1858.

WITH reference to your revenue letter, No. 304, dated 19th ultimo, containing extracts, as per margin,‡ I have the honour to reply, that having had no personal experience in the cultivation of the cotton plant, I can only answer the question your letter contains by pointing out the mode of cultivation followed amongst the natives of the country, and which appears to answer: they sow their cotton seed at the end of the rains in clearings, in the elephant grass jungle generally, and for irrigation trust entirely to the latter rains and the heavy dews; but on no occasion do they water the plant. The best spots for the cultivation are those a little raised above the general level of the country, and which, therefore, cannot have been inundated, and the soil of which is frequently a little sandy; from this I should be of opinion that artificial irrigation would be prejudicial to the plant.

* Extract paras. 1 to 4 of a letter from Collector of Broach, No. 346, dated 11th June 1855. Extract from Despatch from the Honourable Court of Directors to the Government of India in the Revenue Department, No. 13, dated 9th September 1857. Extract, No. 4826, from Secretary to Government of India to Commissioner of Pegu, dated 2d December 1857.

† Extract paragraphs 1 to 4 of letter from Collector of Broach, No. 346, of 11th June 1855. Extract from Despatch from Court of Directors, No. 13, of 9th September 1857. Circular, No. 4826, of 2d December 1857.

‡ Extract paragraphs 1 to 4 of letter from Collector of Broach, No. 346 of 11th June 1855. Extract from Despatch from Court of Directors, No. 13, of 9th September 1857. Extract, No. 4826, of 2d December 1857.

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From Captain *M. Lloyd*, Deputy Commissioner, Tharawaddy, to Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, Rangoon, No. 46; dated the 26th March 1858.

I HAVE the honour to acknowledge the receipt of your letter, No. 353, dated Rangoon, the 4th February 1858, calling my attention to your circular letter, No. 304, dated the 19th December.

2. The circular would have been duly attended to, but absence on leave prevented my doing so. I have the honour to enclose a report of all the information I can give on the subject of the circular.

REPORT.

It is needless for me to inform you that the cotton plant in this country is never irrigated, and as the information sought of me is, whether or not irrigation is good or bad for the crops, I am sorry I am unable to give any on the subject.

(signed) *M. Lloyd*,
Deputy Commissioner, Tharawaddy.

From *George D'Oyly*, Esq., Deputy Commissioner of Toungoo, to Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, Rangoon, No. 6, dated Camp Kardaloo Khyoung, the 10th February 1858.

I HAVE the honour to acknowledge the receipt of your Revenue No. 323, and to inform you that I had proposed making the subject of the letter, No. 301, referred to therein, matter of special inquiry during a tour I proposed making in the district, this cold season, and I cannot sufficiently lament the cause which keeps me a prisoner in these remote mountains.

With reference thereto—the irrigation of cotton in the plains—I cannot speak with certainty. From inquiries, however, which I have made, and from prior observations, I am aware that such cotton is planted on the alluvial deposits near the river, whilst the soil is damp from previous inundations; that whilst the plant is young, the fall or otherwise of rain is a matter of indifference, but that when the plant is attaining maturity, sunshine and dry weather is considered advantageous; the plant is not irrigated. The cotton grown in the mountains, of a separate species, it is sown in the fall of the year on the most exposed and sunny spots, on ground from which the paddy has been just reaped, the most productive spots being selected; this plant requires dryness and warmth, and does not come to perfection if the season is unusually cloudy, even should the clouds be unaccompanied by rain. I purpose forwarding specimens of both species to you, and, at the same time, submitting such further information on the former description as I may be able to collect.

From Dr. *Brandis*, Superintendent of Forests in Pegu, to Major *A. P. Phayre*, Commissioner of Pegu, and Agent to the Governor-General, Rangoon, No. 23, dated the 14th January 1858.

I HAVE the honour to acknowledge the receipt of your office letter, No. 304,* dated the 19th December 1857, requesting my opinion regarding Mr. Inverarity's views on the effect of irrigation on the cultivation of the cotton plant.

2. The main points of Mr. Inverarity's opinion, as expressed in his letter, No. 346, dated the 11th June 1855, appear to be the following:—

a. That under certain conditions of soil and climate, “irrigation, applied artificially, far from improving the growth and staple of the cotton crop, acts injuriously towards it, weakening the fibre, and reducing its value to a corresponding extent” (for instance, in Guzerat).

b. That under other circumstances cotton may be improved by a supply of water from artificial irrigation, for instance, in certain parts of Scinde.

3. The first point, viz., the injurious effect of irrigation upon the strength of the cotton fibre, is new and original; but I regret that neither the cultivation of the cotton plant in Pegu, nor what I have seen of it in other countries, throws any light upon this question.

4. It is sufficiently known that cotton, in contradistinction to rice, is essentially a dry crop, and that if grown in a suitable situation and a good soil, it thrives very well with only

* With enclosures, viz.:—Extract paragraphs 1 to 4 of letter from Collector of Broach, No. 346, dated the 11th June 1855. Extract from Despatch from the Court of Directors, No. 3, dated the 9th September 1857. Circular, No. 4826, dated the 2d December 1857, from Secretary to Government, Foreign Department.

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only a moderate supply of rain and without any artificial irrigation, provided the dew falls heavily and regularly during the first portion of its growth, before the pods begin to form. It is further known that the cotton plant does not thrive in a swampy soil, and that it is liable to perish by an inundation of the ground which on other crops would have no injurious effect.

5. In Pegu the plant is cultivated either on the banks of the rivers or on the sides of hills recently cleared, cutting and burning down the jungle. In both instances it is sown soon after the termination of the rains, and near the rivers, not until the annual inundation has subsided.

6. But, on the other hand, if an attempt is made in this country to cultivate cotton on a less suitable locality, or in a soil less fertile than along the bank of the rivers, or in the fresh soil of the forests fertilised by the ashes of the burnt jungle, artificial irrigation becomes indispensable. Samples of Egyptian and other kinds of cotton, now under experimental cultivation near Rangoon, on a light sandy soil, show this clearly. Under such circumstances cotton must either be sown long before the end of the rains, or the plants must be nourished by artificial irrigation.

7. The question, therefore, whether cotton requires artificial irrigation or not, cannot be replied to in a general way, either in the negative or in the affirmative; it depends, as Mr. Inverarity very correctly maintains, on the character of the soil and situation, and on the nature of the climate.

8. But that portion of Mr. Inverarity's opinion which states that irrigation has a specific injurious effect on the strength of the fibre, should, if it has not yet been sufficiently established by general experience in India and America, or by the operations of the experimental cotton farms, be tested by a series of experiments in suitable soil, with and without irrigation.

9. Finally, considering the matter in a theoretical point of view, only the well known fact can be stated, that a too free supply of moisture during the growth of a plant is likely to produce an over-luxuriant vegetation of leaves and branches, at the cost of the development of the organs of reproduction. A smaller number of pods and a less abundant development of the hairy covering of a seed, which constitutes cotton, might therefore, on theoretical principles, be expected, as the effect of an abundant supply of water.

Office Memorandum, Foreign Department, No. 3145, dated Allahabad, the 8th September 1858.

READ a letter from the Secretary to the Chief Commissioner, Punjab, dated 24th ultimo, No. 216, together with its enclosures, regarding the effect of artificial irrigation on cotton crops.

From *R. Temple*, Esq., Secretary to the Chief Commissioner for the Punjab, to *G. F. Edmonstone*, Esq., Secretary to the Government of India, with the Governor-General, No. 216, dated Lahore, the 24th August 1858.

I AM directed to reply to your No. 4826, of 17th December last, requesting the Chief Commissioner to obtain the opinion of any competent persons, regarding the effect of artificial irrigation upon cotton crops, and to submit the observations of the Financial Commissioner, and of other officers who have been consulted on the subject. The views expressed in Mr. M'Leod's letter have the Chief Commissioner's general concurrence.

2. The Chief Commissioner's own opinion is, that the finest cotton crops are grown on unirrigated lands. Irrigation is probably not general for this culture in the North-western Provinces and the Jullunder Doab, except when the summer and autumnal rains have been scarce. In the Delhi territory, the Chief Commissioner has seen cotton grown extensively on the lands watered by the canal; but in the tracts most famous for cotton, such as Pulwul and Hoodul in the Goorgaon district, south of Delhi, the produce was (to the best of the Chief Commissioner's recollection) chiefly, if not entirely, raised on unirrigated lands.

3. But I am to observe, that after all it must be the character of the soil which determines whether irrigation is beneficial or otherwise for cotton cultivation. In the Punjab, where the soil is dry and firm, except in the vicinity of rivers,

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rivers, the poorest crops will not germinate without irrigation; and even grass will not grow. There, of course, cotton is no exception to the general rule. In such localities, even the ground cannot be broken up for cultivation unless moisture be obtained, and irrigation, therefore, is the great desideratum for every species of produce.

* To be returned.

ORDER.—Ordered, that a copy of the above letter and its enclosures in original,* be sent to the Home Department at the Presidency for disposal.

(signed) *G. F. Edmonstone,*
Secretary to the Government of India,
with the Governor-General.

Allahabad,
8th September 1858.

From *D. T. M'Leod*, Esq., Financial Commissioner for the Punjab, to *R. Temple*, Esq., Secretary to the Chief Commissioner for the Punjab, No. 404, dated Lahore, the 2d August 1858.

IN compliance with the request contained in your letter, No. 82, of the 18th January last, I have the honour to forward, for submission to the Chief Commissioner, copies of the correspondence marginally noted,† conveying the opinions of the several officers whom I have consulted on the question relative to the injurious effects of artificial irrigation of cotton crops.

2. Mr. Barnes expresses his opinion strongly in favour of artificial irrigation, which he reports is always used wherever available in the districts of his division; he shows as the result of his inquiries among native agriculturists, that the yield is greater, and the fibre of the irrigated cotton both softer and stronger, than that grown on unirrigated land.

3. From the observations contained in Mr. Thornton's letter, it would seem that all the cotton produced in the Jhelum Division is more or less dependent on artificial irrigation; though a large supply of water is not required.

4. From the memorandum written by the Chief Commissioner, when Commissioner of the Jullundur Division, and which was forwarded to me by Major Lake, it would appear that in the Jullundur Doab, the best cotton is grown on unirrigated land.

5. Lieutenant-Colonel Clarke, an officer of much experience on subjects connected with agriculture, reports that cotton-growing land in the Punjab is chiefly irrigated by wells; that cotton is occasionally produced as a dry crop, but only where the soil has been softened by previous rain. He opines that were artificial irrigation from canals available, the cultivation of cotton would largely increase; he gives as the opinion of experienced cultivators, that the temperature of well water being more uniform, would be more favourable for the growth of cotton than canal or river water.

6. The Commissioner of Delhi, it will be seen, reports most decidedly in favour of artificial irrigation for cotton crops; he shows that of the two crops annually produced in the districts of his division, the first crop which is entirely dependent on irrigation, is far superior to the second crop, which, although sown during the rainy months, is also partially dependent on artificial irrigation.

But a contrary opinion is expressed by the Deputy Commissioner of Paneeput, in the same division; who gives his opinion by saying that rain water is the best, the well water next, and canal water worst, while any excess of moisture is injurious.

7. The opinions above quoted, though somewhat diverse, it will be seen, are generally in favour of artificial irrigation; but at the same time lead to the conclusion that excess of moisture would be far more injurious to the cotton crops than excessive dryness of the soil, arising from precarious or scanty rain on unirrigated lands; so that it seems very probable that in localities near the west coast of India, where the fall of rain is great, and the soil and atmosphere in consequence more or less moist, the excessive moisture that would result from canal irrigation, would prove injurious.

8. My own impression, however, is, that the character of the soil is the main point which determines the question in each locality. In the Jullundur Doab, of which the general character, as compared with adjoining tracts, is that of moisture, as may be gathered from its

† 1. No. 54, dated 27th January 1858, from Deputy Commissioner, Goojranwalla. 2. No. 33, dated 4th February, from Commissioner, Jhelum Division. 3. No. 57, dated 6th March, from Commissioner Trans-Sutlej States, with annexure. 4. No. 15, dated 28th April, from Commissioner, Delhi Division. 5. No. 4, dated 4th May, from Deputy Commissioner, Paneeput, to Commissioner, Delhi Division.

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its name, which means "water holding," it is shown that artificial irrigation is very rarely employed; and in one tract of that Doab, named the Sirwál, even sugar-cane is raised without irrigation. In Berar, one of the best cotton-growing districts in India, even esculent vegetables are produced in prodigious quantities without irrigation; and irrigating cotton is there, of course, as a general rule, never thought of.

9. In the Nerbudda territories in like manner, what is usually termed the "cotton soil" and is basaltic, hardly admits of irrigation: as its greed of water is so great, that one well will scarcely suffice for an acre, and that only when it is copiously manured; so that field irrigation is there out of the question, a characteristic which probably extends to similar tracts in Bundelkund also. The next best cotton to that of Bérar, in the Mirzapore market, is esteemed to be that of Bhawurgurh, which is grown on the raviny banks of the Nurbudda, where the soil is full of nodular limestones or kankar; and here, in like manner, irrigation is wholly impracticable and not required.

10. The conclusion which I would draw then is, that cotton, as a general rule, does not require irrigation; but where it is grown in alluvial plains, containing an excess of siliceous matter, some irrigation is desirable or necessary.

From Lieutenant-Colonel *J. Clarke*, Deputy Commissioner of Goojranwalla, to *D. F. M'Leod*, Esq., Financial Commissioner for the Punjab, Lahore, No. 54, dated the 27th January 1858.

In reply to your letter, No. 252, dated 21st January 1858, with the annexures noted in the margin,* I have the honour to state that in this district cotton is very generally irrigated from wells, and I am not aware that such irrigation has ever been considered injurious, indeed it is held to be the reverse; as very often the lands which are naturally irrigated suffer from inopportune rises of the river, whereas artificial irrigation is available when considered most advantageous.

2. Cotton is occasionally cultivated as a dry crop in some of the villages bordering on and within the "Bar;" but this is entirely contingent on such a fall of rain in February or the early part of March as shall qualify the hard soil for culture.

3. Cotton is also grown in the low lands termed *Sailaba*, which are more or less subject to be flooded by the rise of the *Chenab* river; the crop is more uncertain, but it is also less costly than that artificially irrigated.

4. I am not acquainted with any soil in the Punjab at all analogous to the black cotton soil of Western India.

5. By far the greater portion of cotton produced in the Punjab is very short-stapled. I am of opinion that were artificial irrigation from canals available in this Doab, the cultivation of cotton would largely increase; but it is thought by experienced cultivators that there is an advantage in the uniformity of temperature which well water possesses, and they also state that the Punjab rivers are in their upper courses much affected by the molten snows which feed them, and that to a certain extent this would operate injuriously in canal irrigation as compared to irrigation from wells; but the greater cheapness of canal irrigation would far outweigh this supposed injury. The waters of the *Chenab* are very heavily laden with sand, whereas those of the *Ravee* deposit a rich argillaceous alluvium.

6. If the bar of this Doab can be efficiently irrigated, the crops in it of cotton, as well as sugar-cane and corn, will be finer than any other soil here.

From *Edward Thornton*, Esq., Commissioner and Superintendent, Jhelum Division, to *D. F. M'Leod*, Esq., Financial Commissioner for the Punjab, No. 33, dated Camp Jhelum, the 4th February 1858.

I HAVE the honour to address you, in reply to your letter, No. 249, dated the 21st ultimo.

2. My observations are intended to apply to the north-west portion of the Punjab, the tract within which I have been employed for the last nine years.

3. Within this tract the cotton plant is not found to require a large supply of water. In those seasons when the rain falls at intervals of not more than 15 or 20 days, the cotton crop

* 1. Circular letter from Secretary to Government of India, to the Chief Commissioner, Punjab, No. 4826, dated 2d December 1857. 2. Extract from a Despatch from the Honourable the Court of Directors to the Government of India, No. 13, dated 9th September 1857. 3. Extract of a letter from Collector of Broach, No. 346, dated 11th June 1855.

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crop is good, even though the actual fall of rain be below that of an average year, and the field be one in which there exists no means for artificial irrigation.

4. Near the mountains the fall of rain is frequent enough in most years to suit the wants of the plant, and there a large quantity of land is cultivated with cotton in localities where artificial irrigation cannot be obtained.

5. Towards the south, and generally throughout the Shahpore district, the amount of rain that falls in what is called the rainy season is very small, and what I believe is a still greater disadvantage, the intervals between the showers are very long; at the same time there are also unusual facilities for making wells. The result is, that in that part of my jurisdiction not merely the cotton crop, but the whole of the cultivation of every description, is dependent upon artificial irrigation.

From Major *Edward Lake*, Commissioner and Superintendent, Trans-Sutlej States, to *D. F. M'Leod*, Esq., Financial Commissioner for the Punjab, No. 57, dated Camp Kala Bukrah, the 6th March 1858.

In reply to your letter, No. 251, dated Lahore, 21st January 1858, with enclosures, on the subject of irrigating cotton, I cannot do better than forward an original letter, No. 373, dated 19th March 1847, written by Sir John Lawrence when Commissioner of this division, and addressed to the Officiating Secretary to the Government of India, in which he states that the best cotton is grown on unirrigated land; and among the several descriptions of cotton grown in the Jullundur Doab, he ranks first and foremost the produce of Bhet* Maunswal, where water is from 50 to 100 feet below the surface. My own inquiries lead me to suppose that irrigation is very sparingly resorted to for the cotton plant, even in tracts where water is abundant.

* Beet.

From *C. B. Saunders*, Esq., Commissioner and Superintendent, Delhi Division, to *D. F. M'Leod*, Esq., Financial Commissioner for the Punjab, No. 15, dated the 28th April 1858.

I HAVE the honour to acknowledge the receipt of your letter, No. 949, dated 9th March 1858, with its annexures, calling for a report on the beneficial or injurious results of artificial irrigation on the cotton crops in the districts under my charge. In reply I have the honour to state:

1st. That in the portions of the districts where irrigation is obtainable, two crops are sown; the first, wholly dependent upon irrigation in the month of March, bears for four months, and is much superior to the second, or rain crop, which, although sown in June or July, is partially dependent upon irrigation in dry seasons, and which seldom comes to perfection before the plants are materially damaged by the early frosts.

2d. Where irrigation is unobtainable the rain crop only is sown; the plants bear no comparison with the irrigated ones, are stunted in growth, and only half their produce is realised, the more backward pods being destroyed by frost before they have had time to ripen.

3d. The produce of the first crop sown in March, and brought to perfection by irrigation, is probably six maunds per acre; that of the rain crops sown in June, perhaps three maunds per acre.

I have the honour to enclose copies of the reports of the several district officers, as per margin.†

From *C. J. H. Richardes*, Esq., Deputy Commissioner, Paneeput, to *C. B. Saunders*, Esq., Commissioner of Delhi, No. 4, dated Kurnal, the 4th May 1858.

I HAVE the honour to inform you, in reply to your circular, No. 13, Revenue department, enclosing a copy of letter, No. 949, dated 9th March 1858, from the Financial Commissioner for the Punjab, relative to the irrigation of cotton crops.

2. The tehseeldars have made a thorough inquiry, and hence the time taken in preparing the information required.

3. From their investigations the cotton crop is chiefly grown in the best soil of this zillah, viz. roushe; but it is often sown in the second quality, or docar; and occasionally in the third, the bhood, or sandy. The sowing month is June.

4. The

† Letter, No. 54, dated 13th April 1858, from the Deputy Commissioner, Delhi, with enclosure. Letter, No. 21, dated 22d March 1858, from the Deputy Commissioner Goorgaon. Letter, No. 3, dated 9th April 1858, from the Deputy Commissioner, Jhujur. Letter, No. 16, dated 13th April 1858, from the Deputy Commissioner, Khotack.

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4. The crop is watered best by the rain, and if a good wet season is prevalent, no further moisture is required. If, in the month of September, there is an excess of rain, the crop is deteriorated. The next best moisture is the well water; this, in the event of no rain falling, is dealt out some seven or eight times; if, after watering, rain comes down, the crop is injured or destroyed.

