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REPORT
OF THE
Baroda Land Mortgage Bank Committee
1924-1925

VOLUME I
(The Report)

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Baroda Land Mortgage Bank Committee.

1924-25.

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INTRODUCTION

1. His Highness the Maharaja Saheb was pleased to order from Paris on the 25th September 1924, both by cable and a letter, to the effect that a committee should be appointed with Mr. Manilal B. Nanavati as President and Mr. Pagar and some other gentlemen as members to study the question of the redemption of agricultural indebtedness in the State, as has been done in Egypt, by the promotion of Government or semi-Government banks like the Agricultural Bank of Egypt, and in France by the establishment of Credit Foncier, and to report whether it would be practicable and useful to start such institutions in Baroda. His Highness the Maharaja Saheb also directed that the report might be placed before the Dhara Sabha for suggestions. Accordingly, His Excellency the Dewan Saheb under his order No. H. C. J. S. 2/2, dated the 27th of September 1924, appointed the present committee.

2. This order recognises the seasonal as well as the long-term financial needs of the farmers for permanent agricultural improvements. There are banking facilities available for the merchants but most of the joint-stock banks are not allowed by rules to grant loans on the security of land. The order further states that this question has engaged the attention of His Highness the Maharaja Saheb for the last ten years. The scheme of the Commerce and Industry department submitted in 1916 had to be shelved owing to the unfavourable conditions of the money market and the negotiations with the Bank of Baroda authorities had not materialised into any practicable scheme of credit facilities for the farmers. After describing the modest beginning made by the State through

Appointment of the
present Committee.

Summary of the order
of appointment.

the agency of the existing co-operative financing institutions, the order mentions the successful organisation of the land mortgage banking work in Egypt, Germany and other countries of Europe. The order next refers to the desire of His Highness the Maharaja Saheb to have this question thoroughly examined from all points of view and directs the committee to consult the Baroda Bank Officers, State Officers, Sahukars and the agriculturists, if necessary. The committee appointed was to consist of :—

1. Manilal B. Nanavati, Esquire, President.
2. Maganlal H. Kantavala, Esquire.
3. Sevaklal D. Parikh, Esquire.
4. Dr. Shankerrao M. Pagar.
5. Ramchandra S. Mane Patil, Esquire.
6. Varajbhai Vaghjibhai, Esquire.

The text of the order is given as Appendix No. 1.

3. The committee at its first meeting held at Baroda on the 11th October 1924 drafted a short questionnaire, copies of which were sent to most of the co-operative societies in the State and non-officials interested in agricultural finance and co-operation. Looking to the nature of the problem which is technical and which has not been studied in a scientific manner in this country, and considering the general ignorance on the working of such credit institutions, it was found advisable not to issue detailed questionnaire on the subject. The committee, therefore, decided to confine the inquiry to finding out whether the time had come for creating special long-term credit facilities and if so how to do this both for the members of the Co-operative Societies and the individual farmers. The questionnaire is given in Appendix 2.

4. After the receipt of replies, the sessions of the committee were held at all the headquarters of the districts, viz., Baroda (7), Mehsana (1), Amreli (1), Navsari (1)

and also at Kosamba (1). Altogether 72 persons had sent written statements, of whom it was found necessary to examine only 21 and 11 more were invited for oral evidence even though they had not sent in written statements.

5. Owing to the technical nature of the inquiry and the lack of information amongst the general public on the subject, we have considered it advisable to give some important facts concerning the systems in operations in various countries of Europe and America and also in Egypt and the lines on which similar institutions are being proposed to be undertaken in some parts of India. On the other hand, as the consideration and discussion of this problem by this committee is not in the nature of a new and independent inquiry but a logical and historical development, of all that has been done in the past by His Highness the Maharaja Saheb and His Highness's Government, we have found it equally necessary to take a review of the history of this inquiry in the State during the last twenty-five years. This report will thus be divided into three main sections :—

1. The Problem.

A. A statement on the history of the problem in the State at various stages and the steps taken by the State in the past.

B. Indebtedness :—

(a) A statement of the problem before the Government with regard to agricultural indebtedness in general and that in connection with the co-operative movement in particular.

(b) Agricultural improvements and the financing of the Panchayats for undertaking works of general agricultural utility.

2. Land Mortgage Banking.

- A. A review of some of the systems of long term agricultural credit in foreign countries.
- B. Suggestions made for similar experiments at some places in India.
- C. An examination of the existing institutions in the State with regard to their suitability for land mortgage banking work.

3. Recommendations of the Committee.

- A. An examination of the earlier scheme for a land mortgage bank of 1916, in the light of the principles established by us.
- B. The scheme prepared by the committee.

6. In the preparation of this report, we have fully drawn upon the literature available on the subject specially collected by us for the purpose and upon various Government publications for which no special acknowledgment has been made in the body of the report. However, a list of the important books of reference on the subject and Government publications is given in Appendix 3.

7. Before we conclude these introductory remarks, we place on record our appreciation of the excellent work done by the Secretary, Mr. T. M. Desai, in the collation of materials for the report and also in its preparation.

No. Acknowledgment
for reference.

Appreciation of Sec-
retary's work.

PART I.

The Problem

CHAPTER I.

RELIEF OF AGRICULTURAL INDEBTEDNESS IN THE STATE.

8. The attention of His Highness the Maharaja Saheb, whose sympathy and earnest solicitude for the welfare of his subjects can be traced to the earliest years of his reign, was drawn to the question of indebtedness amongst the agricultural classes as early as the year 1901 or even a little before this date when His Highness passed an order (H. O. No. 26, dated 19th February 1901.) that a Census of the Ryots' debts should be taken and the report submitted at an early date. The work of this Census was taken up by the Sar Subha and a schedule was drawn up and sent to the Talati of every village to be filled in after local inquiry of each khatedar. The result of the inquiry was submitted by the Sar Subha in tippan No. 262 dated the 8th December 1902. His Highness the Maharaja Saheb was pleased to order (H. O. No. 94 dated 25th February 1903) that suggestions for the relief of the indebted agriculturists might be invited and reported upon and that a similar quinquennial census be taken and published in a book form for the guidance of the public.