5. The canal water is only resorted to for the irrigation of the crops as a last resource, in the event of there being no well, and the rain not coming down. The zemindars do not like canal water for their cotton crops.

6. Recapitulation.—Rain is the best water, the well water next, and canal water worst. Any excess of moisture is injurious.

EXTRACT of a Letter, No. $\frac{42}{373}$, dated 19th March 1847, addressed by *John Lawrence, Esq.*, Commissioner, Trans-Sutlej States, to *H. M. Elliott, Esq.*, Secretary to the Government of India, with the Governor General.

Para. 4. Mr. Vansittart states, that cotton is sown in March, except on the banks of rivers, where it is sown in July, and that when the crop is not irrigated, the return is poor. I coincide in these opinions generally, but think that cotton is sown both in March and towards the end of June, after the first fall of rain, and that there is little or no cotton grown on the banks of either the Beas or Sutledge. I am also of opinion that the great mass of cotton grown in the Doab is produced on unirrigated lands, for the reasons which I will hereafter assign.

6. I coincide with Mr. Vansittart that the best cotton grows on the high lands, where water is at a considerable depth, which, however, is opposed to Doctor Sill's opinion. I do not think that all cotton requires irrigation; that grown in some places and irrigated, may yield a large return; but I have ascertained beyond question, that the greater proportion of cotton in the Doab is not irrigated, and that all the finest kinds are grown where irrigation is impracticable.

7. In the Jullundur district, which embraces the southern portion of the Doab, water is generally near the surface; in no places is it 40 feet distant, in the majority from 10 to 15. This is clearly shown from the fact, that the Persian wheel is the mode used for raising water, which it is obvious would be impossible if it was very distant from the surface. I admit that in some places the people in Jullundur irrigate their cotton, and have shown that they have the facilities for so doing; but I repeat that the practice is not generally adopted.

10. It is a mistake to suppose that the cotton of the south is all grown on canal lands. In Hansee, Kurdondah, Rohtuck, and Delhi, this is generally the case; but in Pulwul, Horul, Hutheen, and Kasee, it is all grown on unirrigated land; nor, as I have already stated, is all the Jullundur cotton, or even a large proportion irrigated; the fact therefore which Mr. Vansittart admits, that irrigation is employed on sugar-cane, and not on cotton, must arise simply from its cultivation not paying, and not from the expense of irrigation.

14. In some localities, water, I admit, is found close to the surface; but there are places which either do not grow cotton, or where its produce is inferior; the best and finest kinds, as I have already observed, are grown where irrigation is impracticable.

17. As to the quantity of produce, I think Doctor Sill's estimate of 207 for an acre of cotton is fair enough, but I do not think that there is so much difference between irrigated and unirrigated land, though there is probably some.

18. The best cotton grows in Bhet-manswal, on the top of the lower range of hills where there are no wells, and where the people of six and eight villages have a single well on the lower ground to drink from. The next best is in the district of Ghur Shunkur, which embraces all the villages under the hills, from 16 miles east of Hooshiarpoor to within a couple of miles of the Sutlej; this is called the kundi cotton, that term being the designation by which the lands under the hills is known. Here water varies from 50 to 100 feet deep, and not an acre of irrigated land is heard of. The country round Hooshiarpoor for 15 miles in every direction, except the north (where it extends but five miles), ranks in the third class. Here water is very near the surface, and the soil is cool and moist. This district is termed "Seerral," and the cotton is sown towards the end of March.

The mid-land tracts, termed Dhak (from the tree of that name which grows on its waste lands), holds the fourth place. It embraces part of Rahon, and the greater portion of Nowashar, Philour, Dhurolee, &c., and the tracts on the banks of the rivers are termed "bheet," or low land, and are quite unsuited to cotton. The lands about Jullundur, Nakodar, and Jumsher, forming the southern portion of the district adjoining the Beas, are termed "Dhonuh," from the Persian wheel used for drawing up water; and are the places from whence the irrigated cotton chiefly comes, and which is considered vastly inferior to the three first kinds above described.

19. "We grow cotton for the house, not for sale," is the answer I received to all my inquiries. The women and children weed, pick, and spin the cotton, and the village weavers make

make the cloth which the poor wear. The expense therefore of the cultivation of a small quantity is not felt, and saves the outlay of hard cash. How different is it in Pulwul and other districts in the Delhi side. Here you are told, "Let us only have early rain, and we shall have a good cotton crop, which will of itself pay the revenue."

20. If I consider the soil of the Doab in no way favourable for cotton cultivation, I think the climate still less so. Here the cold sets in early, and the frost is severe. A single night of frost ruins the cotton crop, which withers and destroys the pods dropping from the stalks, and the leaves shrivelling up, as if scorched with fire. The mass of the cotton is unirrigated; if, therefore, the rains set in late, the cotton crop must fail, for the cold weather will come before the cotton crop is gathered.

EXTRACT from Notes embodying Information collected regarding Cotton.

THE cotton grown round and about Jullundur and the other parts of the southern portion of the Doab, is chiefly unirrigated, though water is close to the surface, and wells abundant. The produce is considered third-rate by the people.

Irrigated land yields a greater produce; unirrigated lands under the hills, cotton of finer quality. The best land irrigated, will yield 20 rupees worth of cotton and seed; good soil not irrigated, 15 rupees per acre; but the Rohan land will not give such a crop.

Cotton is sown in this district (Hooshiarpour) in March, as well as July, in unirrigated land, the soil being sufficiently moist for the purpose. Water varies only from 10 to 15 feet from the surface. This cotton thus early sown is gathered in October, November, and December; that sown in July would be a month or six weeks later. This district is called Seeral, from the moistness of the soil; it is entirely flooded in the rains from the mountain streams, and grows magnificent crops of wheat, barley, and sugar-cane, without any well irrigation. Mokerian is that part of the Hooshiarpour district, bounded by the lower range of hills on the north, and by the Beas on the south and west. The land on the skirts of the hills produces fine cotton, but the whole quantity does not exceed 15 or 1,600 acres, of which one-third is said to be irrigated, and two-thirds unirrigated; but I doubt very much the proportions. The people say its cultivation does not pay. They estimate the yield of an acre at rupees 12-8, and the expense at about 10 rupees.

Juswun Dhoon is said to yield about 4,000 acres of cotton, all of it unirrigated.

The cotton produced in some 30 villages on the top of this portion of the range above Ghur Shunkur, which is called Beet Manswal, is said to produce the finest cotton in the Doab. I do not believe there is a well on the whole of this range.

The cotton grown about Hajepoor is particularly fine [*vide* specimen marked (1)]: cleaned cotton of this quality usually sells at 7 lbs. for the rupee, while that imported is only valued at 10 lbs. per rupee; not more than 100 for 8,000 lbs. weight, however, is calculated to be grown in an abundant year, and all on unirrigated land. This year the cotton crop was a failure, which was always more or less the case when the autumn* rains did not set in early.

This is a very large subdivision of the Hooshiarpour district, and it pays Government a revenue of 1,79,000 rupees, and perhaps half as much more is in jagheer, and contains the whole of the tracts under the hills, full 20 miles long and 10 broad, which is always named as producing the finest cotton. I visited it in March, too late to see anything but the marks of cotton cultivation. The agriculturists say, that in the vicinity of the hills, where water is distant from the surface, and the soil firm, a good deal of cotton is grown, all of fine quality. But that when water is near the surface, the produce is inferior, and the quantity limited. All the cotton is grown without irrigation, and near the hills an acre of good cotton is estimated to be worth from 16 to 20 rupees; at a distance from 12 to 15.

Water varies from 40 to 140 feet deep in this tract.

(True extracts.)

(signed) H. R. Ludlam,
Superintendent.

* Water is from 50 to 80 feet from the surface in this tract.

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SUMMARY of Papers on the Subject of the Effect of Artificial Irrigation on Cotton Crops.

IN JUNE 1855, Mr. G. Inverarity, Collector of Broach, observed in his letter to the Revenue Commissioner of the Northern Division, with reference to the question of extending irrigation throughout the Bombay Presidency, that the greater part of the land of that Collectorate is composed of a deep black soil, and rendered annually subservient to the cultivation of cotton, for which it is peculiarly adapted; and that irrigation supplied artificially, far from improving the growth and staple of the cotton crop, acts injuriously towards it, weakening the fibre, and reducing its value to a corresponding extent.

2. The above remark attracted the attention of the Honourable the Court of Directors, and they accordingly directed, on the 9th September 1857,* that inquiries may be instituted with a view to determine the correctness or otherwise of Mr. Inverarity's opinion. On this the several local Governments and administrative authorities were called upon, in November following, to furnish the views of such persons on the subject as are most conversant with the culture of the plant; and the following is an abstract of their replies.

3. From the papers submitted by the Government of Bengal, it appears that, in the opinion of the Board of Revenue, artificial irrigation in the culture of cotton would be useful in the districts of Behar, though such a process, they remark, is not required in Bengal. The Cotton Committee of the Agricultural and Horticultural Society, whom the Board consulted on the subject, observe, that in sandy and light soils frequent irrigation will probably be found necessary for the successful growth of the plant; in some places a moderate degree of moisture is essential, while again in other localities it may not be at all necessary, but, on the contrary, may prove hurtful to the plant. On the whole, the Committee arrived at the conclusion that irrigation, under a certain peculiarity of soil and climate, acts injuriously on the cotton plant, yet in most localities it will be found beneficial alike to the indigenous and exotic kinds. In Assam the local officers consider irrigation to be unnecessary. Colonel Hannay remarks, that in dry and sandy soils this process may, if judiciously applied, be partially beneficial; and Mr. Masters, Deputy Collector of Seehsaugor, adds, that the cotton plants grown in deep black soil, immediately under the Nagah Hills, which are frequently drenched by the water from the hills, are rendered weak, and the fibre deteriorated, while those immediately in their vicinity, on higher and drier ground, appear healthy and strong, and the staple far superior.

Bengal.
No. 1305, dated
1st June 1858.

4. The Government of the North-western Provinces thinks it inadvisable, during the present state of those provinces, to impose any additional labour upon the civil officers, which the collection of the information in question would naturally involve. It submits now the replies from the Commissioners of the Benares, Allahabad, and Jubbulpore Divisions, who were consulted by the late Government of the Central Provinces, containing the views of persons conversant with the subject. Irrigation is not resorted to in these divisions, and the preponderance of the opinion is against such a process. The Deputy Commissioner of Hosungabad goes so far as to observe, that even a heavy fall of winter rain injures the plants in the black soil, but those on red soil are improved by it. Mr. Gubbins, Officiating Commissioner of Allahabad, and the farmers of Mundlah, a small cotton-growing district in the Jubbulpore Division, appear to be in favour of irrigation; the former, however, while admitting that the nature of the soil of Bundecund, the largest cotton district in his division, precludes irrigation, speaks from his experience of the North-western Provinces, that in those parts the cotton crop is invariably irrigated where a want of rain is found to be likely to prove injurious to the plant, and that he has never heard it even hinted that this process in any way deteriorates the fibre.

North-Western
Provinces,
No. 502, dated
11th May 1858.

5. From the replies submitted by the Government of Fort St. George, it appears that artificial irrigation of cotton crops is not carried on in any of the districts of that Presidency. The Collectors of Coimbatore and Madura are entirely

Fort St. George.
No. 1056, dated
29th July 1858.

* Paragraph 13 of Revenue Despatch, No. 13, of 1857, dated 9th September.

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entirely opposed to it. The Collectors of South Arcot, Bellary, and Nellore, agree in stating that black soil is ill-adapted to such a process; the first states that irrigation of the plant to any great extent is injurious, and the last two say, that in red and sandy soils only it would be beneficial. In the opinion of the Collector and Agent to Governor, Vizagapatam, irrigation would prove beneficial rather than injurious in seasons when rains fail, or vary in their supply. The district engineer of this division, while admitting the growth of cotton on high lands, observes, that a sufficient supply of water by irrigation is also necessary. It would be the same thing, he says, whether the water supplied is rain water, or brought from a channel or tank; the prevalent opinion amongst the people whom he had consulted is in favour of irrigation. The Governor's agent at Kurnool, and the superintendent of gardens at Ootacamund, are of opinion that cotton plant would be improved by irrigation if properly applied, and at the right stages of growth. The latter goes on to say, that the flooding of the whole surface with water is injurious, but it is beneficial when applied by small water channels in the middle of the rows. The Conservator of Forests remarks, that his acquaintance is limited to the districts of Western Mysore and Dharwar, where irrigation is not required. He, however, quotes the authorities of Dr. Royle and also of Dr. Wight, late Superintendent of Cotton Farms, Coimbatore, as bearing testimony to the beneficial effects of artificial irrigation. In the opinion of the latter, it answers best in sandy soil that does not cake on the surface after the absorption of water.

6. With reference to the remarks made by the Superintendent of Gardens at Ootacamund and Conservator of Forests, as detailed in the latter part of the preceding paragraph, the Board of Revenue observe, that they apply rather to the foreign than to the indigenous cotton of India. The Board consider it conclusive that in heavy black soil the plant would not flourish under irrigation, even of the most careful kind, while in sandy and light red soils it might be much benefited.

7. The Madras Chamber of Commerce submits the opinion of one of their body, who speaks from some pretty extensive experiments made by him in the Tinnevely district, that moderate irrigation in very dry weather only benefits the plants grown from New Orleans seeds; but the indigenous cotton, he adds, will not stand water at the roots, either in the black or red soils.

8. The irrigation of the cotton plant is not carried on in any part of the Bombay Presidency, and is considered injurious by the Collectors of Sholapore, Ahmednuggur, Surat, Belgaum, and Kaira. The Collector of Khandeish gives no opinion on the subject. The Conservator of Forests and the Collector of Ahmedabad are of opinion that occasional floodings at seasonable periods during the growth of the crop would be beneficial; and the Collector of Dharwar adds, that it has been determined by experiment that cotton can, by judicious management, be irrigated with success both in black and other soils. The present Collector of Broach, Mr. Tucker, who has never heard of irrigation of indigenous kinds in black soil, states, however, that this process has proved successful with exotic varieties, and that if it were tried with the former species, the prejudice might, in his opinion, probably prove to be unfounded. The Revenue Commissioner of the Northern Division and the Collectors of Kaira and Broach also allude to the irrigation of cotton plant, which Dr. Hove describes to have seen during his travels in Guzerat in 1787-88, and they explain it by observing, that the cotton referred to by that traveller is a sort of vegetable wool, called Nurma, which is much superior to the cotton wool, and raised in red and sandy soils. The local Government have, however, ordered an experiment to be made of cotton plant, both in black and red soils, during the ensuing season, to test the effect of artificial irrigation.

Bombay.
No. 2070, dated
19th June 1858.

Hydrabad.
Foreign
Department.
No. 1426, dated
9th April 1858.

9. The Resident at Hydrabad submits a letter from the Deputy Commissioner of North Berar, who says that irrigation of the plant is not carried on in that division, and that if done so on deep black soil, it would prove injurious both to fibre and produce. He made an experiment with foreign varieties, and the result was as follows: the New Orleans cotton was spoilt by irrigation, but it thrived well without it; partial irrigation proved advantageous to the Sea Island cotton upon red sandy soil, whereas a continuance of it proved injurious. He observes further, that irrigation to a certain extent is necessary on shallow, stony, or sandy

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sandy soils, but in any case he is of opinion it would reduce the crispness of the fibre.

10. The Deputy Commissioner, South Berar, states, that irrigation was never tried in his district, and, consequently, he is unable to offer any opinion on the subject.

11. The Assistant Commissioner, Nuldroog, states, that cotton is invariably sown on dry land, and gives no opinion on the subject of irrigation.

12. The Deputy Commissioner of Raichore Doab states, that, from an experiment made by an individual, it was found that irrigation caused the plant to grow much larger, and to yield a far greater quantity of cotton; but he is unable to say whether the quality of it was deteriorated or not.

13. In Mysore the Commissioner states, that the cultivation of cotton is not carried to any extent worthy of notice, and that consequently no person can give any reliable opinion on the subject. One person connected with the trade, however, says, that Bourbon is the only variety which derives benefit from irrigation, and that of this the produce is not satisfactory.

14. In the Tenasserim and Martaban Provinces the Commissioner states, that the cultivation of cotton is carried to a very small extent, and this without the aid of irrigation. It is there produced on the rich alluvial deposit of the mountain streams, or in hill clearings. Persons employed in the culture of the plant are of opinion that the yield of cotton might be improved by irrigation, but that they are not aware whether it would tend to weaken the fibre.

15. In Rangoon and Bassein cotton is cultivated in dry soil, and the local officers state that irrigation would prove injurious. Captain Brown, Deputy Commissioner of Bassein, speaks from his own experience, that cotton plants watered by artificial means are not so vigorous as those nourished by rain water. In the districts of Prome and Henzada it is grown in hill clearings and high ground respectively without the aid of irrigation, which is neither resorted to in the districts of Tharawaddy. The cotton grown in the district of Toungoo is of two kinds, one being confined to the plains and the other to the hills. Neither of these species is watered by artificial means.

16. The Superintendent of Forests in Pegu observes, that the cotton plant in that province, which grows either on the banks of rivers or on the fertile soil of hill clearings, does not require water; but if an attempt is made to cultivate it in other localities, artificial irrigation is useful. Dr Brandis also states, that the question of the deterioration of the fibre of cotton by this process can be best ascertained by a series of properly conducted experiments.

17. In the district of Goojranwalla, cotton is generally irrigated from wells, and this has never been considered injurious; the experienced cultivators are of opinion that well water is more advantageous towards its growth than river or canal water. In the Jhelum Division the plant is more or less dependent on artificial irrigation, though a large supply of water is not required. In the Delhi Division irrigation is reported to be so beneficial, that of the two crops raised there annually, the one which is grown entirely under this process, is far superior to the rain crops. In the Jullundur Doab the best cotton is produced upon unirrigated lands, irrigation being very sparingly resorted to in tracts where water is abundant. In the opinion of the Deputy Commissioner of Paneeput, the rain water is the best, the well water next, and canal water worst to the growth of cotton.

18. The Financial Commissioner observes, that it must be the character of the soil which determines whether irrigation is beneficial or otherwise for cotton cultivation. He remarks that, as a general rule, such a process is not necessary, except where the plant is grown in alluvial plains, containing an excess of silicious matter. The Chief Commissioner concurs in the views above expressed, and considers that the best cotton is produced on unirrigated lands. In the Punjab, however, where the soil is dry and firm, except in the vicinity of rivers, irrigation is necessary for every kind of crop, and cotton cannot be excepted from this general rule.

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Mysore.
Foreign
Department.
No. 1803, dated
11th May 1858.

Tenasserim and
Martaban Provinces
Foreign
Department.
No. 224, dated
15th January 1858.

Pegu
Foreign
Department.
No. 2785, date
13th August 1858.

Punjab.
Foreign
Department.
No. 3145, dated
8th September 1858.

ACCOUNT Sales of ^{W. L.}_{D C} 500 Bales of Cotton,* per "Quintin Leitch," Bombay, consigned to *Hugh Fleming*, and sold on account of the Honourable East India Company.

1847:		Payment, ten days and three months.					
6 September		By J. & R. Gee, for 10 bales:			£.	s.	d.
		Gross.	T. & D.	Net.			
		10 B. wg. 31. 2. 10.	- 1. 1. 20.	- 30. 0. 18., or 3,378 lbs., at 6½ d.	91	9	9
6	"	By Armstrong & Hurst, for 10 bales:					
		10 B. wg. 31. 2. 17.	- 1. 1. 20.	- 30. 0. 25., or 3,365 lbs., at 6½ d.	91	13	7
7	"	By Thomas Dodgson & Neps., for 10 bales:					
		10 B. wg. 31. 2. 8.	- 1. 1. 20.	- 30. 0. 16., or 3,376 lbs., at 6½ d.	91	8	-
7	"	By J. & J. Bancroft, for 10 bales:					
		10 B. wg. 31. 1. 21.	- 1. 1. 20.	- 30. 0. 1., or 3,361 lbs., at 6½ d.	91	-	-
7	"	By J. Travis & Br., for 10 bales:					
		10 B. wg. 31. 2. 12.	- 1. 1. 20.	- 30. 0. 20., or 3,380 lbs., at 6½ d.	91	10	-
7	"	By T. Ainsworth, for 5 bales:					
		5 B. wg. 15. 3. 8.	- 0. 2. 24.	- 15. 0. 12., or 1,692 lbs., at 6½ d.	45	16	-
7	"	By Ralph Howard, for 10 bales:					
		10 B. wg. 31. 2. 13.	- 1. 1. 20.	- 30. 0. 21., or 3,381 lbs., at 6½ d.	91	11	-
7	"	By T. Calrow & Sons, for 15 bales:					
		15 B. wg. 47. 2. 3.	- 20. 16. 0.	- 45. 1. 15., or 5,083 lbs., at 6½ d.	137	12	-
7	"	By Burns, Dean & Co., for 10 bales:					
		10 B. wg. 31. 3. 3.	- 1. 1. 20.	- 30. 1. 11., or 3,399 lbs., at 6½ d.	92	1	-
7	"	By Charles Haigh, for 10 bales:					
		10 B. wg. 31. 1. 19.	- 1. 1. 20.	- 29. 3. 27., or 3,359 lbs., at 6½ d.	90	19	-
7	"	By W. Fielden & Sons, for 20 bales:					
		20 B. wg. 63. 1. 9.	- 2. 3. 12.	- 60. 1. 25., or 6,773 lbs., at 6½ d.	178	8	-
7	"	By J. Omrod & Sons, for 20 bales:					
		20 B. wg. 63. 2. 1.	- 2. 3. 12.	- 60. 2. 17., or 6,793 lbs., at 6½ d.	183	19	-
7	"	By G. Cheetham & Sons, for 40 bales:					
		40 B. wg. 125. 2. 16.	- 5. 2. 24.	- 119. 3. 19., or 13,431 lbs., at 6½ d.	363	15	1
7	"	By J. Harrison & Sons, for 30 bales:					
		30 B. wg. 95. 0. 19.	- 4. 1. 4.	- 90. 3. 15., or 10,179 lbs., at 6½ d.	275	13	7
7	"	By R. & J. Shipley, for 10 bales:					
		10 B. wg. 31. 2. 19.	- 1. 1. 20.	- 30. 0. 17., or 3,377 lbs., at 6½ d.	91	9	-
7	"	By J. Orrell & Co., for 10 bales:					
		10 B. wg. 31. 2. 17.	- 1. 1. 20.	- 30. 0. 25., or 3,385 lbs., at 6½ d.	91	13	6
7	"	By H. J. Ashton, for 40 bales:					
		40 B. wg. 125. 3. 15.	- 5. 2. 24.	- 120. 0. 19., or 13,459 lbs., at 6½ d.	364	15	3
7	"	By Mayall & Wain, for 2 bales:					
		2 B. wg. 6. 1. 12.	- 0. 1. 4.	- 6. 0. 8., or 680 lbs., at 6½ d.	18	8	4
8	"	By Josh. Clarke, Brs., for 10 bales:					
		10 B. wg. 31. 1. 19.	- 1. 1. 20.	- 29. 3. 26., or 3,358 lbs., at 6½ d.	90	18	11

* Dharwar Cotton.

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Account Sales of ^{W L}_{D C} 500 Bales of Cotton, per "Quintin Leitch," Bombay, &c.—continued.

1847:			£.	s.	d.	£.	s.	d.
9 September	By John Lees, for 10 bales:							
		Gross. T. & D. Net.						
	10 B. wg. 31. 2. 3. - 1. 1. 20. - 30. 1. 11., or 3,371 lbs., at 6½ d.		91	15	11			
9 "	By Marsland, Veltman & Co., for 5 bales:							
	5 B. wg. 15. 2. 23. - 0. 2. 24. - 14. 3. 27., or 1,679 lbs., at 6½ d.		45	9	5			
14 "	By Charles Haigh, for 2 bales:							
	2 B. wg. 6. 1. 12. - 0. 1. 4. - 6. 0. 8., or 680 lbs., at 6½ d.		18	8	4			
15 "	By George Andrew & Sons, for 10 bales:							
	10 B. wg. 31. 2. 14. - 1. 1. 20. - 30. 0. 12., or 3,382 lbs., at 6½ d.		91	11	-			
10 "	By J. Armstrong & Sons, for 5 bales:							
	5 B. wg. 15. 3. 4. - 0. 2. 24. - 15. 0. 8., or 1,688 lbs., at 6½ d.		45	14	-			
17 "	By Thomas Calrow & Sons, for 30 bales:							
	30 B. wg. 94. 2. 10. - 4. 1. 4. - 90. 1. 16., or 10,124 lbs., at 6½ d.		263	12	11			
21 "	By Wood & Westhead, for 6 bales:							
	6 B. wg. 18. 3. 26. - 0. 3. 12. - 18. 0. 14., or 2,030 lbs., at 6 d.		50	15	-			
25 "	By Thomas Mellowdew & Co., for 5 bales:							
	5 B. wg. 15. 3. 6. - 0. 2. 24. - 15. 0. 10., or 1,690 lbs., at 6 d.		42	5	-			
30 "	By Trustees of J. Hall & Sons, for 127 bales:							
	127 B. wg. 400. 0. 16. - 18. 0. 16. - 382. 0. 0., or 42,784 lbs., at 5½ d.		1,002	15	-			
30 October	By James Gray & Co., for 5 bales:							
	5 B. wg. 15. 2. 2. - 0. 2. 24. - 14. 3. 6. - or 1,658 lbs., at 4½ d.		32	16	3			
16 November	By James Gray & Co., for 6 bales:							
	6 B. wg. 14. 1. 15. - 0. 3. 12. - 13. 2. 3., or 1,627 lbs., at 4½ d.		30	10	-			
18 "	By Edward Sidebotham, for 5 bales:							
	5 B. wg. 15. 0. 16. - 0. 2. 24. - 14. 1. 20., or 1,616 lbs., at 4½ d.		30	6	-			
	By George Hinchcliffe, for 2 bales:							
	2 B. wg. 6. 0. 16. - 0. 1. 4. - 5. 2. 12., or 656 lbs., at 4½ d.		12	6	-			
						4,332	5	10
	Charges:							
	To warehouse-rent, weighing, delivering, &c., at 1 s. per bale		25	-	-			
	- mending and sampling, at 2 d.		4	3	4			
	- fire insurance		7	15	11			
	- petty expenses		1	10	-			
	- commission, del credere, and brokerage, on 4,332 l. 5s. 10 d., at 3½ %.		151	12	7			
							190	1 10
	NET Proceeds, average Cash, 2 December 1847						4,142	4 -

Manchester, 2 December 1847.

(E. E.)

(signed) Hugh Fleming.

Account Sales of ^{W L}_{DC} 500 Bales Cotton, per "Quintin Leitch," from Bombay, consigned to
Hugh Fleming, and sold on account of the Honourable East India Company.

		Payment, ten days and three months.			£. s. d.			£. s. d.		
1847:		By J. Leigh & Son, for 10 bales:								
30 October -		Gross.	T. & D.	Net.						
		10 B. wg.	30. 1. 10. -	1. 1. 20. -	28. 3. 18., or 3,238 lbs. at 4½ d.	60	14	-		
16 November		By J. Clarke & Br.; for 50 bales:								
		50 B. wg.	153. 1. 7. -	7. 9. 16. -	146. 0. 19., or 16,371 lbs. at 4½ d.	306	19	-		
18	"	By E. Sidebotham & Son, for 5 bales:								
		5 B. wg.	15. 1. 3. -	0. 2. 24. -	14. 2. 7., or 1,631 lbs. at 4½ d.	30	11	-		
		By George Hinchcliffe, for 3 bales:								
		3 B. wg.	9. 0. 12. -	0. 1. 20. -	8. 2. 20., or 972 lbs. at 4½ d.	18	4	-		
23	"	By George Cheetham & Sons, for 100 bales:								
		100 B. wg.	305. 2. 21. -	14. 1. 4. -	291. 1. 17., or 32,637 lbs. at 4½ d.	611	18	10		
1 Decembe		By J. Clarke & Br., for 50 bales:								
		50 B. wg.	152. 1. 14. -	7. 0. 16. -	145. 0. 26., or 16,266 lbs. at 4½ d.	304	19	-		
11	"	By J. Clarke & Br., for 140 bales:								
		140 B. wg.	429. 1. 17. -	20. 0. 0. -	409. 1. 17., or 45,853 lbs. at 4½ d.	811	19	-		
14	"	By George Cheetham & Sons, for 141 bales:								
		141 B. wg.	429. 3. 24. -	20. 0. 16. -	409. 3. 8., or 45,900 lbs. at 4½ d.	812	16	-		
18	"	By W. Fallows, for 1 bale and packings:								
		1 bale and packings, damaged, wg.	11. 1. 2., or 1,262 lbs. at 7/8			4	10	-		
		Average Cash, 16 March 1848								2,962 10 10
		Charges:								
		To receiving, weighing, delivering, and 2 months' rent at 1s.				25	-	-		
		- mending and sampling, at 2d.				4	3	4		
		- picking, re-packing, making up, and weighing 25 bales damaged cotton				2	10	-		
		- fire insurance				6	7	6		
		- petty expenses				1	10	-		
		- del credere commission and brokerage on 2,962l. 10s. 10d. 3½ per cent.				107	13	9		
		NET Proceeds, Cash, 16 March 1848								143 4 7
										2,819 6 3

(E. E.)

(s gned) Hugh Fleming.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1615.

III.
Bombay.

EXTRACTS of a Letter from *Hugh Fleming*, Esq., Manchester, dated 2 December 1847, to
J. C. Melvill, Esq., East India House, London.

"You will observe that the prices obtained for the last lots sold are 2*d.* per lb. below those of September; it is nevertheless the full market value, good New Orleans cotton having reached the same level. I have this week sold about 200 bales of those last seen home at 4½*d.*"

"I send some reports from spinners."

(Circular.)

Manchester Commercial Association.

OBSERVING that you have purchased — bales of experimental cotton imported by the Honourable the East India Company, per "Quintin Leitch," consigned to me, I beg to annex a list of queries as to its working qualities, to which I request the favour of your reply for the information of the Honourable Company, who are most desirous, as far as in them lies, to extend and improve the cultivation of the cotton plant in India.

I am, &c.
(signed) *Hugh Fleming*,
Secretary.

PRINTED Queries and Replies of Messrs. *George Cheetham & Sons*, *Thomas Dodgson & Nephews*, and *Thomas Mellodew & Co.*

Query 1. General character of the cotton as to staple, &c.?

Reply of Messrs. *George Cheetham & Sons*. The colour is good; the staple fair; and from these qualities, together with its cleanliness, can be used as a substitute for West Indian cotton. We might add, that, if possible to grow it a little finer, it would supply the place of New Orleans cotton.

Reply of Messrs. *Thomas Dodgson & Nephews*. Superior to any East Indian cotton we have used before; but not equal to the American we are using for the same counts.

Reply of Messrs. *Thomas Mellodew & Co.* Very regular in staple; but not so long as New Orleans; still it is longer than Surats, and more regular.

Query 2. Numbers of yarn spun?

Messrs. *George Cheetham & Sons*. No reply.

Reply of Messrs. *Dodgson & Nephews*. No. 20 throstle twist.

Reply of Messrs. *Thomas Mellodew & Co.* 22, 46, and 50.

Query 3. What does it lose as compared with Surat?

Messrs. *George Cheetham & Sons*. No reply.

Reply of Messrs. *Dodgson & Nephews*:

	Surat.	Experimental Cotton
Before carding - - - -	100lb. 0oz.	100 lb.
After carding - - - -	80 , 2,,	91 ,,

Reply of Messrs. *Thomas Mellodew & Co.* We did not notice it sufficiently to answer these questions, but are satisfied about its keeping its weight well; we may say as well as Orleans, worth 7½*d.* at the time it was purchased.

Query 4. What does it lose as compared with Orleans of, or nearly of, the same character?

Messrs. *George Cheetham & Sons*. No reply.

Reply of Messrs. *Dodgson & Nephews*:

	Orleans.	Experimental Cotton.
Before carding - - - -	100 lbs.	100 lbs.
After carding - - - -	89 ,,	91 ,,

Reply of Messrs. *Thomas Mellodew & Co.* See reply to Query No. 3.

III.
Bombay.

Query 5. Further observations?

Reply of Messrs. *George Cheetham & Sons*. From the manner in which we have used this cotton with others, we are not able to afford the information required by the above queries.

From Messrs. *Dodgson & Nephews*. None.

Reply of Messrs. *Thomas Mellodew & Co*. We have no hesitation in stating it as our opinion that it will be found a very useful cotton.*

Holt Town Mills, 21 September 1847.

RESULT of experiments made betwixt Orleans cotton at 6½ *d.* per lb. and the new Surat cotton at 6½ *d.* show that on an average of 60 bags, a bag of New Orleans weighing 16 lbs. 8 oz. produced after carding 14 lbs. 4 oz., and on the same average a bag of new Surat weighing 16 lbs. 5 oz. produced after carding 14 lbs. 15 oz.

The new cotton loses a little more in the spinning department than Orleans, but makes a good cover in the cloth, and is a capital colour.

(signed) *John Ormerod & Brothers*.

To the Honourable East India Company.

Gentlemen,

Stockport, 30 September 1847.

We have been induced to try a few bags of East Indian cotton purchased from your agents in Manchester, our report of which is as follows :

In colour it is good and tolerably clean, the dirt being of a loose character which readily flies off; in staple we find it short and irregular, but fine in texture. It cards and passes through its several preparations well, but makes too much "fly." We consider in Nos. 20 and 26 it will spin well, but not finer alone; on smaller drafts more twist would be required, which enhances its cost. In the cloth it looks well, and appears strong and well calculated from its colour for heavy grey goods.

In proving the cotton by spinning No. 36, we found the evil arise alluded to, but we consider was it mixed with good Orleans, good yarn may be produced in Nos. 36 to 40.

Trusting that by attention being paid to the cultivation of the plant in the East; and in the selection of suitable seed and soil, an improved produce will be the reward of the planter,

Yours, &c.
(signed) *pro Marsland, Veltmann & Co.*
S. G. Johnson.

Sir,

Blackburn, 29 October 1847.

Owing to our having closed our establishment we have been unable to make the experiments with the East Indian cotton which we contemplated; we can, however, speak in general terms of its efficiency as a substitute for middling North American cotton. The staple is clean and equal to that of middling Orleans cotton, and the cotton is of a very good colour and free from dirt. We have made some very good 32 weft from it, and think it well suited for 32 to 36 weft. When we recommence working, we shall be very happy to supply you with the particulars required in the Manchester Commercial Association's letter of the 28th instant.

I remain, &c.
(signed) *pro William Fielden & Sons,*
R. N. Jackson.

Hugh Fleming, Esq.

LETTER from Messrs. *Peel, Cassels & Co.*, of Bombay, to *Henry Young*, Esq., Collector of Customs, Bombay, dated 6 December 1847.

Sir,

In March last we were purchasers of some saw-ginned cotton, put up to sale at public auction by Government in the Custom-house, one lot of the cotton so purchased being the produce of Dhurrumgaum Factory, in the collectorate of Khandeish, the other (bought by us, joint account with and entered in the Custom-house books as sold to Messrs. *Higginson & Cardwell*),

* There is a further report unsigned. In reply to Query 1.—Not good. Query 2.—30 Mule. Query 3.—No common Surat used. Query 4.—The loss was not noticed. Query 5.—Not liked on account of colour.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1617

III.
Bombay.

& Cardwell), the produce of the collectorate of Dharwar. The whole of the cotton so acquired, was shipped to Liverpool on board the "Quintin Leitch," and we have now the honour to communicate the result of the operation to you, for the information of Government.

Upon arrival in Liverpool the Dharwar cotton was valued at 6½ d. per lb., and the Khandeish at 5½ d. to 5¾ d. per lb., Broach and Surat cotton, of the description usually shipped to Liverpool, being at the time worth 4½ d. to 5 d. per lb. The first-named cotton, in fact, realised 6½ d. per lb., but we are without full particulars of the sale of the second lot, and cannot therefore affirm that the whole of it found buyers at the valuation put upon it, though we believe such to have been the case.

With a view to making the quality of the cotton widely known in Lancashire, our Manchester firm caused samples of it to be exhibited in the Exchange of Manchester, and divided the cotton into lots of 10 bales each, not allowing any spinner to take more than one lot of a quality. The Dharwar cotton excited the greatest interest, and the applications for it were very numerous. Our friends wrote to us at the time; if we had had 5,000 bales of it we could have sold the whole with the greatest facility. The Khandeish cotton was admired for its cleanness, but did not attract any great attention, on account, we believe, of the staple being weak and slightly injured by the saw-gin.

We have had a report upon the working of the two descriptions per "Quintin Leitch," from a spinner in Lancashire, who is greatly pleased with the Dharwar, but describes the Khandeish to turn out much less satisfactorily. The result of a trial of equal quantities of the Dharwar, at 6½ d. per lb., and of New Orleans, at 6¾ d. per lb., was in favour of the Dharwar; it leaves less waste, and is better as to the web.

The general opinion in Lancashire is said by our Manchester friends to be, that any important extension of the cotton trade in India must be looked for in the cultivation of the Mexican plants.

We have, &c.
(signed) Peel, Cassels & Co.

Bombay, 6 December 1847.

ACCOUNT Sales of 608 Bales, 4 Half Bales, and 4 Bundles of Cotton,* per "Pemberton," sold for account of the Honourable East India Company, by Hugh Fleming.

		Payment, ten days and three months.			£. s. d.			£. s. d.		
1848: 28 December	By G. Cheetham & Sons, for 243 bales.									
	Gross. T. & D. Net.									
	B N	O C	156 B. wg.	470. 0. 4. - 22. 1. 4. - 447. 3. 0. or 50,148 lbs. at 4 d.	835	16	-			
	D C	166	wg. 500. 2. 24. - 23. 3. 18. - 476. 3. 6. or 53,402 lbs. at 4 d.	890	-	8				
	B C	21	wg. 64. 1. 1. - 3. 0. 0. - 61. 1. 1. or 6,861 lbs. at 4 d.	114	7	-				
Carriage					23	5	9			
1849: 9 January	By H. Lees & Bros., for 10 bales.							1,863	9	-
	C S	G	10 B. wg.	30. 1. 11. - 1. 1. 20. - 28. 3. 19. or 3,239 lbs. at 4 d.	53	19	8			
	Carriage					-	13	6		
								54	13	-

* DESCRIPTION FROM BOMBAY OF COTTON, PER "PEMBERTON."

B N	O C	Belgaum, New Orleans, 1846-47.							
D C		Dharwar cotton.							
B C		} Broach cotton, the produce of Belgaum.							
B N I C			} First and second class indigenous cotton, ginned at Naginhall.						
C C		Khandeish cotton, Dhurungau, 1846-47		-	-	-	-	-	-
S G		Ditto - Ditto; second gathering good; a little leaf	-	-	-	-	-	-	12 "
		Ditto - New Orleans	-	-	-	-	-	-	1 "
		Ditto - From a sowcar	-	-	-	-	-	-	8 "
		Ditto - From ryots at Julgaum	-	-	-	-	-	-	8 "
		Ditto - New Orleans, at Julgaum	-	-	-	-	-	-	2 "
		Ditto - From a sowcar at Julgaum	-	-	-	-	-	-	1 "
		Ditto - New Orleans; factory produce	-	-	-	-	-	-	1 Bundle.
		Ditto - Ditto ditto; at Julgaum	-	-	-	-	-	-	1 "
B N C		} Belgaum native cotton, 1846-47.							
B N O			} First picking, New Orleans, at Naginhall.						
C C		Mixed refuse.		-	-	-	-	-	-
C C		Khandeish, from Belgaum	-	-	-	-	-	-	
J F		From Nusseerabad Talook, in the neighbourhood of Julgaum; a very well got up article, clear of leaf, and has a strong staple	-	-	-	-	-	-	49 "
		Ditto, little leaf	-	-	-	-	-	-	2 Bundles.
		Julgaum	-	-	-	-	-	-	1 Bale.
		Purchased at Julgaum	-	-	-	-	-	-	1 Bundle.