9. That His Highness the Maharaja Saheb was very keen on this question of agricultural indebtedness is further shown by another order that His Highness passed (H.O. No. 120, dated 13th July 1901) to the effect that Committees consisting of the Naib Suba, Vahivatdar, the Munsiff and two leading cultivators for each one of the taluka be appointed and the opinions of these taluka committees be invited on several questions connected with the economic life of the Agriculturists. In the terms of reference for these committees, which were very comprehensive, there were three definite questions relating to the nature of the present inquiry:

1. How far are people indebted; what are the causes of their indebtedness; what remedies should be adopted to relieve them ?

2. What is the best organisation for Agricultural Banks ?
3. What measures should be adopted to minimise the present indebtedness.

10. The suggestions of the committees on these questions along with others were collated and submitted by the Sar Subha to Government (tippan No. 3, dated 2nd August 1902). We find that no final orders were passed on these suggestions, but they were sent for further discussion to a committee consisting of Messrs. Vanikar and Raojibhai. The committee were asked to submit them in such a form that final and definite orders could be passed by His Highness. At this stage the history of the problem becomes vague and uneventful. The work of the committee was not progressing satisfactorily. There were frequent changes in the membership and they could not meet often as was necessary. His Highness the Maharaja Saheb again rescued the subject from this slough of general indifference in March 1905 when he passed another order asking the Sar Subha to submit definite proposals for the relief of agricultural indebtedness (Huzur Order No. 1, dated 31st March 1905). But the suggestions being of a very radical nature involving compulsory arbitration for the settlement of debts they were not acted upon. In December 1904, the first Co-operative Societies Act was passed, with a view to create co-operative credit facilities for the agricultural classes. A little later another question dealing with an act more or less similar to the Deccan Agriculturists Relief Act was referred to the same committee for consideration with the questions of the agricultural indebtedness already before it. But as no report was forthcoming on this important and long standing question, Mr. Maneklal S Desai was entrusted with the work of submitting a final report on it. Later on, in August 1911, the work was again transferred from Mr. Desai to our colleague and President, Mr. Manilal Nanavati. He submitted his report in the August of the next year.

11. This report discusses all the causes of the agricultural indebtedness and suggests remedies
 Recommendations in this Report. for the general uplift of the farmer.

But as far as agricultural finance is concerned, the main recommendations are the development of co-operative credit societies and the organisation of Taluka Banks and Unions with an apex bank to finance these societies with short and long term loans. In this report the whole discussion on the question of agricultural finance facilities has been carried on as was natural, not with an exclusive bearing on *long-term* credit facilities for the agriculturists but with an eye to general agricultural finance. It refers to the question of long-term credit for agriculturists, but does not develop it and proceeds to discuss the question of organising more co-operative societies with taluka unions and a central bank. The idea underlying the discussion of this question is that the Central Agricultural Bank as recommended might take up both the financing of the Unions and through them of the societies for short-term and seasonal credit and also the long-term business for the liquidation of debts, and it is because of this that the report recommends for the Central Agricultural Bank the right of issuing debentures with interest guaranteed by the State. Amongst other concessions suggested in the report for the Central Bank are those already granted to the co-operative credit societies together with a part subscription of its share and debentures by the State.

12. With this ends the phase of committees and reports and the second phase of the movement
 Mr. Nanavati's scheme for a Land Mortgage Bank in 1916. begins with Mr. Nanavati, the Director of Commerce and Registrar of Co-operative Societies, submitting to the Government precise, definite and detailed suggestions for an independent bank designed mainly though not exclusively for granting long-term credit facilities in the form of a tippan on the 7th August 1916, nearly four years after the preparation of the Report on the Agricultural Indebtedness in the State. As this was the first definite effort at presenting to the Government a well de-

signed scheme for the establishment of a Land Mortgage Bank in the State, we propose to give the outlines of the scheme in Appendix 4.

13. The proposals of the department of Commerce and Co-operation were ably criticised by Rao Bahadur Govindbhai H. Desai the then Joint Sar Subha, who urged that if the agricultural population elsewhere can obtain ample credit by means of banding together on co-operative principles and pledging their joint liability as security, the presumption was that the farmers of the Baroda State could do the same. Rao Bahadur Govindbhai's main opposition was to a Government Bank and to Government guarantee. All the same he agreed that if the Government could afford it, it would do well to place as much money as it could spare for the use of the co-operative unions and banks. That he considered would be a real help. As to the proposed bank he doubted that even if the Government was prepared to give the concessions asked for there was any likelihood of the bank becoming a reality. Lastly, he believed that debentures at 4½ p.c. (which was the rate proposed in the tippan by the department) would not find purchasers to the required extent in spite of the Government concessions.

14. The tippan was, however, submitted to Government, and the whole scheme received a very fair amount of their attention. Sir Manubhai's support for the Scheme. Manubhai Nandshanker, the Dewan Saheb, after going through the papers connected with the long history of this question in the State, prepared a short note on the possibilities of a long-term agricultural credit institution, which is one of the most important and interesting documents that we have come across. In a brief precise manner, Sir Manubhai answered all the arguments against the usefulness of the scheme and the possibility of its success, to lay at rest all the apprehensions that any new and bold financial scheme was likely to cause in the minds of many. As the note will have an important bearing on our recom-

mendations, for reasons of economy we propose to reproduce it as Appendix No. 5.