Account Sales of 608 Bales, 4 Half Bales, and 4 Bundles of Cotton, per "Pemberton, &c."—continued.

1848:		£.	s.	d.	£.	s.	d.
30 January	By Samuel Radcliffe & Sons, for 20 bales. CS SG 20 B. wg. 60. 3. 2. - 2. 3. 12. - 57. 3. 18. or 6,486 lbs. at 4 d. Carriage - - - - -	108	2	-			
				1 7 4	109	9	4
2 February	By John Worthington & Sons, for 20 bales. B NC 20 B. wg. 60. 2. 1. - 2. 3. 11. - 57. 2. 17. or 6,457 lbs. at 4 d. Carriage - - - - -	107	12	4			
				1 7 2	108	19	-
3 February	By J. Clarke & Bros., for 40 bales. B NC 40 B. wg. 121. 2. 19. - 5. 2. 24. - 115. 2. 23. or 12,987 lbs. at 4 d. Carriage - - - - -	216	9	-			
				2 14 6	219	3	6
15 February	By John Bright & Bros., for 20 bales. CG SC 20 B. wg. 61. 0. 1. - 2. 3. 12. - 56. 0. 17. or 6,513 lbs. at 4 d. Carriage - - - - -	108	11	-			
				1 7 5	109	18	-
6 March	By W. & D. Morris, for 10 bales. CG SC 10 B. wg. 30. 1. 10. - 1. 1. 20. - 28. 3. 18. or 3,238 lbs. at 4 ½ d. Carriage - - - - -	57	6	9			
				- 13 7	58	-	-
26 April	By John Bright & Bros., for 45 bales. CC 2½ SG 55 B. wg. 104. 1. 3. at 5 ½ d. B I C 1½ B N 7 B wg. 22. 2. 23. CC 1 B. wg. 3. 0. 13. B N O 1½ B. wg. 1. 0. 0. CC ½ B. J F 2 B. wg. - 7. 1. 2. 138. 1. 13. - 6. 3. 19. - 131. 1. 22. or 14,722 lbs. at 3 ½ d. Carriage - - - - -	222	7	-			
				3 2 3	225	9	3
22 May	By John Bright & Bros., for 30 bales. CC J F 30 B. wg. 90. 3. 2. - 4. 1. 6. - 86. 1. 26. or 9,686 lbs. at 3 ½ d. Carriage - - - - -	141	5	-			
				2 - 9	143	5	9
	By Samuel Lucas & Co., for 20 bales. CC J F 20 B. wg. 60. 2. 0. - 2. 3. 12. - 57. 2. 16. or 6,456 lbs. at 3 ½ d. Carriage - - - - -	94	3	-			
				1 7 -	95	10	-
5 June	By John Bright & Bros., for 50 bales. CC 50 J F ½ B. wg. 151. 0. 2. - 7. 0. 27. - 143. 3. 3. or 16,103 lbs. at 3 ½ d. Carriage - - - - -	234	16	-			
				3 8 -	238	4	-
	Charges:						
	To carriage from Liverpool				3,226	-	10
	- sampling, weighing, and delivering			41 5 8			
	- allowance for short weight to Messrs. G. Cheetham & Sons			15 14 8			
	- advertising and petty expenses			1 16			
	- fire insurance			1 10 -			
	- del credere commission and brokerage on 3,226 l. 0 s. 10 d. at 3 ½ %			5 6 -			
				112 18 2			
					178	11	2
					£.	3,047	9 8

(E. E.)

(signed) Hugh Fleming.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1619

ACCOUNT Sales of 608 Bales, and 30 Half Bales of Cotton,* per "Gulterus," from Bombay, sold for account of the Honourable East India Company, by *Hugh Fleming*, of Manchester

		Payment, ten days and three months.			£. s. d.			£. s. d.			
1848:	28 November	By Birley & Co., for 239 bales and 10 half lbs.									
		CC 100 B.	Gross.	T. & D.	Net.						
		CC NO 1 B.	wg. 354. 0. 12.	- 14. 1. 20.	- 339. 2. 20.	or 38,044 lbs.	at 3 d.	475	11	-	
		BC B 100.									
		BC J 37.									
		MC 1.									
		BC J 10 1/2 B.	wg. 503. 0. 27.	- 20. 2. 20.	- 482. 2. 7.	or 54,047 lbs.	at 3 1/2 d.	731	17	8	
			Carriage	-	-	-	-	19	5	10	
									1,226	14 -	
	29 November	By Josh. Clarke & Bros., for 349 bales & 20 1/2 lbs.									
		CC 93 B.	wg. 344. 0. 5.	- 14. 0. 0.	- 330. 0. 5.	or 36,965 lbs.	at 3 d.	462	1	3	
		BC A 49.									
		BC 120 B.	wg. 634. 0. 24.	- 26. 1. 0.	- 607. 3. 24.	or 68,092 lbs.	at 3 1/2 d.	922	1	7	
		BC B 20 1/2									
		SC 81 B.	wg. 383. 3. 5.	- 11. 2. 8.	- 272. 0. 25.	or 30,489 lbs.	at 3 1/2 d.	444	12	7	
			Carriage	-	-	-	-	28	8	-	
									1,857	3 -	
		By G. Higgins, for 20 bales.									
		BC B 20 B.	wg. 70. 1. 23.	- 2. 3. 12.	- 67. 2. 11.	or 571 lbs.	at 3 1/2 d.	102	10	-	
			Carriage	-	-	-	-	1	11	6	
									104	1 6	
									3,187	18 6	
		Charges:									
	24 November	To carriage from Liverpool						49	1	10	
		- forwarding, weighing, and sampling						15	19	-	
	24 December	- printing and petty expenses						1	15	6	
		- fire insurance						3	15	-	
		- brokerage, commission, and del credere, on 3,187 £. 18 s. 6 d. at 3 1/2 per cent.						111	11	10	
									- 182	3 2	
		NET Proceeds, avg. Cash, 12 March 1849								3,005	15 4

(E. E.)

(signed) *Hugh Fleming*.

20 January 1849.

* DESCRIPTION FROM BOMBAY OF COTTON, PER "GULTERUS."

- BC } Broach cotton cultivated by the ryots in 1847-48, and cleaned at Broach by cattle-power machinery.
- B 1 to 261 }
- BC } Ditto - ditto - by hand-gin machinery.
- A 1 to 47 }
- SC } Surat cotton cultivated in Surat by ryots, in 1847-48, and cleaned at Surat by hand-gin machinery.
- 1 to 82 }
- CC } Khandeish cotton from Dhurrumgaum and Julgaum, 1847-48.
- 1 to 98 }
- CC } New Orleans, Khandeish, 1847-48.
- NO 199 }
- MC } Mixed cotton.
- 639 }

EXTRACT Paras. 3 and 4 of a Letter from *H. Young, Esq.* Collector of Customs, Bombay, to *J. G. Lumsden, Esq.*, Secretary to Government, Territorial Department, dated 4 July 1848.

3. I take this opportunity to notice a circumstance connected with the shipment of saw ginned cotton, which considerably enhances the freight on this article, as compared with cotton cleaned by the ordinary country process. It appears that, from (as I conclude) the action of the gin by which the staple of the cotton is crossed in all directions when delivered by the machine, it presents a much greater resistance than other cotton to the press when packed into bales preparatory to shipment.

4. The Bombay cotton presses have not, in fact, power to compress the saw-ginned cotton into a bale of the usual dimensions and weights; on some occasions the attempt has caused injury to the presses, and the result is that, on the present occasion, the bales, measuring each 14.23 cubic feet, average only 380 lbs.; thus 609 bales and 30 half bales measure 177.63 tons, and weigh 2,37,300 lbs.; whereas the same weight of ordinary cotton might have been packed in bales measuring 13 1/4 cubic feet, and weighing 392 lbs. each, thus occupying a total measurement of 160.42 tons, being 17.21 tons less than the tonnage occupied by the present shipment; at 3 l. 5 s. per ton, the loss in freight amounts to 55 l. 5 s.

I have, &c.
(signed) *H. Young*, Collector of Customs.

Bombay Custom-house, 4 July 1848.

10 C 2

296—Sess. 2.

Account Sales of 618 Bales and 24 Half Bales East India Cotton,* ex "Brahmin," from Bombay, sold in Manchester for account the Honourable East India Company, by Hugh Fleming.

		£.	s.	d.	£.	s.	d.
1849:	Payment, ten days and three months.						
6 September	By George Cheetham & Sons, for 332 bales and 20 half bales.						
	Gross. T. & D. Net.						
	DC - 227 B. } wg. 801. 0. 9. - - 32. 1. 20. - - 768. 2. 17.	1,793	10	5			
	or 86,089 lbs. at 5 d. - - - - -						
	DC - 105 B. } wg. 408. 2. 7. - - 16. 3. 24. - - 391. 2. 11.	868	-	10			
	2 - 20½ B. } or 43,859 lbs. at 4½ d. - - - - -						
	Carriage, at 6 s. - - - - -	18	3	-			
					2,679	14	-
11 October	By Kelly & Gilmour, for 231 bales and 3 half bales.						
	CC - 108 B. } " - 1½ } BC - 39 } wg. 821. 0. 26. - - 33. 1. 5. - - 787. 3. 21.						
	N - 84 } N - 1½ } MC - 1½ }						
	or 88,249 lbs. at 4½ d. - - - - -	1,608	14	1			
	Carriage, at 2 s. 6 d. - - - - -	5	2	8			
					1,613	16	9
12 October	By Kelly and Gilmour, for 55 bales and 1 half bale.						
	BC - 55 B. } wg. 196. 0. 14. - - 7. 3. 23. - - 188 0. 19.	461	-	-			
	NO - 1½ B. } or 21,075 lbs. at 5½ d. - - - - -						
	Carriage, at 2 s. 6 d. - - - - -	1	4	6			
					462	4	6
					4,755	15	3
	Charges:						
28 August	To carriage from Liverpool - - - - -	33	17	7			
	- portorage, weighing, sampling, &c. - - - - -	16	1	-			
	- cartage at Liverpool - - - - -	5	11	4			
	- ditto at Manchester - - - - -	3	13	-			
	- interest on 55 l. 9 s. 11 d., 128 days - - - - -	-	19	3			
	- fire insurance - - - - -	5	15	6			
	- petty expenses - - - - -	1	10	-			
	- del credere commission and brokerage, or 4,755 l. 15 s. 3 d. at 3½ % - - - - -	166	9	2			
					233	16	10
	NET Proceeds, averaging Cash, 4 January 1850 - - - - -				4,621	18	5

(E. E.)

19 December 1849.

(signed) Hugh Fleming.

* DESCRIPTION FROM BOMBAY OF COTTON, PER "BRAHMIN."

CC - No. 1 to 109 Bales of Khandesh indigenous saw-ginned clean cotton, from Dhurrungaum factory, the produce of 1848-49.

BC } No. 1 to 56 Bales of New Orleans cotton, from Belgaum Collectorate, the produce of 1847-48.
NO }BC } No. 1 to 39 Bales of native 1st class cotton, from Belgaum Collectorate, the produce of 1847-48.
N }BC } No. 1 to 85 Bales of native 2d class cotton, from Belgaum Collectorate, the produce of 1847-48. The bale No. 85 is made of the pickings
N } or refuse of good cotton.

DC - No. 1 to 227 Bales of New Orleans Dharwar cotton, the produce of 1847-48, and is the best of the New Orleans Cotton of that season grown in the Dharwar district.

DC } No. 1 to 125 Bales of New Orleans Dharwar cotton, season 1847-48, described as slightly differing in quality from the above bales.
2 }

MC - No. 642. This bale is made of mixed cotton, from the above three Collectorates.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1621

REPORT ON 618 Bales and 24 Half Bales, East Indian Cotton, ex "Brahmin," from Bombay

III.
Bombay.

1. CC 108 Bales } Ordinary Surat leafy and dirty; short staple, similar to the usual
1 half Bale } run of Surat cotton.
2. BC 53 Bales } Clean and bright, good colour and staple, and in every respect
NO 1 half Bale } superior cotton.
3. BC 39 Bales } Good ordinary Surat, with leaf and dirt; staple short and similar
N } to the general import of Surat cotton.
4. BC 84 Bales } Native cotton, ordinary quality with both leaf and dirt, similar to
N 1 half Bale } Lot No. 3.
5. DC 227 Bales } Clean and bright, rather brown in colour, but good staple. An
useful cotton.
6. DC 103 Bales } Clean, but colour rather brown; staple fair, but not quite so good as
2 20 half Bales } Lot 5.
7. MC 1 half Bale Mixed cotton.

The above import of cotton cannot be considered equal in quality to that imported in 1848 per the "Quintin Leitch." Lots 1, 3 and 4 differ little from the common run of Surat, and in ordinary years would not be worth importing.

Account Sales of 663 Bales, 22 Half Bales, and 1 Bundle of Cotton,* ex "George Buckham," sold in Manchester for account the Honourable East India Company, by Hugh Fleming.

		Payment, ten days and three months.			£. s. d.			£. s. d.		
1849:		By Kelly & Gilmour, for 462 bales, 17 half bales, and 1 bundle.								
		Gross.	T. & D.	Net.						
BC	- 335 B.	} wg. 1,223. 0. 20. - or 131,491 lbs. at 5½d.	} 49. 0. 17. -	} 1,174. 0. 3.	2,876 7 3					
CC	- 8									
NO	- 1 Bdle.									
BC	- 33 B.	} wg. 142. 1. 3. - or 15,305 lbs. at 5½d.	} 5. 2. 24. -	} 136. 2. 17.	350 14 9					
SK	- 7									
CC	- 79 B.	} wg. 309. 3. 12. - or 33,271 lbs. at 4½d.	} 12. 3. 12. -	} 297. 0. 7.	641 3 3					
DC	- 16½ B									
					3,868 5 -					
Carriage, 2s. 6d.					10 9 4			3,878 14 4		

* DESCRIPTION FROM BOMBAY OF COTTON, PER "GEORGE BUCKHAM"

- BC 335 Bales } of saw-ginned cotton from Brooch, the produce of 1848-49.
1 half Bale }
- BC } 24 Bales - ditto - ditto - of rather cleaner and better quality than the foregoing.
K }
- CC 140 Bales } Saw-ginned, indigenous, from Khandeish, the produce of 1848-49.
1 half Bale }
- CC } 80 Bales - ditto - ditto - cleaner, and free from leaf and extraneous matter.
A }
- CC } 8 Bales } New Orleans, saw-ginned, from Khandeish, the produce of 1848-49.
NO } 1 Bundle }
- SC 27 Bales - , Saw-ginned, from Surat, the produce of 1848-49.
- DC 20 half Bales New Orleans, saw-ginned, from Dharwar, the produce of 1847-48.

ACCOUNT Sales of 663 Bales, 22 Half Bales, and 1 Bundle of Cotton, ex "George Buckham"—*continued.*

		£.	s.	d.	£.	s.	d.
1849:	By S. & F. Ashton, for 30 bales.						
	Gross.			T. & D.			Net.
	S C - 30 B. wg. 106. 0. 25. - - - - -			4. 1. 4. - - - - -			101. 3. 21.
	or 11,417 lbs. at 5½ d.						
	Carriage, 2 s. 6 d.						
		261	12	-			
				-	13	3	
							262 5 3
13 November	By G. Battams, for 22 bales and 4½ bales damaged.						
	6 B. at 6 L 5 s. per bale						37 10 -
	6 B. at 6 L 10 s. "						52 - -
	4½ B. } at 6 L 17 s. 6 d. "						34 7 6
	5 B. }						35 - -
	5 B. at 7 L - - - - -						
	3 Bags, packages, wg. 4. 2. 24. - - - - -			0. 0. 23. - - - - -			4. 2. 1.
	or 505 lbs. at 3¾ d.						
							7 1 11
							165 19 5
7 November	By Joseph Clarke & Bros., for 20 bales.						
	C C - 20 B. wg. 71. 1. 7. - - - - -			2. 3. 12. - - - - -			68. 1. 23.
	or 7,667 lbs. at 4½ d.						
	Carriage						
		143	15	-			
				-	8	11	
							144 3 11
1850:							
23 January -	By G. Boggens, for 5 bales.						
	C C - 5 B. wg. 17. 3. 25. - - - - -			0. 2. 24. - - - - -			17. 1. 1.
	or 1,933 lb. at 4½ d.						
	Carriage						
		36	4	-			
				-	9	-	
							36 13 -
	By J. A. Turner & Co., for 5 bales.						
8 April -	C C - 5 B. wg. 17. 3. 19. - - - - -			0. 2. 24. - - - - -			17. 0. 23.
	or 1,927 lbs. at 3¾ d.						
	Carriage						
		31	2	-			
				-	9	-	
							31 11 -
10 April -	By Joseph Clarke & Bros., for 119 bales and 1 half bale.						
	C C 119 B. } wg. 428. 0. 8. - - - - -			17. 0. 11. - - - - -			410. 3. 25.
	1½ B. } or 46,029 lbs. at 3¾ d.						
	Carriage						
		743	3	-			
				-	9	12 6	
							752 15 6
	Charges:						
16 October -	To carriage from Liverpool						15 18 11
	- portorage, weighing, sampling, &c.						18 13 -
	- cartage at Manchester						6 1 3
	- interest on 34 L 1 s. 11 d., 131 days						- 12 2
	- fire insurance						6 2 6
	- del credere commission, and brokerage on 5,272 L 2 s. 5 d. at 3½%						184 10 2
							231 18 -
	Net Proceeds, averaging Cash, 24 February 1850						5,040 4 5

(E. E.)

25 April.

(signed) *Hugh Fleming.*

The apparent discrepancies in the charges for carriage have arisen in consequence of the fluctuations in carriers' rates, the practice being to charge the buyers with the rate current at the time of settlement.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA. 1623

III.
Bombay.

REPORT on 663 Bales, 22 Half Bales, and 1 Bundle of East India Cotton, ex "George Buckham," from Bombay.

1. B C 335 Bales } Clean; good colour and staple, and very superior. The best lot
1 half Bale } of cotton imported by the Honourable Company this season.
2. B C 34 Bales } Very clean, bright cotton, good colour, and staple very superior.
K
3. S C 37 Bales - - Ditto - - - Ditto.
4. C C 8 Bales } Clean, good colour, and staple; a very useful cotton.
NO 1 Bdle }
5. C C 80 Bales } Leafy, and rather dirty, weak in staple, and brownish colour.
A
6. D C 20 half Bales. Similar in quality to Lot 5.
7. C C 149 Bales } Dirty, leafy, bad colour, staple apparently destroyed in ginning,
663 Bales, 22 half Bales, and 1 Bundle. } and worse than the usual indigenous cotton.

In the above imports, Lots 1, 2, 3, and 4 are good cottons, and would answer a great many purposes for which American cotton is used. The other lots are, however, very inferior, particularly Lot 7, which appears to have been quite destroyed in ginning; great difficulty has been experienced in disposing of it.

Manchester Commercial Association,
25 April 1850.

(signed) *Hugh Fleming,*
Secretary.

ACCOUNT Sales of 51 Bales, 1 Half Bale, and 1 Bundle of Cotton,* ex "Anne Cropper," sold in Manchester for account of the Honourable East India Company.

		Payment, ten days and three months.						
1850:		By Staley & Wilkinson, for the whole.			£.	s.	d.	
April -		Gross.	T. & D.	Net.				
	C C 51 B	} wg. 182. 1. 26. - 7. 21. - 175. 0. 5., or 19,605 lbs.						
	1 1/2 B		at 4 d.			326	15	-
	1 Bdle					4	2	2
		Carriage					330 17 2	
1849:		Charges:						
November	To carriage from Liverpool				1	2	9	
	- portorage, weighing, sampling, &c.				1	6	6	
	- interest on 2 l. 9 s. 3 d. for 250 days				-	1	8	
	- fire insurance				1	6	6	
	- del credere commission, and brokerage on 330 l. 17 s. 2 d. at 3 1/2 %				11	11	7	
							15. 9 -	
							315 8 2	
							Net Proceeds, average Cash, 22 July 1850 - - - £.	

April 25.

(signed) *H. Fleming.*

* Khandeish cotton.

ACCOUNT Sales of 1,390 Bales, 60 Half Bales, and 2 Bundles of Cotton,* per "India," sold in Manchester for account the Honourable East India Company, by *Hugh Fleming*.

1851:	Payment, ten days and three months.	£.	s.	d.	£.	s.	d.
7 January	By A. Vickers, for 10 bales: Gross. T. & D. Net. CC 10 B. wg. 36. 0. 6. - 1. 1. 20. - 34. 2. 14., or 3,878 lbs., at 5½ d. Carriage, 9 s.	84	16	-			
							85 12 2
7 "	By Radcliffe Brothers, for 10 bales: DC A 10 B. wg. 35. 2. 10. - 1. 1. 20. - 34. 0. 18., or 3,826 lbs., at 6½ d. Carriage, 9 s.	107	12	-			
							108 8 -
7 "	By James Smith & Sons, for 10 bales: " 10 B. wg. 35. 1. 27. - 1. 1. 20. - 34. 0. 7., or 3,815 lbs., at 6½ d. Carriage, 9 s.	107	5	-			
	Carriage allowed - - - - -	108	1	-			
							107 12 -
7 "	By James Howarth & Brothers, for 30 half bales: DC E 30 ½ B. wg. 54. 1. 7. - 2. 3. 24. - 51. 1. 11., or 5,761 lbs., at 5½ d. Carriage, 9 s.	125	16	-			
	Carriage allowed - - - - -	127	-	5			
							126 9 6
8 "	By Kelly & Gilmour, for 10 bales: DC A 10 B. wg. 35. 0. 24. - 1. 1. 20. - 33. 3. 4., or 3,784 lbs., at 6½ d. Carriage, 10 s.	106	8	-			
	Carriage, 10 s. - - - - -						107 5 7
8 "	By S. & T. Ashton, for 10 bales: " 10 B. wg. 35. 2. 0. - 1. 1. 20. - 34. 0. 8., or 3,816 lbs., at 6½ d. Carriage, 9 s.	107	6	-			
	Carriage, 9 s. - - - - -						108 2 -
9 "	By Thomas Barton & Son, for 10 bales: " 10 B. wg. 35. 2. 22. - 1. 1. 20. - 34. 1. 2., or 3,838 lbs., at 6½ d. Carriage, 10 s.	105	18	-			
	Carriage, 10 s. - - - - -						106 15 10
9 "	By William Holme & Brothers, for 20 bales: " 20 B. wg. 71. 1. 25. - 2. 3. 12. - 68. 2. 13., or 7,685 lbs., at 6½ d. Carriage, 9 s.	212	2	-			
	Carriage, 9 s. - - - - -						
	Carriage allowed, 4 s. - - - - -	213	14	2			
							212 19 10

* DESCRIPTION FROM BOMBAY OF COTTON, PER "INDIA."

BC NO	No. 1 to 136	Bales of Belgaum New Orleans cotton, the produce of 1848-49.
BC N	No. 1 to 23	Bales of Belgaum Native 1st class cotton, the produce of 1848-49.
BC N	No. 1 to 41	Bales of Belgaum Native 2d class cotton, the produce of 1848-49.
DC A	No. 1 to 681	Bales of Dharwar New Orleans cotton, the produce of 1848-49.
DC B	No. 1 to 38	Bales of Dharwar New Orleans cotton, the produce of 1848-49, and described as being of somewhat better quality than the above.
DC C	No. 1	Bale of Dharwar New Orleans cotton, the produce of 1848-49, described as somewhat dirty and mixed cotton.
DC D	No. 1 to 104 No. 1 to 20	Bales of Dharwar Native cotton, the produce of 1848-49.
DC E	No. 1 to 32	Bales of Dharwar Native cotton, the produce of 1848-49, and described as being somewhat dirty cotton.
DC F	No. 1 to 8	Bales of Breach cotton, received from Dharwar Collectorate, the produce of 1848-49.
CC NO	No. 1 to 451 No. 1 to 8	Bales of Khandeish indigenous saw-gin cleaned cotton, the produce of 1849-50. The bales from No. 326 to 397, 72 whole bales, and from No. 1 to 7, seven half bales, are a little dirtier than the other bales.
CC NO	No. 1 to 26	Bales of Khandeish New Orleans saw-gin cleaned cotton, the produce of 1849-50.

Account Sales of 1,330 Bales, 60 Half Bales, and 2 Bundles of Cotton, per "India"—continued.

1851:			£.	s.	d.	£.	s.	d.
9 January	By Robt. Hocking, for 10 bales:							
		Green. Y. & D. Net.						
	D C A 10 B. wg. 35. 2. 17. - 1. 1. 20. - 34. 0. 25., or 2,923 lbs., at 6½ d.		165	16	-			
	Carrriage, 9s.			16	1			
	Carrriage allowed		165	12	1			196 4 11
				4	-			
9 "	By Jn. Turner & Co, for 10 bales:							
	" 10 B. wg. 35. 2. 17. - 1. 1. 20. - 34. 1. 25., or 2,931 lbs., at 6½ d.		165	11	-			
	Carrriage, 9s.			16	2			
	Carrriage allowed, 4s.		167	7	2			197 - -
				7	2			
9 "	By E. G. Kay, for 20 bales:							
	" 20 B. wg. 71. 0. 2. - 2. 2. 12. - 63. 0. 25., or 7,641 lbs., at 6½ d.		219	13	-			
	Carrriage, 9s.			11	11			
	Carrriage allowed, 2s.		212	9	11			212 2 19
				7	1			
9 "	By J. & J. Ashton, for 25 bales:							
	" 25 B. wg. 52. 0. 17. - 2. 2. 2. - 53. 2. 2., or 2,535 lbs., at 6½ d.		234	11	-			
	Carrriage, 9s.			2	1			236 11 1
9 "	By T. & J. Aiken, for 20 bales:							
	" 20 B. wg. 72. 2. 21. - 2. 2. 12. - 67. 2. 9., or 7,507 lbs., at 6½ d.		219	14	-			
	Carrriage, 9s.			11	19			
	Carrriage allowed, 4s.		221	5	19			229 11 8
				14	2			
9 "	By Jn. Lark, for 20 bales:							
	" 20 B. wg. 72. 2. 12. - 2. 2. 12. - 63. 0. 7., or 7,623 lbs., at 6½ d.		219	8	-			
	Carrriage, 9s.			11	11			
	Carrriage allowed, 4s.		221	19	11			221 5 9
				14	2			
9 "	By Robt. Munn & Co, for 25 bales:							
	" 25 B. wg. 52. 2. 12. - 2. 2. 2. - 53. 1. 11., or 2,532 lbs., at 6½ d.		232	16	-			
	Carrriage, 9s.			2	-			
	Carrriage allowed, 4s.		235	16	7			234 12 2
				17	9			
9 "	By W. & W. Sterling, for 10 bales:							
	" 10 B. wg. 22. 1. 21. - 1. 1. 21. - 24. 0. 0., or 2,318 lbs., at 4½ d.		115	2	-			
	Carrriage, 11s.			17	9			115 29 9
9 "	By Fehlen & Bowlers, for 10 bales:							
	" 10 B. wg. 22. 2. 12. - 1. 1. 21. - 24. 0. 21., or 2,324 lbs., at 4½ d.		115	12	-			
	Carrriage, 9s.			12	1			
	Carrriage allowed, 2s. 2d.		116	12	1			116 6 2
				5	8			
11 "	By S. Ratchell & Sons, for 10 bales:							
	" 10 B. wg. 22. 2. 2. - 1. 1. 21. - 24. 0. 11., or 2,314 lbs., at 4½ d.		115	7	-			
	Carrriage, 9s.			12	-			115 2 -

(continued)

Account Sales of 1,390 Bales, 60 Half Bales, and 2 Bundles of Cotton, per "India"—*continued.*

1851:		£.	s.	d.	£.	s.	d.
11 January -	By Jn. Shawcross, for 10 bales :						
	Gross. T. & D. Net.						
	D C A 10 B. wg. 35. 3. 8. - 1. 1. 20. - 34. 1. 6., or 3,832 lbs., at 6 $\frac{1}{2}$ d.	106	6	-			
	Carriage, 10 s.	17	9	-			
					107	3	9
11 " -	By M. Broadbent & Son, for 10 bales :						
	" 10 B. wg. 35. 1. 13. - 1. 1. 30. - 33. 3. 21., or 3,801 lbs., at 6 $\frac{1}{2}$ d.	104	18	-			
	Carriage, 9 s.	-	15	10			
					105	13	10
11 " -	By J. R. Calron, for 5 bales :						
	" 5 B. wg. 17. 3. 24. - 0. 2. 24. - 17. 1. 0., or 1,932 lbs., at 6 $\frac{1}{2}$ d.	53	6	-			
	Carriage, 9 s.	-	8	1			
					53	14	1
14 " -	By J. Butterworth & Sons, for 10 bales :						
	" 10 B. wg. 35. 2. 6. - 1. 1. 20. - 34. 0. 14., or 3,822 lbs., at 6 $\frac{1}{2}$ d.	105	10	-			
	Carriage, 9 s.	-	16	-			
					106	6	-
17 " -	By the Dacca Twist Company, for 25 bales :						
	" 25 B. wg. 88. 3. 9. - 3. 2. 8. - 85. 1. 1., or 9,549 lbs., at 6 $\frac{1}{2}$ d.	263	11	-			
	Carriage, 10 s.	2	4	5			
					265	15	5
20 " -	By Worthington & Benson, for 15 bales :						
	" 15 B. wg. 53. 1. 27. - 2. 0. 16. - 51. 1. 11., or 5,751 lbs., at 6 $\frac{1}{2}$ d.	158	15	-			
	Carriage, 9 s.	1	4	-			
	Carriage allowed, 4 s.	-	10	8			
					159	8	4
21 " -	By Richard Ashworth & Co., for 30 bales :						
	" 30 B. wg. 106. 3. 9. - 4. 1. 4. - 102. 2. 5., or 11,485 lbs., at 6 $\frac{1}{2}$ d.	311	1	-			
	Carriage, 9 s.	2	7	11			
	Carriage allowed, 4 s.	1	1	4			
					312	7	7
21 " -	By R. Munn & Co., for 50 bales :						
	" 50 B. wg. 176. 3. 19. - 7. 0. 16. - 169. 3. 3., or 19,015 lbs., at 6 $\frac{1}{2}$ d.	514	19	-			
	Carriage, 9 s.	3	19	6			
	Carriage allowed, 4 s.	1	15	5			
					517	3	1
21 " -	By A. Ormerod & Bros., for 50 bales :						
	" 50 B. wg. 177. 2. 1. - 7. 0. 16. - 170. 1. 13., or 19,081 lbs., at 6 $\frac{1}{2}$ d.	516	15	-			
	Carriage, 9 s.	3	19	10			
	Carriage allowed, 3 s. 2 d.	1	8	1			
					519	6	9
21 " -	By Dawson & Haworth, for 50 bales :						
	" 50 B. wg. 177. 2. 5. - 7. 0. 16. - 170. 1. 17., or 19,085 lbs., at 6 $\frac{1}{2}$ d.	516	17	-			
	Carriage, 9 s.	3	19	10			
	Carriage allowed, 4 s.	1	15	6			
					519	1	4

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1627

ACCOUNT Sales of 1,390 Bales, 60 Half Bales, and 2 Bundles of Cotton, per "India"—continued.

1851:			£.	s.	d.	£.	s.	d.
21	January -	By Jas. Howarth & Bros, for 50 bales:						
			Gross.	T. & D.	Net.			
		D C } 50 B. wg. 177. 1. 15. - - - 7. 0. 16. - - - 170. 0. 27.						
		A } or 19,067 lbs., at 6½ d.				516	7	-
		Carriage, 9 s.				3	19	9
						520	6	9
		Carriage allowed, 4 s.				1	15	6
								518 11 3
21	"	By Jn. Lord, for 64 bales:						
		D C } 64 B. wg. 227. 2. 27. - - - 9. 0. 16. - - - 218. 2. 11.						
		D } or 24,483 lbs., at 6½ d.				663	1	-
		Carriage, 9 s.				5	2	5
						668	3	5
		Carriage allowed, 4 s.				2	5	7
								665 17 10
21	"	By Kelly & Gilmour, for 10 bales and 20 half bales:						
		" 10 B. } wg. 73. 2. 21. - - - 3. 1. 16. - - - 70. 1. 5.						
		" 20 ½ B. } or 7,873 lbs., at 6½ d.				213	4	-
		Carriage, 10 s.				1	16	10
								215 - 10
21	"	By Thos. Barton & Son, for 20 bales:						
		" 20 B. wg. 71. 0. 3. - 2. 3. 12. - 68. 0. 19., or 7,635 lbs., at 6½ d.				206	15	-
		Carriage, 10 s.				1	15	6
								208 10 6
21	"	By Fielden, Bros., for 90 bales:						
		D C } 90 B. wg. 319. 1. 20. - - - 12. 3. 12. - - - 306. 2. 8.						
		A } or 34,336 lbs. at 6½ d.				929	18	-
		Carriage, 9 s.				7	3	8
						937	1	8
		Carriage allowed, 3 s. 2 d.				2	10	6
								934 11 2
22	"	By S. & T. Ashton, for 10 bales:						
		" 10 B. wg. 35. 1. 24. - 1. 1. 20. - 34. 0. 4., or 3,812 lbs., at 6½ d.				103	4	-
		Carriage, 9 s.				-	16	-
								104 - -
23	"	By Geo. Cheetham & Sons, for 212 bales, 1 half bale, and 1 bundle:						
		" 22 B. wg. 78. 0. 15. - 3. 0. 16. - 74. 3. 27., or 8,399 lbs., at 6½ d.				227	9	5
		D C } 38 B. wg. 135. 0. 12. - - - 5. 1. 20. - - - 129. 2. 20.						
		B } or 14,524 lbs., at 7½ d.				446	6	3
		B C } 20 B. wg. 71. 1. 24. - - - 2. 3. 12. - - - 68. 2. 12.						
		N } or 7,684 lbs., at 7½ d.				236	2	5
		" 132 B. } wg. 466. 3. 5. - - - 19. 0. 6. - - - 447. 2. 27.						
		N O. ½ B. } or 50,147 lbs., at 7½ d.				1,540	19	6
		1 Bdle. }						
						2,450	17	7
		Carriage, 9 s.				16	18	2
						2,467	15	2
		Carriage allowed, 5 s.				9	8	-
								2,458 7 2

(continued)

Account Sales of 1,390 Bales, 60 Half Bales, and 2 Bundles of Cotton, per "India"—*continued.*

1851:					£.	s.	d.	£.	s.	d.	
29 January	-	By T. & J. Artken, for 27 bales and 2 half bales:									
		CC - 19 B.	} wg. 98. 1. 17. - - 4. 0. 6. - - 94. 1. 11. or 10,567 lbs. at 6 $\frac{1}{2}$ d.	Gross.	T. & D.	Net.					
		NO - 1 $\frac{1}{2}$ B.									
		DC - 7 B.									
		E - 1 $\frac{1}{2}$ B.						269	13	--	
		DC - 1 B.									
		C - 1 B.									
		Carriage, 9 s.						2	4	3	
								271	17	3	
		Carriage allowed, 4 s.						--	19	8	
										270 17 7	
31	"	By Gladstone, Bond & Co., for 290 bales and 1 bundle:									
		CC - 290 B.	} wg. 1,035. 1. 15. - - 41. 2. 3. - - 993. 3. 12. 1 Bdle. } or 111,312 lbs. at 4 $\frac{1}{2}$ d.				2,145	1	--		
		Carriage, 9 s.						23	5	11	
										2,168 6 11.	
1 February		By G. & E. Wood, for 121 bales and 7 $\frac{1}{2}$ bundles:									
		CC - 84 B.	} wg. 444. 3. 27. - - 17. 3. 25. - - 427. 0. 2. 6 $\frac{1}{2}$ B. } or 47,826 lbs. at 4 $\frac{1}{2}$ d.				921	12	--		
		BC - 37 B.									
		NE - $\frac{1}{2}$ B.									
		Carriage, 9 s.						10	--	3	
										931 12 3:	
26	"	By Kelly & Gilmour, for 1 bale:									
		No mark - 1 B.	} wg. 3. 0. 21. - - 0. 0. 16. - - 3. 0. 5. or 341 lbs. at 6 d.				8	10	--		
		Carriage, 5 s.						--	--	10	
										8 10 10	
		Gross Proceeds								13,810 15 1	
		Charges:									
		To carriage from Liverpool						122	13	1	
		- portorage, weighing, sampling, &c.						36	6	--	
		- cartage in Manchester						1	1	11	
		- interest on 160 L. 1 s.; 123 days						2	13	11	
		- fire insurance						15	7	6	
		- petty expenses						1	--	--	
		- del credere commission and brokerage on 13,810 L. 15 s. 1 d., at 3 $\frac{1}{2}$ per cent.						483	7	6	
										662 9 11	
		Net Proceeds, averaging Cash, 4 May 1851								13,148 5 2	

Manchester, 19 March 1851.

(E. E.)

(signed) *Hugh Fleming.*

Note.—The carriage charged is in all cases the rate between Liverpool and Manchester; where an allowance is made, the buyer resides at some intermediate place.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1626

ACCOUNT Sales of 54 Packages Sea-damaged (part of 1,569 Packages) Cotton shipped by *Henry Young, Esq.*, Collector of Customs, Bombay, per "India," at Bombay, sold by order and on account of the Honourable the East India Company, by *William Rathbone, Agent.*

1851:		Net.	£. s. d.	£. s. d.
13 January	J. Bouker - - - C C	5 B. wg. 1,988 lbs., at 3½ d. per lb. -	31 1 6	
	W. B. C. Parkinson - - "	10 B. wg. 3,963 lbs., at 3½ d. per lb. -	55 14 6	
	Ditto - - - "	5 B. wg. 2,139 lbs., at 3½ d. per lb. -	32 6 -	
	Ditto - - - D C	} 5 B. wg. 1,936 lbs., at 5 d. per lb. -	40 6 6	
	A			
	T. & C. Buxton, B C	} 5 B. wg. 1,729 lbs., at 3½ d. per lb. -	25 4 -	
	N			
	E			
	T. Heery - - - C C	5 B. wg. 1,948 lbs., at 5½ d. per lb. -	43 12 6	
	Ditto - - - "	5 B. wg. 1,647 lbs., at 4½ d. per lb. -	30 17 6	
	T. Parker - - - "	5 B. wg. 2,135 lbs., at 3½ d. per lb. -	30 - -	
	Ditto - - - D C	} 5 B. wg. 2,153 lbs., at 4½ d. per lb. -	37 - -	
	H			
	M. Fitzwilliam - - - B C	} 4 B. wg. 1,655 lbs., at 4½ d. per lb. -	32 15 -	
	N O			
	3			
	Ditto - - - - N" 1			
	T. Heery, loose cotton pickings,	889 } 3,907 lbs., at 3½ d. per lb. -	59 - -	
		3,018 }		
		54 pkgs. 25,200 lbs.	417 17 -	
	Cwt. qrs. lbs.			
	T. Heery, 7 0 8 damaged ropes, at 6 d. per 120 lbs.		- 1 19 7	
	Ditto - 1 1 25 " rags, at 2 s. 6 d. "		3 5	
			2 3 -	420 - -
	Charges:			
	Dock dues, 14 s. 6 d.; town dues, 8 s. 11 d.		1 3 5	
	Fire insurance		- 6 3	
	Albert Dock charges		2 11 9	
	Brokerage, ¼ %		2 1 9	
	Advertising and catalogues, 16 s. 6 d.; portorage, 10 s. 6 d.		1 7 -	
	Survey fee, (½)		5 5 -	
				12 15 2
				407 4 10
				NET Proceeds, Cash, 26 April 1851 - - - £.