15. The scheme, after a year, found its way, as many schemes do, to a committee with Mr. A. N. Datar as President, with instructions from the Government to formulate workable proposals as regards the many details involved therein, in view of the abnormal conditions prevailing in the market. The committee's report was a short one, which after considering some preliminaries admitted the necessity of such an institution, as the evil of agricultural indebtedness was very wide-spread. But the members were of opinion that instead of the State undertaking a big ambitious scheme, with a complicated machinery, it was better to make a small beginning by utilising institutions that existed at the time. They recommended that the Central Co-operative Bank at Baroda and the Agricultural Bank at Bhadrar might be entrusted with the work of liquidating old debts of the members of co-operative societies besides meeting their current needs. These banks could do this work through the co-operative Societies, who should advance loans to their members for a period upto ten years on the security of first mortgage on land at 6 p. c. per annum, provided the value of the land so mortgaged was not less than twice the amount of the loan. The societies in their turn could be financed for this purpose by the Central Co-operative Bank at Baroda or the Bhadrar Agricultural Bank as the case may be, such loans bearing interest at 5 p. c. per annum. To enable the Central Co-operative Bank and the Bhadrar Agricultural Bank to grant these special loans to societies for ten years at 5 p. c., the committee recommended that the Government should give a deposit of one lac of Rupees to the former and half that amount to the latter for a period of ten years at $3\frac{1}{2}$ p. c. per annum. The Government was not to ask for any specific security to cover these loans from either of the banks, as an attempt to do this would have affected the banks' chances of getting outside deposits. It was, however, recommended that the banks should be

required to double their paid-up capital before receiving this deposit from Government and that similar proposals regarding the Amreli Agricultural Bank might also be sympathetically considered by Government, if the working of that bank was found to be satisfactory. The committee finally hoped that if redemption operations were started on these lines, the State might be in a position later on, if the experiment proved successful, to push on the work on a much larger scale.

16. It is necessary to observe that the committee throughout their report do not say a word against the scheme submitted by the department of commerce and co-operation and that they admit the necessity of an institution to tackle the question of the redemption of the old debts of the agriculturists. It was only because of their determination to follow a conservative and cautious policy in connection with an ambitious and complicated scheme of agricultural finance that the committee were led to whittle down the proposals of the department and to suggest in their stead a beginning so modest that even if completely successful, it could hardly have affected the vast and terrible amount of agricultural indebtedness in the State.

17. The tippan with the committee's report was placed before the Government. The Council considered the proposals on the 4th June 1918 and decided to submit the matter to His Highness the Maharaja Sahib recommending that the proposals of the committee might be sanctioned tentatively, pending the maturing of the idea of a separate Land Mortgage Bank. His Highness the Maharaja Sahib sanctioned the recommendations of the Council, and *inter alia* the desirability of bringing into existence a Land Mortgage Bank (B. K. K. Commerce Department H. O. No. 11, dated 11th June 1918).

18. The original scheme of 1916 that had been put off temporarily was submitted to Government two or three times during the period between 1918 and 1923. But as the rate of interest prevailing in the money market at the time was very high, the proposals were sent back by the Government. The whole question was, however, again revived by His Highness the Maharaja Sahab himself, in September 1924, as shown in the Introduction by appointing the present Committee.

The question of a Land Mortgage Bank revived with the appointment of the present Committee.

CHAPTER II.

THE PROBLEM BEFORE GOVERNMENT.

A. General Agricultural Indebtedness.

19. In this chapter we propose to examine the various purposes for which long-term credit is required for the development of agriculture in the State. We wish first to examine the nature and extent of agricultural indebtedness in general and that of the members of co-operative societies in particular; and then take up the question of agricultural improvements and their possibilities, incidentally examining the method of Panchayat finance for rural engineering, for roads, drainage, etc., upon which the prosperity of the agricultural population to a large extent depends. It may also be mentioned here that we do not propose to go very minutely into all these questions since most of the questions have been exhaustively dealt with in earlier reports. We will give a general out-line, just sufficient to show whether there is a case for the proposals that we make at the end of this report.

General plan of the chapter.

20. As stated before, the first attempt made in the State to get a rough estimate of the Debt Census of 1901. Ryots' indebtedness was in 1901, when soon after the famine, His Highness the Maharaja Saheb ordered a census of agricultural indebtedness. A special form was prepared and sent to the Talati. The form was a very interesting one and contained information with regard to the debts previous to the famine, the debts incurred in the famine year, the prices of ornaments, houses or agricultural land sold or mortgaged because of the famine and many other important points. The returns showed that out of 2,53,734 khatedars 1,57,722 or 60 p. c. were indebted to the extent of Rs. 7,57,17,190 or Rs. 460 per head. The details show that the Baroda District khatedar was on an average indebted to the extent of Rs 620, the Navsari khatedar to the amount of Rs. 469, the Kadi one to Rs. 428 and the Amreli one to Rs. 313. A curious fact in this connection was that the indebtedness by districts was in the same proportion as the value of land in the districts. The figures might not be very accurate but we would be justified in accepting them as giving an approximately correct amount of agricultural indebtedness.

21. The second stage in the history of the question of agricultural indebtedness was the preparation of the Report on the Agricultural Indebtedness in the State. This was in 1912, about a decade later than the previous inquiry. From this report we learn that the indebtedness of the farmers then, i.e. in 1912, was in no way less than in 1901. During this interval of a decade there were many bad years and it was not likely that the farmers had paid off any of the old debts. The method of estimating indebtedness was a much less elaborate one than that employed in 1901. The amount of the registered debts of the people was obtained by adding up the value of mortgages with possession, mortgages without possession, money bonds over Rs. 1,000— which were required to be registered and money bonds under Rs. 1,000

which had been voluntarily registered, for 12 years preceding the inquiry. To avoid all errors, half of this amount was taken as paid and so there remained the other half, which came to Rs. 3,38,96,454 as the total registered debts for the whole population at the time. Of this, 75% was taken as the share of the farmers, which came to Rs. 2,54,14,840. This amount represented the secured debts of the farmers. As most of the short-term loans of the farmers are unsecured and as every farmer has floating debt of this kind, there remained the amount of unsecured debts to be considered. This was placed at twice the amount of the secured debts bringing the total to Rs. 7,62,44,520. To this was added the amount of Rs. 44,00,000 of government arrears. This brought the total agricultural debts in the State to Rs. 9,06,44,520. This was a little more than what it was in the year 1901. It must be accepted that this was the lowest possible estimate that could be made. It did not include the debts represented by the conditional sale documents which were getting common in some of the districts at this time and also the amount of some registered money bonds because figures for a few years were not available. Further it was estimated that the percentage of khatedars who were free from debts, was lower in 1912 than in 1901 from the fact that there were more documents registered—mortgages and sales—in 1912 than in 1901 though the value represented by them had not risen proportionately. From this it was inferred that more kheduts were indebted. But for the purposes of finding out the average debt per khatedar, the percentage of indebted khatedars was taken as the same in the earlier census, i.e., 60%. The average debt per khatedar was thus Rs. 450.