Liverpool, 20 February 1851.

(Errors excepted.)

(signed)

William Rathbone.

REPORT and Valuation on 1,390 Bales and 59 Half Bales of Cotton, ex "India," from Bombay.

D C } 648 Bales	{ Good colour; fair staple, but mixed with leaf and seed; not well cleaned. Value 6½ d. per lb.
A } 38 Bales	{ Good colour; fair staple, not quite clean, but better in quality than the above. Value 7½ d. to 7½ d. per lb.
D C } 1 Bale	Not sampled.
C } 104 Bales	{ Good colour and staple, and tolerably fine fibre. Clean, but much of the general character of Surats. Value 6 d. per lb.
D } 20 half Bales	
D C } 30½ Bales	{ Rather dingy colour, but middling staple; rather full of leaf, not better than ordinary Surats. Value 5½ d. per lb.
E } 7 Bales	{ Good staple and colour; tolerably clean, but rather mixed. Value 6½ d. per lb.
D C } 1 half Bale	
B C } 132 Bales	Rather high colour, good staple, and very clean. Value 7½ d. per lb.
N O } 20 Bales	{ High colour, but good staple, and clean. Value 7½ d. per lb.
B C } 1 Bundle	
B C } 37 Bales	{ Fair colour and staple, but much mixed with leaf, and very dirty. Value 5 d. to 5½ d. per lb.
N } 1 half Bale	
C C } 384 Bales	{ Dingy colour; weak, short staple, and full of leaf. No better than ordinary Surats. Value 5 d. per lb.
N O } 6 half Bales	
C C } 19 Bales	{ Good colour and staple, and tolerably clean. Value 7 d. per lb.
N O } 1 half Bale	

Manchester Commercial Association,
28 January 1851.

(signed)

Hugh Fleming,
Secretary.

Account Sales of 278 Bales and one half Bale Cotton,* ex "Marion," sold in Manchester for account the Honourable East India Company, by *Hugh Fleming*.

		Payment ten days and three months.			£. s. d.			£. s. d.		
1851:										
7 January -		By Thomas Barton & Son, for 6 bales:								
		Gross.	T. & D.	Net.						
	N O	6 B. wg. 21. 0. 18. - 0. 3. 12. - 20. 1. 4. or 2,272 lbs. at 6½ d.			61	10	-			
	A	Carriage 10 s.			-	10	7			
								62 - 7		
7 "		By A. Vickers, for 10 bales:								
		" 10 B. wg. 35. 0. 23. - 1. 1. 20. - 33. 3. 3. or 3,783 lbs. at 6½ d.			102	9	-			
		Carriage 9 s.			-	15	10			
								103 4 10		
1 "		By T. Dodgson & Nephews, for 10 bales:								
		" 10 B. wg. 35. 0. 0. - 1. 1. 20. - 33. 2. 8. or 3,760 lbs. at 6½ d.			101	16	-			
		Carriage 10 s.			-	17	6			
								102 13 6		
23 "		By T. S. Scholes, for 10 bales:								
		" 10 B. wg. 34. 3. 20. - 1. 1. 20. - 33. 2. 0. or 3,752 lbs. at 6½ d.			97	14	-			
		Carriage 9 s.			-	15	9			
								98 9 9		
30 "		By Thos. Staley, for 100 bales:								
	C C	100 B. wg. 347. 0. 5. - 14. 1. 4. - 332. 3. 1. or 37,269 lbs. at 4½ d.			737	12	-			
	A	Carriage 9 s.			7	16	2			
								745 8 2		
30 "		By Gladstone, Bond & Co., for 112 Bales:								
		" 112 B. wg. 387. 1. 18. - 16. 0. 0. - 371. 1. 18. or 41,598 lbs. at 4½ d.			823	5	-			
		Carriage 9 s.			8	14	5			
								831 19 5		
1 February -		By George and Edward Wood, for 1 bale and 1½ bale:								
	C C	1 B. } wg. 5. 0. 9. - 0. 0. 27. - 4. 3. 10. or 542 lbs. at 4½ d.			10	9	-			
	B	1½ B. }								
	N O	Carriage 9 s.			-	2	3			
	B							10 11 3		
26 "		By Kelly & Gilmour, for 29 bales:								
	N O	29 B. wg. 101. 1. 24. - 4. 0. 16. - 97. 1. 8. or 10,900 lbs. at 6 d.			272	10	-			
	A	Carriage 5 s.			1	5	4			
								273 15 4		
		Gross Proceeds - - - - -			-	-	-	2,228 2 10		
		Charges:								
1 January -		To carriage from Liverpool - - - - -			23	5	6			
		- charges in Liverpool - - - - -			-	9	7			
		- porterage, weighing, sampling, &c. - - - - -			6	19	6			
		- packing and mending 5 damaged bales - - - - -			-	5	-			
		- cartage in Manchester - - - - -			-	7	4			
		- interest, 133 days, on 31 l. 6 s. 11 d. - - - - -			-	11	4			
		- fire insurance - - - - -			2	7	6			
		- sundries - - - - -			-	5	-			
		- del credere commission and brokerage on 2,228 l. 2 s. 10 d. at 3½ per cent. - - - - -			77	19	8			
								112 10 5		
								£. 2,115 12 5		

Manchester, 19 March 1851.

(E. E.)

(signed) *Hugh Fleming*.

REPORT and Valuations on 278 Bales and one half Bale of Cotton, ex "Marion."

C C } 212 bales; dingy colour; weak, short staple, and full of leaf; no better than ordinary Surats. Value, 5 d. per lb.

C C } 1 bale; bad colour; very weak, short staple, and full of leaf. Value, 4½ d. per lb.

N O } 65 bales; good colour; fine staple, but uneven, and mixed with leaf and dirt.

N O } 1½ bale; good colour, but full of leaf and dirt. Value 5 d. to 5½ d. per lb.

Manchester Commercial Association,
28 January 1851.

(signed) *Hugh Fleming*,
Secretary.

* DESCRIPTION FROM BOMBAY OF COTTON, PER "MARION."
212 Bales and one half Bale Khandeish indigenous cotton. 65 Bales and one half Bale Khandeish New Orleans cotton.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1631

ACCOUNT Sales of 677 Whole and 1 Half Bales Dharwar Cotton,* ex "Aliwal," sold in Manchester for Account of the Honourable East India Company, by *Hugh Fleming*.

1851:		Payment, ten days and three months.			£. s. d.			£. s. d.		
2 September -	By George Whiteley & Co., for 200 bales:									
		Gross.	T. & D.	Net.						
	DC A -	664. 3. 15.	- 28. 2. 8.	- 636. 1. 7., or 71,267 lbs. at 4 1/2 d.	-	1,262	-	-		
		Carriage	-	-	-	8	6	3		
						1,270	6	3		
		Less allowed on carriage	-	-	-	7	8	5		1,262 17 10
4 September -	By James Howorth & Bros., for 20 bales:									
	"	68. 3. 20.	- 2. 3. 12.	- 66. 0. 8., or 7,400 lbs. at 4 1/2 d.	-	131	-	-		
		Carriage	-	-	-	-	17	3		131 17 3
5 September -	By Kelly & Gilmour, for 110 bales:									
	"	378. 2. 11.	- 15. 3. 7.	- 362. 3. 4., or 40,632 lbs. at 4 1/2 d.	-	719	10	-		
		Carriage	-	-	-	4	14	8		724 4 8
5 September -	By Samuel Leer & Co., for 309 bales:									
	"	1,069. 3. 7.	- 44. 0. 16.	- 1,025. 2. 19., or 114,875 lbs. at 4 1/2 d.	-	2,034	4	-		
		Carriage	-	-	-	10	14	-		2,044 18 -
20 September	By Thomas Ogden & Sons, for 10 bales:									
	"	34. 1. 13.	- 1. 1. 20.	- 32. 3. 21., or 3,689 lbs. at 4 1/2 d.	-	65	6	-		
		Carriage	-	-	-	-	8	7		65 14 7
4 October -	By Thomas Ogden & Sons, for 10 bales:									
	"	34. 0. 18.	- 1. 1. 20.	- 32. 2. 26., or 3,666 lbs. at 4 d.	-	61	2	-		
		Carriage	-	-	-	-	8	6		61 10 6
4 November -	By Kelly & Gilmour, for 18 bales:									
	"	62. 0. 15.	- 2. 2. 8.	- 59. 2. 7., or 6,671 lbs. at 3 1/2 d.	-	97	5	-		
		Carriage	-	-	-	-	15	7		98 - 7
										4,389 3 5
1 September -	Charges:									
	To carriage from Liverpool					28	18	3		
	- cartage from Liverpool					4	16	4		
	- portage, weighing, sampling, &c.					16	19	-		
	- packing and mending 38 bales					1	18	-		
	- fire assurance					4	5	-		
	- petty expenses					-	15	-		
	- interest on 57 l. 11 s. 7 d., 109 days					-	17	2		
	- commission del credere, and brokerage on 4,389 l. 3 s. 5 d. at 3 1/2 %					153	12	5		212 1 2
										4,177 2 3
	NET Proceeds, averaging Cash, 19 December 1851									£. 4,177 2 3

Manchester Commercial Association,
25 November 1851.

(E. E.)

(signed) *Hugh Fleming*,
Secretary.

* DESCRIPTION FROM BOMBAY OF COTTON PER "ALI WAL."

BC } 122 whole } bales Belgaum New Orleans cotton
NO } and 1 half }
BC } 113 whole } bales Belgaum Native first-class cotton.
N } 1 half }
BC } 79 whole } bales Belgaum Native second-class cotton.
N } and 15 half }
DC } 677 whole } bales Dharwar New Orleans cotton.
A } 1 half }

ACCOUNT Sales of 122 Whole and 1 Half Bales Belgaum Cotton, ex "Aliwal," sold in Manchester, on Account of the Honourable East India Company, by *Hugh Fleming*.

		Payment, ten days and three months.			£. s. d.		£. s. d.	
1851:								
4 September -	By James Howorth & Bros., for 20 bales:							
	Gross.	T. & D.	Net.					
	70. 1. 4.	- 2. 3. 12.	- 67. 1. 20., or 7,552 lbs. at 4 ½ d.	- -	133	14	-	
		Carriage	- - - - -	- - - - -	-	17	7	
							134 11 7	
	By James Greaves & Co., for 20 bales:							
	70. 1. 18.	- 2. 3. 12.	- 67. 2. 6., or 7,566 lbs. at 4 ½ d.	- -	133	19	-	
		Carriage	- - - - -	- - - - -	-	17	7	
					134	16	7	
		Allowed for false packed at ¼ d.	- - - - -	- - - - -	7	6	9	
							127 9 10	
5 September -	By George Cheetham & Sons, for 82 bales, 1 half bale:							
	289. 3. 1.	- 11. 3. 7.	- 277. 3. 22., or 31,130 lbs. at 4 ½ d.	- -	551	5	-	
		Carriage	- - - - -	- - - - -	3	12	5	
							554 17 5	
							816 18 10	
	Charges:							
1 September -	To carriage from Liverpool	- - - - -	- - - - -	- - - - -	5	7	7	
	- cartage in Liverpool	- - - - -	- - - - -	- - - - -	-	17	11	
	- portorage, weighing, sampling, &c.	- - - - -	- - - - -	- - - - -	3	1	6	
	- petty expenses	- - - - -	- - - - -	- - - - -	-	4	6	
	- fire insurance	- - - - -	- - - - -	- - - - -	-	14	3	
	- interest on 10 l. 5 s. 9 d., 108 days	- - - - -	- - - - -	- - - - -	-	2	11	
	- commission del credere and brokerage on 816 l. 18 s. 10 d. at 3 ½ %.	- - - - -	- - - - -	- - - - -	28	11	10	
							39 - 6	
	NET Proceeds, averaging Cash, 18 December 1851	- - - - -	- - - - -	- - - - -			£. 777 18 4	

Manchester Commercial Association,
25 November 1851.

(signed) *Hugh Fleming*,
Secretary.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1633

ACCOUNT Sales of 113 Whole and 1 Half Bales of Belgaum Cotton, ex "Aliwal," sold in Manchester for Account of the Honourable East India Company, by *Hugh Fleming*.

1851 :	Payment, ten days and three months.			£. s. d.	£. s. d.	
11 September	By James King & Sons, for 13 bales :					
	B.C.	Gross.	T. & D.	Net.		
	N.	45. 2. 12.	- 1. 3. 12.	- 43. 3. 0., or 4,900 lbs. at 4½ d.	84 4 -	
		Carriage	- - - - -	- - - - -	- 11 5	
					84 15 5	
14 October	By George Cheetham & Sons, for 100 bales and 1 half bale :					
	"	352. 0. 0.	- 14. 1. 5.	- 337. 2. 13., or 37,813 lbs. at 3½ d.	551 8 -	
		Carriage	- - - - -	- - - - -	4 8 -	
					555 16 -	
		Charges :				
1 September	To carriage from Liverpool	- - - - -	- - - - -	- - - - -	4 19 5	
	- cartage in Liverpool	- - - - -	- - - - -	- - - - -	- 16 6	
	- portorage, weighing, sampling, &c.	- - - - -	- - - - -	- - - - -	2 17 -	
	- petty expenses	- - - - -	- - - - -	- - - - -	- 3 2	
	- fire insurance	- - - - -	- - - - -	- - - - -	- 12 4	
	- interest on 9 l. 8 s. 5 d. ; 144 days	- - - - -	- - - - -	- - - - -	- 3 9	
	- commission del credere and brokerage on 640 l. 11 s. 5 d. at 3½ %.	- - - - -	- - - - -	- - - - -	22 8 4	
					32 - 6	
		NET Proceeds, averaging Cash, 23 January 1852			£.	608 10 11

Manchester Commercial Association,
25 November 1851.

(E. E.)

(signed)

Hugh Fleming,
Secretary.

ACCOUNT Sales of 79 Whole and 15 Half Bales Belgaum Cotton, ex "Aliwal," sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1851 :	Payment, ten days, three months.			£. s. d.	£. s. d.	
7 October	By S. Lees & Co. for the whole :					
	B.C.	Gross.	T. & D.	Net.		
	N.	305. 3. 24.	- 12. 3. 1.	- 293. 0. 23., or 32,839 lbs. at 3½ d.	478 18 -	
		Carriage, at 4s.	- - - - -	- - - - -	3 1 2	
					481 19 2	
		Charges :				
1 September	To carriage from Liverpool	- - - - -	- - - - -	- - - - -	3 16 6	
	- cartage in Liverpool	- - - - -	- - - - -	- - - - -	- 12 9	
	- portorage, weighing, and sampling	- - - - -	- - - - -	- - - - -	2 7 -	
	- petty expenses	- - - - -	- - - - -	- - - - -	- 2 -	
	- fire insurance	- - - - -	- - - - -	- - - - -	- 9 4	
	- interest on 7 l. 7 s. 7 d. ; 141 days	- - - - -	- - - - -	- - - - -	- 2 10	
	- commission del credere and brokerage on 482 l. 19 s. 2 d. at 3½ %.	- - - - -	- - - - -	- - - - -	16 18 2	
					24 18 7	
		NET Proceeds, averaging Cash, 20 January 1852			£.	457 10 7

Manchester Commercial Association,
25 November 1851.

(E. E.)

(signed)

Hugh Fleming,
Secretary.

ACCOUNT Sales of ^{DC}_A 172 bales Dharwar Cotton,* ex "Armide," from Bombay, sold for Account of the Honourable East India Company, by *Hugh Fleming*.

1851:		Payment, ten days and three months.					
				£.	s.	d.	£.
4 November	By Kelly & Gilmour, for 10 bales:						
		T. & D.	Net.				
		Cwt. 31. 2. 12.	- 1. 1. 20.	- 30. 0. 20.,	or 3,380 lbs.,	at 3 $\frac{1}{2}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				49	5	-	
				-	7	11	
							49 12 11
4 November	By James Howorth & Brs., for 30 bales:						
	"	95. 1. 4.	- 4. 1. 4.	- 91. 0. 0.,	or 10,192 lbs.,	at 3 $\frac{1}{2}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				148	12	-	
				1	3	10	
							149 15 10
6 November	By J. Scholfield & Sons, for 10 bales:						
	"	31. 3. 0.	- 1. 1. 20.	- 30. 1. 8.,	or 3,396 lbs.	at 3 $\frac{1}{2}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				49	10	-	
				-	7	11	
							49 14 -
6 November	By Ermen & Engel, for 5 bales:						
	"	15. 2. 14.	- 2. 24.	- 14. 3. 18.,	or 1,670 lbs.	at 3 $\frac{1}{2}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				24	7	-	
				-	3	11	
							24 10 11
6 November	By James Greaves & Co., for 6 bales:						
	"	19. 0. 8.	- 3. 12. 0.	- 18. 0. 24.,	or 2,042 lbs.	at 3 $\frac{1}{2}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				29	15	-	
				-	4	9	
							29 19 9
6 November	By James Scholfield & Sons, for 20 bales:						
	"	63. 1. 18.	- 2. 3. 12.	- 60. 2. 6.,	or 6,782 lbs.	at 3 $\frac{1}{2}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				98	18	-	
				-	15	10	
							99 13 10
		Allowed on carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				-	7	11	
							99 5 11
6 November	By Kelly & Gilmour, for 50 bales:						
	"	158. 1. 23.	- 7. 0. 16.	- 151. 1. 7.,	or 16,947 lbs.	at 3 $\frac{7}{16}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				242	14	-	
				1	19	7	
							244 13 7
6 November	By Kelly & Gilmour, for 40 bales:						
	"	127. 2. 11.	- 5. 2. 24.	- 121. 3. 15.,	or 13,651 lbs.	at 3 $\frac{7}{16}$ d.	
		Carriage	- - - - -	- - - - -	- - - - -	- - - - -	
				195	10	-	
				1	11	11	
							197 1 11
6 November	By James Buckley, for 1 bale, sea damaged						
							2 5 -
							846 19 10
		Charges:					
28 October	To carriage from Liverpool						
	- cartage in Liverpool						
	- portorage, sampling, weighing, &c.						
	- petty expenses						
	- fire insurance						
	- interest on 10 <i>l.</i> 18 <i>s.</i> 9 <i>d.</i> , 116 days						
	- commission del credere and brokerage on 846 <i>l.</i> 19 <i>s.</i> 10 <i>d.</i> at 3 $\frac{1}{2}$ %						
				6	15	8	
				1	2	8	
				2	3	-	
				-	3	9	
				-	14	8	
				-	3	5	
				29	12	10	
							40 16 -
	NET Proceeds, averaging Cash, 21 February						806 3 10

Manchester Commercial Association,
10 January 1852.

(signed) *Hugh Fleming*,
Secretary.

* DESCRIPTION FROM BOMBAY OF COTTON PER "ARMIDE."

DC } 172 whole bales Dharwar New Orleans cotton.
A }
DC } 820 whole }
N } 16 half } bales Dharwar native cotton.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1635

ACCOUNT Sales of ^{D C*}_N 820 Bales and 16 Half Bales Dharwar Cotton, ex "Armide," from Bombay, sold for Account the Honourable East India Company, by Hugh Fleming.

1851 :	Payment, ten days and three months.	£. s. d.	£. s. d.
6 November -	By Joseph Butterworth & Sons, for 5 bales :		
	T. & D. Net.		
	Cwt. 15. 2. 17. - 0. 2. 24. - 14. 8. 21., or 1,073 lbs. at 2½ d.	17 8 -	
	Carriage	- 8 11	17 11 11
6 November -	By J. Scholfield & Sons, for 5 bales :		
	" 15. 2. 24. - 0. 2. 24. - 15. 0. 0., or 1,080 lbs. at 2½ d.	17 10 -	
	Carriage	- 8 11	
	Allowed on carriage	17 18 11	
		- 4 -	17 11 11
6 November -	By George Choatham & Sons, for 500 bales :		
	" 1,572. 2. 23. - 71. 1. 20. - 1,503. 1. 3., or 168,225 lbs. at 2½ d.	1,577 7 -	
	Carriage	10 18 6	1,587 - 6
6 November -	By G. & E. Wood, for 200 bales :		
	" 628. 0. 9. - 28. 2. 8. - 500. 2. 1., or 67,145 lbs. at 2½ d.	629 9 -	
	Carriage	7 17 -	637 6 -
6 November -	By Thomas Collier, for 10 bales :		
	" 31. 1. 14. - 1. 1. 20. - 29. 3. 22., or 3,354 lbs. at 2½ d.	33 8 -	
	Carriage	- 7 10	33 10 10
6 November -	By Joseph Butterworth & Sons, for 30 bales :		
	" 93. 2. 5. - 4. 1. 4. - 89. 1. 1., or 9,997 lbs. at 2½ d.	93 18 -	
	Carriage	1 8 6	100 1 6
13 November	By James Scholfield & Sons, for 20 bales :		
	" 63. 1. 10. - 2. 3. 12. - 60. 1. 26., or 6,774 lbs. at 2½ d.	67. - -	
	Carriage	- 15 10	
	Allowed on carriage	67 15 10	
		- 7 11	67 7 11
	By G. & E. Wood, for 50 bales and 16 half ditto :		
	" 183. 1. 14. - 8. 2. 24. - 174. 2. 18., or 19,592 lbs. at 2½ d.	192 11 -	
	Carriage	2 6 10	192 16 10
	Charges :		2,866 17 4
	To carriage from Liverpool	32 11 2	
	- cartage in Liverpool	5 8 7	
	- portage, sampling, weighing, &c.	19 9 -	
	- fire insurance	2 3 -	
	- petty expenses	- 15 -	
	- interest on £1 L 6 s. 9 d., 120 days	- 16 11	
	- commission del credere and brokerage on 2,866 L 7 s. 4 d. at 2½ %	92 6 6	145 19 2
	NET Proceeds, averaging Cash, 25th February 1852		£. 2,520 17 2

Manchester Commercial Association,
10 January 1852.

(E. E.)

(signed)

Hugh Fleming,
Secretary M. C. A.

* Extract of a Letter from H. Fleming, Esq., Secretary to the Manchester Commercial Association, dated 10 January 1852
 "I would again call the attention of the Honourable Court of Directors to the very inferior quality of the bales marked D C as shown by the process which have been obtained for them. Indeed this cotton was almost unworkable, being considered inferior to what is known in the mills as 'ordinary waste.' It is evident that a fraud has been practised upon the authorities by whom the purchases were made in India, a considerable weight of cotton damaged by saw, earth, &c., having been found in the centre of almost every bale. I have therefore thought it right to forward a large sample to Dr. Kocke, from which a correct opinion may be formed of the character of the whole.
 "I have, however, much satisfaction in stating that the cotton from Comblatore, per 'Arise,' on which I shall have the honour to report in a few days, is of most excellent quality, calculated to compete on equal terms with the American staple in this market."

+ Account Sales of this cotton at page 415 of the Minutes Section of the Report.

ACCOUNT Sales of ^{NO}_C 36 Bales of Cotton, ex "David Clarke," sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1852:		Payment, ten days and three months.		£.	s.	d.	£.	s.	d.
17 January -	By Dawson & Howarth, for 18 bales:								
	Gross.	T. & D.	Net.						
	wg. 56. 1. 16.	- 2. 2. 8.	- 53. 3. 8., or 6,028 lbs. at $3\frac{9}{16}d.$	89	9	-			
	Carriage	-	-	-	14	1			
							90	3	1
	By John Lord, for 18 bales:								
	wg. 56. 1. 19.	- 2. 2. 18.	- 53. 3. 11., or 6,031 lbs. at $3\frac{9}{16}d.$	89	10	-			
	Carriage	-	-	-	14	2			
							90	4	2
							180	7	3
			Charges:						
17 January -	To carriage from Liverpool	-	-	1	8	4			
	- carriage in Liverpool	-	-	-	4	9			
	- porterage, weighing, sampling, &c.	-	-	-	18	-			
	- fire insurance	-	-	-	6	-			
	- commission del credere and brokerage on 180 l. 7 s. 3 d. at $3\frac{1}{2}\%$	-	-	6	6	3			
							9	3	4
							171	3	11
			NET Proceeds, averaging Cash, 9 May 1852	-	-	£.			

Manchester Commercial Association,
28 April 1852.

(E. E.)

(signed) *Hugh Fleming*, Secretary.

ACCOUNT Sales of ^{DC}_A 11½ Bales of Cotton, ex "David Clarke," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1852:		Payment, ten days and three months.		£.	s.	d.	£.	s.	d.
20 January -	By G. & E. Wood, for the whole:								
	Gross.	T. & D.	Net.						
	20. 0. 19.	- 1. 0. 9.	- 19. 0. 10., or 2,138 lbs. at $2\frac{1}{2}d.$	20	-	10			
	Carriage	-	-	-	5	-			
							20	5	10
			Charges:						
17 January -	To carriage from Liverpool	-	-	-	5	2			
	- carriage in Liverpool	-	-	-	-	10			
	- porterage, weighing and sampling	-	-	-	5	6			
	- fire insurance	-	-	-	1	-			
	- commission del credere and brokerage on 20 l. 5 s. 10 d. at $3\frac{1}{2}\%$	-	-	-	14	2			
							1	6	8
							18	19	2
			NET Proceeds, averaging Cash, 3 May 1852	-	-	£.			

Manchester Commercial Association,
28 April 1852.

(E. E.)

(signed) *H. Fleming*, Secretary.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1637

ACCOUNT Sales of ^{NO} 200 Bales of Cotton, ex "David Clarke," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1852:		Payment, ten days, three months.		£. s. d.		£. s. d.	
20 January -	By Jos. Clarke & Bros., for 20 bales:						
	Gross. T & D. Net.						
NO	62. 1. 25. - 2. 3. 12. - 59. 2. 13., or 6,677 lbs. at 3½ d. -			104	6	-	
B	Carriage - - - - -			-	15	8	
							105 1 8
20 January -	By Geo. Clarke & Co. for 25 bales:						
H	77. 3. 25. - 3. 2. 8. - 74. 1. 17., or 8,333 lbs. at 3½ d. -			130	4	-	
	Carriage - - - - -			-	19	6	
							131 3 6
20 January -	By William Morris, for 5 bales:						
H	15. 2. 24. - 0. 2. 24. - 15. 0. 0., or 4,680 lbs. at 3½ d. -			26	5	-	
	Carriage - - - - -			-	3	11	
							26 8 11
	Prompt, 6 March 1852.						
	By Kelly & Gilmour, for 70 bales:						
H	218. 3. 3. - 10. 0. 0. - 208. 3. 3., or 23,383 lbs. at 3½ d. -			365	7	-	
	Carriage - - - - -			2	14	9	
							368 1 9
27 January -	By Kelly & Gilmour, for 30 bales:						
H	94. 0. 15. - 4. 1. 4. - 89. 3. 11., or 10,063 lbs. at 3½ d. -			157	4	-	
	Carriage - - - - -			1	3	7	
							158 7 7
	By Geo. Cheetham & Sons, for 42 bales:						
H	131. 0. 16. - 6. 0. 0. - 125. 0. 16., or 14,016 lbs. at 3½ d. -			219	-	-	
	Carriage - - - - -			1	12	9	
							220 12 9
30 January -	By William Parker, for 8 bales:						
H	8 Bales, sea damaged, at 55 s. 6 d. per bale - - - - -			22	4	-	
	Carriage - - - - -			-	6	3	
							22 10 3
	Charges:						1,032 6 5
17 January -	To carriage from Liverpool - - - - -			7	17	3	
	- carriage in Liverpool - - - - -			1	6	3	
	- portorage, weighing, sampling, &c. - - - - -			5	-	-	
	- fire insurance - - - - -			1	12	6	
	- petty expenses - - - - -			-	5	-	
	- interest on 16 L. 1s. for 109 days - - - - -			-	4	9	
	- commission del credere and brokerage on 1,032 l. 6 s. 5 d. at 3½ % - - - - -			36	2	7	
							52 8 4
							979 8 1
							NET Proceeds, averaging Cash, 5 May 1852 -

Manchester Commercial Association,
28 April 1852.

(E. E.) (signed) *Hugh Fleming*, Secretary.

ACCOUNT Sales of ^{D C}_A 458 Bales of Cotton, ex "David Clarke," from Bombay, sold in Manchester,
for Account of the Honourable East India Company, by *Hugh Fleming*.

1852:		Payment, ten days and three months.												
20 Jan.	-	By George Cheetham & Sons, for 100 bales:			£.	s.	d.	£.	s.	d.				
		D C	Gross.	T. & D.	Net.									
		A	310. 3. 12.	- 14. 1. 4.	- 296. 2. 8.,	or 33,216 lbs. at 3½ d.	-	484	8	-				
			Carriage	-	-	-	-	3	17	9				
									488	5	9			
		By Ermen Brothers, for 25 bales:												
		H	77. 0. 25.	- 3. 2. 8.	- 73. 2. 17.,	or 8,249 lbs. at 3½ d.	-	-	-	-	124	11	-	
		By Ermen & Engels, for 5 bales:												
		H	15. 2. 7.	- 0. 2. 24.	- 14. 3. 11.,	or 1,663 lbs. at 3½ d.	-	25	2	-				
			Carriage	-	-	-	-	-	3	11				
											25	5	11	
		Prompt, 6 March.												
22 Jan.	-	By Kelly & Gilmour, for 140 bales:												
		H	434. 0. 18.	- 20. 0. 0.	- 414. 0. 18.,	or 46,386 lbs. at 3½ d.	-	676	9	-				
			Carriage	-	-	-	-	5	8	7				
											681	17	7	
24 Jan.	-	By R. Munn & Co., for 100 bales:												
		H	310. 1. 25.	- 14. 1. 4.	- 296. 0. 21.,	or 33,173 lbs. at 3½ d.	-	483	15	-				
			Carriage	-	-	-	-	3	17	7				
											487	12	7	
		Prompt, 6 March.												
27 Jan.	-	By Kelly & Gilmour, for 60 bales:												
		H	186. 11. 20.	- 8. 2. 8.	- 177. 3. 12.,	or 19,920 lbs. at 3½ d.	-	290	10	-				
			Carriage	-	-	-	-	2	6	7				
											292	16	7	
30 Jan.	-	By Wm. Parker, for 8 bales:												
		H	8 bales, sea damaged,	at 55/6 per bale	-	-	-	22	4	-				
			Carriage	-	-	-	-	-	6	6				
											22	10	6	
9 Jan.	-	By Kelly & Gilmour, for 20 bales:												
		H	61. 3. 6	- 2. 3. 12.	- 58. 3. 22,	or 6,602 lbs. at 3½ d.	-	96	5	-				
			Carriage	-	-	-	-	-	15	5				
											97	-	5	
		Charges:												
17 Jan.	-	To carriage from Liverpool			-	-	-	-	17	18	3			
		- carriage in Liverpool			-	-	-	-	2	19	9			
		- weighing, portorage, sampling, &c.			-	-	-	-	11	9	-			
		- fire insurance			-	-	-	-	3	9	-			
		- petty expenses			-	-	-	-	-	10	-			
		- interest on 327 l., 103 days			-	-	-	-	-	9	-			
		- commission del credere and brokerage on 2,220 l. 0 s. 4 d. at 3½%			-	-	-	-	77	14	-			
												114	9	-
		Net Proceeds, averaging Cash, 6 May 1852									£.	2,105	11	4

(E. E.)

Manchester Commercial Association,
28 April 1852.

(signed) *Hugh Fleming*,
Secretary.

ACCOUNT Sales of ^{N O}_A 87 Bales of Cotton, ex "David Clarke," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1852:	Payment, ten days and three months.	£. s. d.	£. s. d.
27 Jan.	By R. Munn & Co., for the whole:		
	Gross. T. & D. Net.		
	87 B. 273. 2. 16. - 12. 1. 20. - 261. 0. 24., or 29,256 lbs. at 3½ d.	457 2 -	
	Carriage - - - - -	3 8 5	460 10 5
	Charges:		
17 Jan.	To carriage from Liverpool - - - - -	3 8 7	
	- carriage in Liverpool - - - - -	- 11 5	
	- portorage, weighing, and sampling - - - - -	2 3 6	
	- fire insurance - - - - -	- 15 -	
	- petty expenses - - - - -	- 2 -	
	- commission del credere and brokerage on 460 l. 10 s. 5 d., at 3½%	16 2 4	23 2 10
	NET Proceeds, averaging Cash, 9 May 1852 - - - £.		437 7 7

(E. E.)

Manchester Commercial Association,
28 April 1852.

(signed) *Hugh Fleming*,
Secretary.

ACCOUNT Sales of CC 27 Half Bales of Cotton, ex "David Clarke," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1852:	Payment, ten days and three months.	£. s. d.	£. s. d.
28 Jan.	By Kelly & Gilmour, for 26 half bales:		
	Gross. T. & D. Net.		
	H 40. 2. 4. - 2. 2. 6. - 37. 3. 26., or 4,254 lbs. at 3½ d.	62 - -	
	Carriage - - - - -	- 10 2	62 10 2
9 Feb.	By Wm. Parker, for 1 half bale:		
	H 1 half bale, sea-water damaged, at 25 s.	- - -	1 5 -
	Charges:		
17 Jan.	To carriage from Liverpool - - - - -	- 10 9	
	- carriage in Liverpool - - - - -	- 1 10	
	- portorage, weighing, and sampling - - - - -	- 13 6	
	- fire insurance - - - - -	- 4 -	
	- commission del credere and brokerage on 63 l. 15 s. 2 d., at 3½%	2 4 11	3 15 -
	NET Proceeds, averaging Cash, 10 May 1852 - - - £.		60 2 -

(signed) *Hugh Fleming*,
Secretary.

Manchester Commercial Association,
28 April 1852.

1640 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

III.
Bombay.

REPORT and VALUATIONS of 781 Bales and 38 Half Bales of Cotton, ex "David Clarke,"
from Bombay.

D C A	458 Bales, rather high colour, fair staple, but mixed with leaf and dirt, value 3½ d. per lb.
D C N	11 Half bales, pickings from outsides of bales, value very nominal.
N O A	87 Bales, good colour, middling staple, but not very clean, value 3¾ d. per lb.
N O B	200 Bales, good colour, fair staple, and well cleaned, value 3¾ d. to 3½ per lb.
N O C	36 Bales, similar to the above, but not quite so good.
C C N	27 Half bales.

Manchester Commercial Association,
28 April 1852.

(signed) *Hugh Fleming*,
Secretary.

ACCOUNT Sales of C C
S L 1 Bale and 1 half Bale of Cotton, ex "Theodore," from Bombay, sold in Manchester
for Account of the Honourable East India Company, by *Hugh Fleming*.

		Payment, ten days and three months.			£. s. d.		£. s. d.	
1851:								
16 Dec.	-	By George Cheetham & Sons, for the whole:						
		Gross.	T. & D.	Net.				
		wg. 4. 10. 0.	v 0. 0. 27.	- 4. 0. 1., or 449 lbs. at 4½ d.	-	-	-	7 19 -
		Carriage			-	-	-	1 1
								8 - 1
		Charges:						
9 Dec.	-	To carriage from Liverpool			-	-	-	1 2
		- carriage in Liverpool			-	-	-	2
		- porterage, weighing, sampling, &c.			-	-	-	1 -
		- fire insurance			-	-	-	8
		- commission del credere and brokerage on 8 l. 0 s. 1 d., at 3½ p' cent.			-	-	-	5 10
								- 8 10
		Net Proceeds, averaging Cash, 29 March 1852			-	-	-	7 11 3

(E. E.)

Manchester Commercial Association,
11 February 1852.

(signed) *Hugh Fleming*.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1641

ACCOUNT Sale of A C 12 Bales of Cotton, ex "Theodore," from Bombay, sold in Manchester for Account of the Honourable East India Company, by *Hugh Fleming*.

1851:		Payment, ten days and three months.		£. s. d.		£. s. d.	
17 Dec.	-	By W. P. Clarke & Co., for the whole:					
		Gross.	T. & D.	Net.			
		wg. 37. 1. 7.	- 1. 2. 24.	- 35. 2. 11.,	or 3,987 lbs.,	at 2½ d.	
			Carriage				
							48 4 5
		Charges:					
9 Dec.	-	To carriage from Liverpool					
		- carriage in Liverpool					
		- portorage, weighing, sampling, &c.					
		- fire insurance					
		- commission del credere and brokerage on 48 l. 4 s. 5 d.,	at 3½ p' cent.				
							2 12 4
		NET Proceeds, averaging Cash, 30 March 1852					45 12 1

(E. E.)

Manchester Commercial Association,
11 February 1852.

(signed) *Hugh Fleming*.

ACCOUNT Sales of ^N_A 20 Bales of Cotton, ex "Theodore," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1851:		Payment, ten days and three months.		£. s. d.		£. s. d.	
23 Dec.	-	By David Morris, for 7 bales:					
		Gross.	T. & D.	Net.			
		wg. 21. 2. 19.	- 1. 0. 11.	- 20. 2. 19.,	or 2,315 lbs. at 4 d.		
			Carriage				
							38 16 5
		1852:					
10 Jan.	-	By Kelly & Gilmour, for 12 bales:					
		wg. 37. 1. 7.	- 1. 2. 24.	- 35. 2. 11.,	or 3,987 lbs. at 3½ d.		
			Carriage				
							63 15 4
27 Jan.	-	By Robert Munn & Co., for 1 bale:					
		wg. 3. 0. 5.	- 0. 16. 0.	- 2. 3. 17.,	or 325 lbs. at 3½ d.		
			Carriage				
							5 2 4
		Charges:					
9 Dec.	-	To carriage from Liverpool					
		- carriage in Liverpool					
		- portorage, weighing, sampling, &c.					
		- fire insurance					
		- petty expenses					
		- commission del credere and brokerage on 107 l. 14 s. 1 d.,	at 3½ p' cent.				
							107 14 1
		NET Proceeds, averaging Cash, 16 April 1852					102 6 1

(E. E.)

Manchester Commercial Association,
12 February 1852.

(signed) *Hugh Fleming*.

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1643

ACCOUNT Sales, ex "Theodore," sold for Account, &c.—*continued*

1851:			£. s. d.	£. s. d.
23 Dec.	-	By W. P. Clarke & Co., for 30 bales:		
		Gross. T. & D. Net.		
		wg. 92. 2. 7. - 4. 1. 4. - 88. 1. 3., or 9,887 lbs. at 3½ d.	154 9 -	
		Carriage	1 3 2	
				155 12 2
23 Dec.	-	By James Howarth & Brothers, for 20 bales:		
		wg. 62. 0. 18. - 2. 3. 12. - 59. 1. 6., or 6,642 lbs. at 3½ d.	103 15 -	
		Carriage	- 15 6	
				104 10 6
24 Dec.	-	By Robert Mann & Co., for 84 bales:		
		wg. 261. 3. 8. - 12. 0. 0. - 249. 3. 8., or 27,980 lbs. at 3¼ d.	437 3 -	
		Carriage	3 5 5	
				440 8 5
		Charges:		
9 Dec.	-	To carriage from Liverpool	8 6 1	1,125 8 7
		- carriage in Liverpool	1 7 8	
		- porterage, weighing, sampling, &c.	5 7 -	
		- fire insurance	1 12 6	
		- petty expenses	- 10 -	
		- commission del credere and brokerage on 1,125 l. 8 s. 7 d. at 3½ d. per cent.	39 7 10	
				56 11 1
		NET Proceeds, averaging Cash, 4 April 1852	- - - £.	1,068 17 6

(E. E.)

Manchester Commercial Association,
12 February 1852.

(signed) Hugh Fleming.

ACCOUNT Sales of ^{N B}C 9 whole and 1 half Bales of Cotton, ex "Theodore," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by Hugh Fleming.