22. The next estimate of agricultural indebtedness was made by the Basoda Economic Enquiry

Estimate by the Economic Enquiry Committee.

Committee in 1918-19 on the lines adopted in the previous report of 1912.

The committee also arrived at the total of Rs. 8,03,55,516. This figure shows a decrease of about Rs. 5,00,000 from the total estimate arrived at in 1912. This

decrease is almost nominal and may safely be neglected. Thus the total indebtedness during the interval of 7 years between 1912 and 1919 had not changed. However, if we consider that in the earlier estimate, the amount of Government arrears was Rs. 44,00,000 and that in the Committee's estimate, 7 years later it was little over 19 lacs, we must admit that the indebtedness to the private money-lenders had during this period really increased by Rs. 18,00,000. Though the total agricultural indebtedness had remained very nearly the same for the first twenty years of the century, now, in consequence of good seasons for the last few years there might have been some decrease in it. Still the evil of indebtedness is there and to remove it special measures are necessary.

23. For our purpose, however, the total indebtedness of the agricultural population is not an important consideration. We have attempted an estimate of it here to show that in the absence of any far reaching remedial measures the pressure of indebtedness, in spite of the increasing education, somewhat better seasons, and the general rise in the prices of raw products does not show very great decrease. The money-lenders are, as a rule, a very shrewd class of people and they make it their business to see that the advantages from all these factors do not go to the farmers but to them. It is to their interests that the khatedar should not be completely free from debts and beyond the reach of their influence. It is not at all uncommon that in good years when the farmer has money, they encourage him to undertake all sorts of unnecessary expenses by voluntarily offering him loans. Otherwise, with somewhat favourable conditions, we might have expected a greater fall in the pressure of indebtedness. We believe that had there been a straight forward honest agency, for financing agriculturists on reasonable terms, in operation during these years, the pressure of indebtedness would have diminished considerably. Without such an agency there is little hope of attacking

Why there was no reduction in the amount of agricultural debts.

successfully the problem of chronic indebtedness amongst the farmers, even if we go on having good seasons on an average and good prices for agricultural products for some time in the future, because the reasons for this indebtedness are not purely economic but also psychological. It is not that the present state of agricultural industry is so degraded as to leave no margin of savings, after the farmer's usual and unusual expenses, to go towards the redemption of debt. We came across only one witness in the course of our inquiry, who held that the proceeds from agricultural operations were always less on an average than the expenses in connection with farming and the cost of maintenance of the farmer's family or that the agricultural industry was ordinarily insolvent.

24. This point raised by the witness about the permanent insolventcy of the agricultural industry is an important one as it vitally affects the question whether any organised effort should be made to relieve the agriculturists from indebtedness. If the industry is really insolvent or not in a position to yield enough for the cost of farming and the necessary expenses of the farmer as required by the present state of society, it would be not only useless but an absolute folly to undertake any economical measure, apart from direct philanthropy or charity, to relieve the agriculturist from the burden of old debts. We, however, believe that the industry is certainly not insolvent at its present stage. The period from 1900 to 1925 is, after making all allowances, certainly not an exceptional one. This quarter of a century like any other had its own years of famine, its years of scarcity and its good years. If the statement that the industry was insolvent or not able to meet all the justifiable demands on its products was true, the total indebtedness would have shown an appreciable increase. But we find that the amount of indebtedness in 1901, 1912 and 1918-19 is maintained almost at the same level without any alarming rise. When we consider that it was possible to maintain the indebtedness at the same level in spite of the usurious rate of interest and

many other corrupt practices obtaining in the field of agricultural finance together with the fact that an indebted farmer never gets the full market value of his crops, we must admit the existence of a margin. It is this margin that is swallowed by the saokars in the form of the difference between the justifiable rate of interest and the actual rate charged, the commission resulting from the manipulation of accounts and the difference in the price of agricultural products that the farmer ought to get and that he actually does get at some places. We hold that it is this margin, which to-day is being taken from agriculturists either owing to his ignorance or helplessness or want of an organisation which could work honestly for his redemption from chronic debts. It is further obvious that as the debts go on decreasing, as a result of the proper use of this margin, the amount of this margin will go on increasing holding out a legitimate hope of complete freedom from chronic debts, for the farmers. We want to guard against a possible misunderstanding here. It is neither possible nor quite necessary that the farmers should have no debts at all. Even when the condition of freedom from debts that we contemplate for the future is realised, there will be the ordinary current debts for financing the seasonal demands of the industry and debts for large scale remunerative improvements. The existence of these debts in no way constitutes a disease of or a danger to the industry. It is a common feature of almost all the industries to have current debts for the ordinary operations and to have debts of longer durations for development purposes. What is to be aimed at is the elimination of the chronic debts, which are neither for development purposes nor for current needs and which form a regular drag and dead-weight on the industry. It is possible to do this by utilising the margin that, as we have shown, exists in the agricultural industry. But this margin can be utilised for this purpose only if there is an agency, which by its straightforward dealing, honest accounts, a reasonable rate of interest, that the condition of the money market would justify, absence of any 'graft' and the genuine desire to free the farmers from the burden of these debts, undertakes to meet the needs for long-term finance of the agricul-

turists. In the absence of such an agency, this margin will always find its way into the pockets of the saokars and the debts will continue to be at the same high level.

25. It would be interesting to examine the question of indebtedness from another point of view. The phenomenon of the transfer of land from the hands of the agriculturists is an important one for the consideration of the problem of agricultural indebtedness. The following table gives the figures for the number of transfers of land as well as the bighas transferred from the cultivators from 1910-11 to 1922-23 :—

NUMBER OF TRANSFERS OF LAND AND AREA TRANSFERRED.