1852:			£. s. d.	£. s. d.
		Payment, 10 days and 3 months.		
6 Jan.	-	By W. P. Clarke & Co., for the whole:		
		Gross. T. & D. Net.		
		wg. 27. 3. 24. - 1. 1. 4. - 26. 2. 20., or 2,988 lbs. at 3½ d.	45 2 -	
		Carriage	- 6 8	
				45 8 8
20 Jan.	-	By Geo. Ed. Wood, for 1 half-bale pickings:		
		wg. 1. 1. 20. - 0. 0. 11. - 1. 2. 9., or 177 lbs. at 2 d.	1 9 6	
		Carriage	- - 5	
				1 9 11
		Charges:		
9 Jan.	-	To carriage from Liverpool	- 7 6	46 18 7
		- carriage in Liverpool	- 1 3	
		- porterage, weighing, and sampling, &c.	- 5 -	
		- fire insurance	- 1 6	
		- commission del credere and brokerage on 46 l. 18 s. 7 d., at 3½ p' cent.	1 12 10	
				2 8 1
		NET Proceeds, averaging Cash, 19 April 1852	- - - £.	44 10 6

(E. E.)

Manchester Commercial Association,
12 February 1852.

(signed) Hugh Fleming.

1644 PAPERS RELATING TO MEASURES TAKEN SINCE 1847

REPORT and VALUATIONS of 256 Bales and 3 Half Bales of Cotton, ex "Theodore," from Bombay.

- N O
A 20 Bales, good colour and staple, middling, very clean, value $4\frac{1}{4}$ d. per lb.
- N O
B 214 Bales, similar to the above, but not quite so good, value 4 d. per lb.
- N O
C 9 Bales, } ditto - - - - ditto - - value 4 d. per lb.
1 Half bale, }
- C C 1 Bale, } good colour and staple, value $4\frac{3}{4}$ per lb.
S L 1 Half bale. }
- D C
N 1 Bale, damaged.
- A C 12 Bales, good colour but leafy, short staple, nominal value, 3 d. per lb.

This is the best of the lots assigned to me this year. The sugar-loaf cotton in staple is quite equal to boweds.

Manchester Commercial Association,
28 April 1852.

(signed) *Hugh Fleming*,
Secretary.

ACCOUNT Sales of ^{D C}_A 499 Bales of Cotton,* ex "Chancellor," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1853:		Payment, ten days and three months.					
26 April	-	By Gladstone, Bond & Co., for 200 bales:		£.	s.	d.	£. s. d.
		D C 200 B.	wg. 687. 1. 24. - 28. 2. 8. - 658. 3. 16., or 73,796 lbs. } Gross. T. & D. Net at $4\frac{1}{4}$ d. }	1,306	16	-	
		A	Carriage - - - - -	15	8	6	1,322 4 6
26 April	-	By S. Lees & Co., for 50 bales:					
		\$ 50 B.	wg. 172. 1. 3. - 7. 0. 16. - 165. 0. 15., or 18,495 lbs. } at $4\frac{1}{4}$ d. }	327	10	-	
			Carriage - - - - -	3	17	6	331 7 6
29 April	-	By Gladstone, Bond & Co., for 249 bales:					
		\$ 249 B.	wg. 855. 1. 22. - 35. 2. 8. - 819. 3. 14., or 91,826 lbs. } at $4\frac{1}{4}$ d. }	1,626	1	-	
			Carriage - - - - -	19	5	-	1,645 6 -
		Charges:					
21 April	-	To carriage from Liverpool	- - - - -	42	8	6	3,298 18 -
		- dockage in Liverpool	- - - - -	4	4	6	
		- fire insurance	- - - - -	2	11	3	
		- portorage, sampling, and re-weighing	- - - - -	12	9	6	
		- petty expenses	- - - - -	-	10	-	
		- interest on 62 l. 3 s. 9 d., 103 days	- - - - -	-	17	6	
		- commission del credere and brokerage on 3,298 l. 18 s., at $3\frac{1}{2}$ per cent.	- - - - -	115	9	3	178 10 6
		Net Proceeds, averaging Cash, 11 August 1853					3,120 7 6

Manchester Commercial Association,
30 June 1853.

(E. E) (signed) *Hugh Fleming*,
Secretary.

* DESCRIPTION OF COTTON, PER "CHANCELLOR."
D. C. A. 500 whole bales, Dharwar New Orleans cotton.

ACCOUNT Sales D C 767 Bales and 9 Half Bales, and ^{D C}_B 194 Bales Cotton,* ex "Loch Lomond," from Bombay, sold in Manchester for Account of the Honourable East India Company, by *Hugh Fleming.*

1852:		Payment, ten days and three months.						
1 Dec.	-	By Richard Birley & Co., for 5 bales:			£.	s.	d.	
		D C	Gross.	T. & D.	Net.			
		A 5.	17. 0. 12.	0. 2. 24.	16. 1. 16., or 1,836 lbs. at 4½ d.			
			Carriage, at 5 s.			36	6	-
					-	4	3	
								36 10 3
1 Dec.	-	By William Morris, for 10 bales:			£.	s.	d.	
		H 10.	33. 3. 27.	1. 1. 20.	32. 2. 7., or 3,647 lbs. at 4½ d.			
			Carriage			72	3	-
					-	8	6	
								72 11 6
1 Dec.	-	By George Clarke & Co., for 10 bales:			£.	s.	d.	
		D C	10.	33. 2. 21.	1. 1. 20. - 32. 2. 1., or 3,641 lbs. at 4½ d.			
		A			Carriage			
					73	19	-	
					-	8	6	
								74 7 6
1 Dec.	-	By Joseph Clarke & Brothers, for five bales:			£.	s.	d.	
		D C	5.	17. 0. 18.	0. 2. 24. - 16. 1. 22., or 1,842 lbs. at 4½ d.			
		A			Carriage			
					36	9	-	
					-	4	3	
								36 13 3
7 Dec.	-	By W. P. Clarke & Co., for 5 bales:			£.	s.	d.	
		D C	5.	16. 3. 27.	0. 2. 24. - 16. 1. 3., or 1,823 lbs. at 4½ d.			
		B			Carriage			
					36	11	-	
					-	4	3	
								36 15 3
11 Dec.	-	By D. Morris & Co., for 5 bales:			£.	s.	d.	
		D C	5.	16. 3. 17.	0. 2. 24. - 16. 0. 21., or 1,813 lbs. at 4½ d.			
		A			Carriage			
					33	19	-	
					-	4	3	
								34 3 3
13 Dec.	-	By E. Busch & Co., for 20 bales:			£.	s.	d.	
		H 20.	68. 1. 8.	2. 3. 12.	65. 1. 24., or 7,332 lbs. at 4½ d.			
					183	13	-	
								183 13 -
15 Dec.	-	By G. Clarke & Co., for 5 bales:			£.	s.	d.	
		H 5.	17. 0. 22.	0. 2. 24.	16. 1. 26., or 1,846 lbs., at 4½ d.			
			Carriage			34	12	-
					-	4	4	
								34 16 4
23 Dec.	-	By James Scholfield & Sons, for 20 bales:			£.	s.	d.	
		H 20.	68. 1. 11.	2. 3. 12.	65. 1. 27., or 7,335 lbs., at 4½ d.			
			Carriage, 2 s 6 d.			181	16	-
					-	8	7	
								182 4 7
24 Dec.	-	By Gladstone, Bond & Co., for 500 bales:			£.	s.	d.	
		H 500.	1,705. 1. 8.	71. 1. 20.	1,633. 3. 16., or 182,996 lbs., at 4½ d.			
			Carriage			3,240	11	-
					-	21	6	8
								3,261 17 3
28 Dec.	-	By William Parker, for 17 bales:			£.	s.	d.	
		D C	14	D B	3 bales damaged cotton, at 50 s. per bale			
		A		C				
					42	10	-	
								42 10 -
28 Dec.	-	By Samuel Lees & Co., for 183 bales and 9 half-bales:			£.	s.	d.	
		H 183	wg. 637. 2. 21.	27. 0. 3.	610. 2. 18., or 68,394 lbs., at 4½ d.			
		9½			Carriage			
					1,211	2	-	
					-	7	19	5
								1,219 1 5

* DESCRIPTION FROM BOMBAY OF COTTON, PER "LOCH LOMOND."

D C No. 1 to 767 } Bales of Dharwar New Orleans cotton, the produce of 1850-51, being cotton of second quality.
 A No. 1 to 9 }
 D C No. 1 to 194 } Bales of Dharwar New Orleans cotton, the produce of 1850-51, being cotton of second quality, but of a little better quality.
 B } than the above.
 S C No. 1 to 18 } Bales of Sehwan or Sindh cotton, received from Kurrachee.
 H C No. 1 to 7 } Bales of Hyderabad cotton, grown in 1831.
 A C No. 1 to 5 } Bales of Ahmedabad New Orleans ginned cotton, the produce of 1832.
 A C No. 1 } Bale of Ahmedabad New Orleans ginned cotton, the produce of 1832, being cotton of inferior quality to the above bales.

C C No. 1 to 5 } Bales of Khandeish New Orleans saw-ginned cleaned cotton, the produce of 1850-51.
 N O No. 6 } Bundle

ACCOUNT Sales, ex "Loch Lomond," sold for Account, &c.—continued.

1853:					£. s. d.		£. s. d.		
6 Jan.	-	By James Scholfield & Sons, for 20 bales:							
		Gross.	T. & D.	Net.					
	D C	20 bales.	66. 2. 26.	2. 3. 12.	63. 3. 14.,	or 7,154 lbs.,			
	B	at 4 $\frac{5}{16}$ d.	-	-	-	-	128	10 -	
		Carriage 6 s. 6 d.	-	-	-	-	1	1 9	
								129 11 9	
18 Jan.	-	By Gladstone, Bond & Co., for 156 bales:							
	H 156.	532. 1. 22.	22. 1. 4.	510. 0. 18.,	or 57,138 lbs.,				
		at 4 $\frac{5}{16}$ d.	-	-	-	-	998	18 -	
		Carriage	-	-	-	-	11	9 6	
								1,008 17 6	
		Charges:							
30 Nov.	-	To carriage from Liverpool	-	-	-	-	41	5 6	
		- dockage in Liverpool	-	-	-	-	6	19 10	
		- fire insurance	-	-	-	-	5	1 10	
		- portorage, sampling, re-weighing, &c.	-	-	-	-	24	5 -	
		- picking and mending 85 bales, at 1 s.	-	-	-	-	4	5 -	
		- petty expenses	-	-	-	-	-	15 -	
		- interest on 48 L. 10 s. 4 d., 161 days	-	-	-	-	1	1 7	
		- del credere commission and brokerage on 6,253 L. 12 s. 10 d., at 3 $\frac{1}{2}$ per cent.	-	-	-	-	218	17 6	
								302 11 3	
		NET Proceeds, averaging Cash, 10 April 1853							5,951 1 7

Manchester Commercial Association,
11 February 1853.

(E. E.)

(signed) *Hugh Fleming.*ACCOUNT Sales of S C 18 Bales of Cotton, ex "Loch Lomond," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming.*

1852:					£. s. d.		£. s. d.		
28 Dec.	-	Payment, ten days and three months.							
		By Wm. Parker, for 1 bale:							
		S. C. 1 bale, damaged, at 50 s. per bale	-	-	-	-		2 10 -	
1853:		By Wm. Parker, for 17 bales:							
20 Jan.	-	Gross.	T. & D.	Net.					
	H 17,	62. 0. 1.	2. 1. 20.	59. 2. 9.,	or 6,673 lbs.,	at 3 $\frac{1}{2}$ d.	86	17 -	
		Carriage	-	-	-	-	1	7 11	
								88 4 11	
		Charges:							
		To carriage from Liverpool	-	-	-	-	-	16 5	
		- dockage in Liverpool	-	-	-	-	-	2 6	
		- fire insurance	-	-	-	-	-	1 7	
		- portorage, sampling, re-weighing, &c.	-	-	-	-	-	9 -	
		- picking and mending 3 bales	-	-	-	-	-	3 -	
		- del credere commission and brokerage on 90 L. 4 s. 11 d. at 3 $\frac{1}{2}$ per cent.	-	-	-	-	3	3 6	
								4 16 -	
		NET Proceeds, averaging Cash, 2 May 1853							85 18 11

Manchester Commercial Association,
11 February 1853.

(E. E.)

(signed) *Hugh Fleming.*

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1647

ACCOUNT Sales of A C 4 Bales and 1 Half Bale, and A C I 1 Bale Cotton, ex "Loch Lomond," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1853 :		Payment, ten days and three months.			£. s. d.		£. s. d.		
18 January -	By Gladstone, Bond & Co., for 4 bales and 1 half bale :								
	Gross. T. & D. Net.								
	A C 4 bales,	} 14. 2. 11.	- 0. 2. 19.	- 13. 3. 20., or 1,560 lbs.,	}	26	16	3	
	1 half bale,								
	Carriage, at 9s.								
								27 2 9	
	By Gladstone, Bond & Co., for 1 bale :								
	A C I 1 bale,	3. 1. 11.	- 0. 0. 16.	- 3. 0. 23., or 359 lbs.,	at 3½ d.	5	4	8	
	Carriage								
								5 6 3	
Charges :									
To carriage from Liverpool								32 9 -	
- dockage in Liverpool									
- fire insurance									
- portorage, sampling, re-weighing, &c.									
- del credere commission and brokerage on 32 l. 9s., at 3½ per cent.									
								1 11 5	
NET Proceeds, averaging Cash, 1 May 1853								30 17 7	

Manchester Commercial Association,
11 February 1853.

(E. E.)

(signed) *Hugh Fleming*.

ACCOUNT Sales of C C N O 5 Bales and 1 Bundle of Cotton, ex "Loch Lomond," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1853 :		Payment, ten days and three months.			£. s. d.		£. s. d.		
18 January -	By Gladstone, Bond & Co., for the whole :								
	Gross. T. & D. Net.								
	H 5 bales,	} wg. 17. 3. 19.	- 0. 3. 7.	- 17. 0. 12., or 1,916 lbs.,	}	32	18	7	
	1 bundle,								
	Carriage, at 9s.								
									33 6 8
	Charges :								
	To carriage from Liverpool								
	- dockage in Liverpool								
	- fire insurance								
- portorage, sampling, re-weighing, &c.									
- picking and mending 2 bales, at 1s.									
- del credere commission and brokerage on 33 l. 6s. 8d. at 3½ per cent.									
								1 14 1	
NET Proceeds, averaging Cash, 1 May 1853								31 12 7	

Manchester Commercial Association,
11 February 1853.

(E. E.)

(signed) *Hugh Fleming*.

ACCOUNT Sales of H C 6 Bales and 1 Half Bale of Cotton, ex "Loch Lomond," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1853:		Payment, ten day and three months.			£. s. d.		£. s. d.	
20 January		By Wm. Parker, for the whole:						
		Gross.	T. & D.	Net.				
		H C 6 bales, } wg. 23. 1. 5. - 0. 3. 23. - 22. 1. 0., or 2,502 lbs.						
		1 half bale, } at 3½ d. - - - - -			32	11	6	
		Carriage, at 9 d. - - - - -			-	10	7	
								33 2 1
		Charges:						
		To carriage from Liverpool - - - - -			-	5	10	
		- dockage in Liverpool - - - - -			-	1	-	
		- fire insurance - - - - -			-	-	7	
		- portorage, sampling, and re-weighing - - - - -			-	3	6	
		- picking and mending 1 bale - - - - -			-	1	-	
		- del credere commission and brokerage on 33 l. 2 s. 1 d., at 3½ per cent. - - - - -			1	3	2	
								1 15 1
		NET Proceeds, averaging Cash, 3 May 1853 - - - - -			-	-	£.	31 7 -

Manchester Commercial Association,
11 February 1853.

(E. E.)

(signed) *Hugh Fleming*.

B C
ACCOUNT Sale of N D 18 Bales of Cotton,* ex "Anglesey," from Bombay, sold in Manchester,
D
for Account of the Honourable East India Company, by *Hugh Fleming*.

1853:		Payment, ten days and three months.			£. s. d.		£. s. d.	
5 May		By S. Lees & Co., for the whole:						
		Gross.	T. & D.	Net.				
		18 bales, 60. 0. 13. - 2. 2. 8. - 57. 2. 5., or 6,445 lbs. at 4¼ d. -			114	2	-	
		Carriage - - - - -			1	7	-	
								115 9 -
		Charges:						
		To carriage from Liverpool - - - - -			1	10	1	
		- dockage in Liverpool - - - - -			-	2	2	
		- fire insurance - - - - -			-	1	10	
		- portorage, sampling, and re-weighing - - - - -			-	9	-	
		- commission del credere and brokerage on 115 l. 9 s. at 3½ p' cent. -			4	-	9	
								6 3 10
		NET Proceeds, averaging Cash, 19 August 1853 - - - - -			-	-	£.	109 5 2

Manchester Commercial Association,
30 June 1853.

(E. E.)

(signed) *Hugh Fleming*, Secretary.

* DESCRIPTION FROM BOMBAY OF COTTON PER "ANGLESEY."
B C } 31 whole } Bales Belgaum New Orleans cotton.
N O } 1 half }
B C }
N O } 18 whole Bales Belgaum New Orleans cotton.
D }
B C } 73 whole } Bales Belgaum native cotton.
N } 1 half }

TO PROMOTE THE CULTIVATION OF COTTON IN INDIA.

1649

ACCOUNT Sales of ^{B C}_N 73 Bales and 1 Half Bale of Cotton, ex "Anglesey," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *H. Fleming*.

1853 :		Payment, ten days and three months.			£. s. d.			£. s. d.						
5 May	-	By S. Lees & Co., for the whole :												
			Gross.	T. & D.	Net.									
		^{B C} _N 73 bales, 4½ d.	245. 0. 5.	- 10. 1. 20.	- 234. 2. 13.,	or 26,277 lbs. at			465	6	-			
		Carriage	-	-	-	-	-	-	5	10	3			
		P 1 ½ bale,	1. 3. 7.	- 0. 0. 11.	- 1. 2. 24.,	or 192 lbs. at 4 d.			3	4	-			
		Carriage	-	-	-	-	-	-	-	-	10			
		Charges :												
		To carriage from Liverpool	-	-	-	-	-	-	6	3	4			
		- dockage in Liverpool	-	-	-	-	-	-	-	10	-			
		- fire insurance	-	-	-	-	-	-	-	7	10			
		- portorage, sampling, and re-weighing	-	-	-	-	-	-	1	17	-			
		- commission del credere and brokerage on 471 l. 1 s. 1 d., at 3½ per cent.	-	-	-	-	-	-	16	11	9			
											25 9 11			
		NET Proceeds, averaging Cash, 19 August 1853									448 11 2			

Manchester Commercial Association,
30 June 1853.

(E. E.)

(signed) *Hugh Fleming*,
Secretary.

ACCOUNT Sale of ^{B C}_{N O} 31 Bales and 1 Half Bale of Cotton, ex "Anglesey," from Bombay, sold in Manchester, for Account of the Honourable East India Company, by *Hugh Fleming*.

1853 :		Payment, ten days and three months.			£. s. d.			£. s. d.						
5 May	-	By S. Lees & Co., for the whole :												
			Gross.	T. & D.	Net.									
		§ 31 bales, 103. 3. 21.	- 4. 1. 20	- 99. 2. 1.,	or 11,145 lbs. at 4 ½ d.			203	3	-				
		Carriage	-	-	-	-	-	-	2	6	10			
		§ 1 ½ bale,	1. 3. 5.	- 0. 0. 11.,	or 190 lbs. at 4 d.			3	3	4				
		Carriage	-	-	-	-	-	-	-	-	9			
		Charges :												
		To carriage from Liverpool	-	-	-	-	-	-	2	12	9			
		- dockage in Liverpool	-	-	-	-	-	-	-	5	-			
		- fire insurance	-	-	-	-	-	-	-	3	4			
		- portorage, re-weighing, and sampling	-	-	-	-	-	-	-	16	-			
		- commission del credere and brokerage on 208 l. 13 s. 11 d. at 3½ per cent.	-	-	-	-	-	-	7	6	1			
											11 3 2			
		NET Proceeds, averaging Cash, 19 August 1853									197 10 9			

Manchester Commercial Association,
30 June 1853.

(E. E.)

(signed) *Hugh Fleming*,
Secretary.