No.	Year.	From cultivators to non-cultivators.		From non-cultivators to cultivators.		Net bighas transferred from cultivators to non-cultivators.	
		No. of transfers.	No. of bighas.	No. of transfers.	No. of bighas.	No. of transfers.	No. of bighas.
1	2	3	4	5	6	7	8
1	1910-11	2,023	17,298	505	4,474	1,518	12,824
2	1911-12	2,125	18,025	684	6,834	1,441	11,191
3	1912-13	1,810	15,369	1,026	8,490	784	6,879
4	1913-14	1,776	15,587	877	7,635	899	7,952
5	1914-15	1,980	19,730	1,136	8,890	844	10,840
6	1915-16	2,462	24,216	9,914	7,961	1,548	16,255
7	1916-17	1,945	17,863	966	6,821	979	11,042
8	1917-18	2,096	20,211	1,193	9,187	903	11,024
9	1918-19	2,430	20,283	1,117	10,387	1,313	9,896
10	1919-20	4,047	33,833	1,499	9,733	2,448	24,100
11	1920-21	3,249	25,943	1,174	8,450	2,075	17,493
12	1921-22	2,919	23,735	986	7,735	1,833	16,000
13	1922-23	2,263	21,019	1,107	9,723	1,156	11,296
		31,025	2,73,112	13,184	1,06,320	17,841	1,66,792

26. The figures are very significant. The number of transfers from cultivators to non-cultivators shows the number of agriculturists who from various reasons are forced to part with land in their possession.

About two thousand cultivators compelled to part with land every year.

Anybody, who understands the psychology of our average khedut, knows that they are extremely reluctant to sell their land, even when they may have a surplus except when compelled by force of circumstances. They are not speculators in land and hardly ever attempt the buying and selling of land with a view to profits. The only meaning that we can, therefore, draw from the figures for the number of transfers of land from cultivators to non-cultivators is that on an average more than 2,000 cultivators are compelled to dispose of their land of an average area of 21,000 bighas every year owing to their pecuniary embarrassments. About the fluctuations in these figures from year to year, we merely want to observe that the large and sudden fluctuations might be accounted for by the effect of scarcity and failure of monsoon. And the general rise during the latter half of the period, both in the number of khatedars and the number of bighas, might to some extent be explained by the increasing practice of conditional sales, even when the transactions are merely of a mortgage nature, partly because of the diminishing confidence between the saokar and the agriculturists resulting in more fore-closures and forced sales, and partly because of the realisation by the more intelligent sections of the agriculturists that in the event of embarrassment it is better to dispose of a small piece of land to get the money than to mortgage two or three times the area to a saokar for the same amount. This factor, however, would not operate, if they could borrow from a mortgage bank, which would not take any advantage of their ignorance and unfamiliarity with systems of accounts. A part of the transfer may, however, be accounted for by the increasing tendency among the non-cultivating classes to own land for investment and profit.

27. The figures for transfer of land from non-cultivators to cultivators are from our point of view not so important as those previously discussed. However, it is interesting to note that during the last 13 years, some 13,000 transfers or on an average some 1,000 transfers a year from non-cultivators to cultivators took place involving about one lac of bighas for the whole period or some 8,000 bighas per year. The figures are, however, useful for getting the net transfers from cultivators to non-cultivators. It is the last column, which shows the net transfers of land from the cultivating classes to the non-cultivators, that is the most significant. This net loss of land to the agricultural classes during these years is never less than 6,000 bighas and more than 24,000 bighas in any one year. The average loss per year to the agricultural classes is 12,830 bighas. Whatever else these figures tell, they point to the one very significant and alarming fact that from twelve to thirteen thousand bighas of land passes from the hands of the agriculturists to those of the non-agriculturists every year. There is not even the consoling feature of having some years, when the net transfer is in favour of the cultivating classes. There is not a single year, when more land has passed from the non-cultivators to the cultivators. From a general tendency in the fluctuations of these net transfer figures, one cannot even deduce that this net loss to the cultivators is in any way showing a sign of steady and gradual decrease. Happily, there is no evidence of any general tendency towards an increase in the amount of this net loss. This fact further bears out our contention at a previous stage that the total debts of the agriculturists have not increased in any appreciable manner. We might have been justified in expecting a tendency towards decrease in the area of land transferred from the cultivators to the non-cultivators owing to the appreciation of land values during the present decade. But against the factor of appreciation, we have to take into consideration the fact that a large number of transactions concerning land, which would have originally

The important implications of the figures in the above table.

gone under the name of mortgage and which would not have been recorded as land transferred are now of the nature of sales (conditional) accompanied by regular *mobadla* proceedings. We have it from a pleader of every good standing that during recent years owing to the interpretation by the High Court of the section providing maintenance for the cultivators in civil court decrees, most of the mortgage transaction at least in the Navsari and the Amreli districts took place as sales (conditional). Then there is a further fact that the attitude of the saokar towards his debtors has undergone considerable change in as much as where during the old days he would not have taken recourse to obtaining a civil court decree and enforcing a sale of the mortgaged property, he now does so, partly owing to a kind of nervousness and partly owing to the absence of confidence in his debtor. Finally, there is the greater burden owing to the general increase in the rate of interest during the last ten years in the money market. Because of all these influences, though the amount of debt has not increased in any appreciable manner, the pressure exerted by the debt both pecuniary and psychological has increased. The fact concerning the steady and continuous passing of land from the cultivating classes is of great social importance. The net loss, as we have shown, amounts to nearly 13,000 bighas every year. In the year 1921-22 the cultivators held 49,52,122 bighas of land while the non-cultivators held 15,09,707 bighas. If transfer of land from the cultivators to non-cultivators continues at the present rate, and there is no reason to believe why it should not continue unless special measures are taken, it is quite conceivable that in a few years a very difficult situation would arise, which it would then be very difficult to deal with.

28. For the purposes of this inquiry, however, it is not the figures for net transfers from the cultivating classes to the non-cultivating classes that matter but the figures of such transfers without making any allowance for the land reclaimed by the cultivators from the non-cultivators.

Further implications of the figures in the above table.

Because those cultivators, who reclaim this land are not the same set of persons who are compelled by circumstances to part with land. The figures in the columns 3 and 4 of the table on page 19 show the number of cultivators who are compelled to part with land and the area of land that they have to part with. But this is not all. It is not always that the agriculturists have to sell their land to saokars or the non-cultivating investors in land. It is more often that the land belonging to a distressed khatedar is bought by a prosperous one. But we have no figures for land so transferred or the number of transfers as a result of sale. The figures that are available for such transfers from cultivators to cultivators are vitiated, because they include transfers due to gifts, inheritance, etc. The genuine sales from cultivators to cultivators might be about three times of those to non-cultivators. But to avoid all errors of exaggeration we might quite safely take these sales as at least double. Even on this conservative estimate we have more than 7,000 agriculturists driven to part with more than 60,000 bighas of land on an average every year. Of these 60,000 bighas sold every year by the cultivators, only a certain percentage is in the nature of nominal sales. These sales are for all practical purposes as good as mortgages from the financier's point of view. Of the remaining, some sales are absolutely necessary and where no land mortgage bank could be of any help. If we take the proportion of such sales as one-third of the total sales, we are left with the effective demand of 40,000 bighas on the services of a land mortgage bank. The average price per bigha on a cautious estimate for the whole State is Rs. 100. The total value of the 40,000 bighas of land involved would be Rs. 40,00,000. If the proportion of loans granted to the value of security be taken as half, these 40,000 bighas of land create an effective demand, on any land mortgage institution that might be started, of Rs. 20,00,000 a year. This demand would decrease in course of time as the total secured chronic debts of the cultivators decrease as a result of the operations of a better financing agency. Many of the 7,000 agriculturists who as shown above are compelled to sell land every year,

are those who are pushed on their downward path and who are likely to go below the line in course of time after which they cannot be helped as a result of the pressure of old debts.

29. Another set of figures which might be important Figures for mortgages. are those concerning the number of mortgages with and without possession. The following table gives such mortgages for 4 years from 1919-20 to 1922-23 :—

Year.	Number of Mortgages with possession.	Number of Mortgages without possession.	Total.
1919-20...	16,354	2,482	18,836
1920-21...	16,428	2,948	19,376
1921-22...	13,384	2,546	15,930
1922-23...	15,381	2,115	17,496
	61,547	10,091	71,638

We find from these figures that on an average about 18,000 people borrow money on the security of immovable property. We might consider 75 p.c. of these mortgages as mortgages on land. It follows, therefore, that about 11,500 of these have to part with the possession of the land so mortgaged every year. Taking the average value for each mortgage at Rs. 300, the average amount borrowed on the security of land comes to about Rs. 40,00,000. This estimate of 40 lacs does not include the amount borrowed every year on the security of the conditional sales of land. But as the figures for the sale of land and the persons compelled to sell include these conditional sales, we cannot add them on here,

30. The amount of 40 lacs of new secured debts of the agriculturists every year includes loans for short-terms-also. It is not possible for the poorer classes of cultivators to raise even temporary seasonal loans without offering sound security for them. This amount also includes a considerable number of mortgage loans for long periods for very small amounts which it would not be possible for a land mortgage bank to make. If we take the amount of small long-term loans and the loans for the current needs at half the total amounts of loans, we have Rs. 20,00,000 of long-term loans secured on mortgages on land which a land mortgage bank could undertake to give. Thus in addition to the demand of 20,00,000 that we deduced from the figures for sales of land, we have an additional demand for another 20,00,000 every year for mortgage loans for long periods. This need of Rs. 40,00,000 every year for long-term loans shows that there is a very obvious need for a land mortgage bank. Any ignoring of this demand and leaving the saokars a free field is bound to result in the acceleration of the rate of transfer of land from the cultivating to the non-cultivating classes.

31. While dealing with the problem of agricultural indebtedness, the amount of indebtedness is not the only important thing to consider. What is more important and more to the point is the saokar's method of doing his business. His charges for interest and commission (vatav), his method of exacting repayments in cash and kind, his mode of keeping accounts and his recourse to fore-closure and forced sale of the mortgaged land, are things that go to make the problem more acute. It is these that play an important part in the downfall of the peasantry and the consequent transfer of land from the cultivators to the non-cultivators which we have noticed in this chapter. It is not necessary for us to go into the various intricacies of the saokar's business; they are fully exposed in the Report

on the Agricultural Indebtedness in the State (1912). Under the existing conditions the saokar has found a place for himself in our agricultural economics. But it is nevertheless true that at best he is a necessary evil and has to be replaced at the earliest opportunity, by a more honest and business-like institution which would give relief to the agriculturists and place them on a road to better business, better farming and better living.

B. INDEBTEDNESS AMONG THE MEMBERS OF CO-OPERATIVE CREDIT SOCIETIES.

32. Though the problem of agricultural indebtedness has been before the State for the last twenty-five years, it has now been brought to a greater prominence as a result of the working of the co-operative movement. As the movement progresses its limitations are more and more being realised. At one time during the initial stages of the movement, it was believed that the Raefessein Societies and their financing institutions would be able to give relief to the members even for the payment of their old debts. But these anticipations have not been fulfilled and the movement has now reached a stage, when unless some special measures are taken to repay old debts, even the work of short-term finance would be made more difficult. The resources of the existing societies and the banks are limited and the latter are able to lend only a small part of their funds for a maximum period of five years. The societies are able to get deposits for a short period not exceeding two years at the most. With these resources it has been found impossible to undertake liquidation of the old debts to the saokars. Out of rupees ninety lakhs odd loaned out to societies during the last ten years, only about twelve lakhs seem to have been advanced for the purpose of liquidating old debts. The

existence of old debts is one of the most embarrassing factors in the development of the societies.

33. Every one connected with the co-operative movement whom we had occasion to confer with, from the Registrar of Co-operative Societies downwards to the secretary of the smallest co-operative credit society admitted the necessity for long-term facilities. The existence of previous debt from saokars, the high rate of interest usually paid on it, the 'vatav' and the other commissions and finally the dishonesty in the account in some cases make it impossible for a member of a co-operative society to reap all the benefits that the membership of the society might bring him. As it happens, in several cases, he is merely shunted back from the society to the saokar and from the saokar to the society, to meet the periodical demands from both these agencies. His instalment against the loan from the co-operative society must be paid when due. He cannot do so as the saokar generally keeps his eye on the products of his cultivation. He has to go to the saokar and borrow fresh to meet his liability to the society in due time. Soon after, as the saokar begins to get impatient and press him for payment on account, he goes to the society and borrows fresh ostensibly for current expenses but really to satisfy his saokar. One saokar, who does considerable amount of business in the Navsari District, told us that he knew of many members of the co-operative societies who went to him for loans when their loans from the society were due for repayment and assured him that they would take fresh loans on the merit of having paid the previous ones regularly and pay him back. Thus the calls from the societies were met by borrowing from the saokar and the calls from the saokars were met by fresh borrowings from the society. In this manner, so long as the members of the societies were heavily in debt to the saokars, the societies could do little for them. For nobody could go on in this vicious circle of borrowing from one source to satisfy the other and vice versa without incurring more and more debts.

34. Our saokar witness referred to above went so far as to assure us that if once the agriculturists were relieved from the burden of old debts from the saokars by being given adequate amount of loans spread over a large number of years, the debtors in most cases would not need facilities for current expenses, because what happens at present is that the man pays practically all the income from his farming to the saokar against his debts. The saokar gives him credit for this payment in kind at a rate generally lower than the prevailing market rate and from a date always later than that on which the payment in kind is made. For all his current needs the debtor is thus forced to borrow afresh. The result is that while he goes on paying interest on his borrowings for all the time he does not get any interest for his payments for some time besides realising less for his product. This is, however, a very extreme view. But this much appears certain that if he owed the same amount to some public institution where there could be no doubt as to the accuracy of accounts and no question of sharp practices, and where he would have to pay annually definite instalments, he would naturally dispose of his produce at the usual market rate, keep enough for his current needs and pay the balance against the interest and principal. He would thus be put on the road to freedom from debt at some definite future date, but the co-operative societies in the present state of his indebtedness to the saokar cannot do much for him. We believe that our co-operative societies in spite of the great efforts made by the department have not been able to show adequate results and comparatively healthy progress because of this evil of their members' indebtedness to the saokar.

35. Neither the agricultural credit societies nor the Central Bank and the Banking Unions as they exist are in a position to remedy this evil. They are primarily constituted to meet the short-term needs of their members. Their constitution, growth and their outlook have all been

The co-operative banks and societies cannot remedy this evil.

fashioned by this legitimate activity of theirs. Their resources also are designed with a view to meet demands for short-terms. As to getting long-term deposits, so as to be able to give loans for periods exceeding ten years, it is impossible and no one connected with either the agricultural or commercial banking would consider it as a practical proposition for a moment. People do not go and deposit large sums for ten, fifteen or twenty years, though they might at times renew their deposits year after year for several years. But no bank or financing agency would think of furnishing long term credit on the slender hope of perpetual renewals of deposits, and if it did, it would most certainly come to grief.

36. The only way in which the co-operative societies and the co-operative banks could undertake long-term financing for their members, is by utilising their reserve funds for this purpose. But looking to the amount of the reserve funds of the societies and the banks, we do not think it possible for them to tackle the problem in such a manner as to obtain appreciable results for years. The total reserve funds of the agricultural credit societies amount to about four lacs, while those of the banks and unions to a little over forty-six thousand. Even this whole amount, small as it is, would not be available for the purpose of long-term loans for liquidating old debts of the members. Of the four lacs of reserve funds of the societies, a large part of them is owned by many societies in small amounts not exceeding a few hundreds. All these small amounts might as well be ruled out of consideration, because each one of them by itself would perhaps not be enough to meet the debts of even one member. With these general remarks let us now examine the old debts of the members of the credit societies in the State, as it would give us some idea of the requirements of the movement.

37. The number of agricultural co-operative societies at the end of the year 1924-25 was 601, out of which 536 were credit societies. Of these 601 societies, 466 might be regarded as good in as much as they

Their reserve funds too insignificant to give appreciable relief.

The needs of the members of the Co-operative societies A, B, & C classes.

have been classed by the Registrar of the Co-operative Societies either as A, B, or C. The remaining 135 belong either to the D and E classes or have not been classified so far. Those coming under D and E are bad, while those not classed must be new ones. We have, therefore, to consider at present the needs of the 466 societies of the A, B, and C classes.

38. There is no material available for estimating the secured and unsecured debts of the members of the agricultural credit co-operative societies, except the amount given in the property statements prepared by each society. We have examined those figures but as they disclose many discrepancies of an important nature, we cannot place any reliance on them. These statements are prepared by the officials of the societies themselves with the help of the members and it is natural that in some cases no reliable information might be available of the exact state of affairs of certain members. There is also the tendency for minimising one's indebtedness among all classes of society, especially with regard to those debts for which specific security has been given. In our examination we have also found that the figures for unsecured debts are, on the whole, more reliable than those for secured debts. From the figures supplied to us and from the above considerations, we come to the conclusion that the total secured debts of the A, B, and C classes of the co-operative credit societies must be in the neighbourhood of twenty-five to thirty lakhs. The total of unsecured debts must be about double the amount of the secured debts.

39. On the whole, a greater part of the unsecured debts of the members of the co-operative societies represents their current needs and it is possible that a greater part of it is repaid and recreated every year. For purposes of long-term loans on the security of mortgage property this debt or at least a greater part of it might very well be ignored. W

would not be far wide of the mark if out of the total unsecured debts of 40 lacs we assign 10 lacs to those more or less of a long-term or permanent nature and transfer this figure from debts incurred for current expenses to those for long-terms. We would then arrive at a figure of from 30 to 40 lacs for which the members of the A, B and C classes of societies need long-term credit facilities.

40. The amount mentioned above, that of between 30 to 40 lacs does not represent the entire need of the members of the co-operative societies for long-term credit. This amount merely covers the sum required for liquidating old debts of the members. There is, however, another field for a considerable use of long term credit, if it is obtainable on reasonable terms. This 40 lacs or so covers an infinitesimally small part of the cost on agricultural improvements possible and attempted. There must be many members of the co-operative societies who would undertake agricultural improvements of a major nature or buy more land to render their uneconomic holdings economic if unrecalable long-term credit was guaranteed. It is not at all possible to estimate the amount that might be required from year to year for this purpose, but there is no doubt that it would be a comparatively large amount. At present the amount given for the purposes of land improvement is only about fifty thousand rupees, but this must be for minor works of improvement as loans are only for a short-period.

Loans will be required in addition for undertaking major agricultural improvements.

to 40 lacs does not represent the entire need of the members of the co-operative societies for long-term credit. This amount merely covers the sum required

C. AGRICULTURAL IMPROVEMENTS.

41. In the foregoing sections of this chapter, we have discussed the extent of the agricultural indebtedness of the farmers in general and of the members of the co-operative

Mortgage Banking necessary also for large scale agricultural improvements.

societies in particular. In the same discussion we have shown that unless some measures are taken to relieve the burden of old debts the progress of agricultural as well as the co-operative movement would be retarded. The best known method of relieving this burden is by the opening of banks that would lend funds for a long time on the security of mortgages of agricultural lands. But no scheme of land mortgage bank would be complete, unless it took into consideration the financing of costly agricultural improvements, for which long-term loans are needed and for which as far as we know there is ample scope for development. In the two sections that follow, we propose to inquire into the scope for this kind of credit facilities.

42. During the last twenty-five years agriculture in Gujarat has been passing through a slow but silent revolution. Side by side with this there has been a spread of general education and of mechanical arts, with the result that quite a fair number of oil engines and pumps and a few tractors have been introduced in the State. As in the case of the co-operative movement, in this effort for agricultural development also, the State has extended generous assistance by offering *tagavi* loans.

43. We find that during the last ten years, Government by way of encouraging experiments for tractors, oil engines and pumps has advanced Rs. 3,17,331. Of these, Rs. 47,800 has been given for purchases of tractors and the rest for oil engines and pumps. About 62 persons have taken advantage of this facility for oil engines and pumps and 7 for tractors. It is, however, to be observed that most of the advances have been in the Baroda district, and the field for such improvements has not yet been tapped elsewhere. Besides this, the Government has been granting *tagavi* loans for well-sinking and other purposes to a very large extent.

Use of machinery being gradually introduced in the agricultural industry.

Loans advanced by Government for agricultural improvements.

44. The following statement gives the figures for *tagavi* advances in the year 1923-1924 by

Figures for *tagavi* advances for various purposes.
Districts :—

No.	Name of District.	Jathu Tagavi.	Famine.	Special.	Agri-cultural.
1	2	3	4	5	6
1	Baroda ...	1,04,370	18,859	40,710	1,89,937
2	Kadi ...	60,279	1,78,758	1,66,387	...
3	Navsari ...	82,884	90	31,892	16,000
4	Amreli ...	38,226	19,624	61,340	13,763
5	Okhamandal ...	8,043	41,895	2,030	...
	Total...	2,93,802	2,59,226	3,02,359	2,19,700
					10,75,087

It is certain that a part of this amount of Rs. 10,75,087 could have legitimately been obtained from a bank.

45. The problem of financing farmers for large agricul-

The success of the *tagavi* grants for improvements point to necessity for creating facilities on a much larger scale.

tural improvements of a directly productive or protective nature has not yet been systematically tackled, though as in everything else, we have made a small beginning by granting Government loans for this purpose through the agricultural department. This has, however, been in the nature of an experiment to popularise the use of certain types of machinery rather than of an undertaking of a permanent business-like effort. The scope of and the probable demand for financial aid for this work both in the near and distant future is so

great that the State in spite of its resources will never be able to cope with the problem by the present method of *tagavi* grants. The very success with which the present experiment on a small scale has been attended, goes to show that the *tagavi* machinery will break down, if these facilities were to be extended freely for all legitimate purposes all over the State. The State has already realised the drawback of the *tagavi* administration and if the system has been tolerated, it is because, we have not yet seen our way to develop banking institutions suitable to the needs of the farmers.

46. Though prejudice, want of education, want of enterprise and many other things must have combined to retard the progress of improved agricultural methods and the introduction of labour and time-saving machinery in this industry, we believe that the lack of a suitable financing agency granting loans on convenient terms must have been one of these causes. It is no use trying to remove these prejudices and the attitude of lethargy and indifference, if we cannot at the same time, make it possible for the farmers to raise loans necessary for undertaking improvements. Without such an agency, the efforts of the Agricultural Department are bound to be unproductive and the Director of Agriculture has urged this need on us with due emphasis. The loans for this purpose are precisely the loans that want long-terms for repayment. At present, at places where the need is recognised and where people are willing to undertake the improvements, they do not do so because there are no facilities for raising loans except from saokars. And if loans are raised from saokars for this purpose, the undertakings would not be economically profitable. One of the largest landowners assured us that he himself had been obliged to give up many improvement schemes for want of proper financial accommodation. He wanted very large sums, and naturally, no individual saokar could be expected to meet his demand.

Want of facilities for obtaining long-term loans—one of the causes for retarding the progress of agriculture.

47. There are many kinds of improvements that are possible to-day and for which the ground has been prepared by departmental action. The problem of the shortage and cost of agricultural labour is getting so acute that it is going to revolutionise our agricultural organisation within no distant date. In the Navsari district where wages are the highest and where the supply of labour is inadequate, there is already an effective need for labour-saving machinery. In the other districts, too, the complaints of the agriculturists that the cost of labour is affecting the prosperity of the agricultural industry is not absent. Industrial development in the State and elsewhere is going on and as years go by, there is bound to be a still greater shortage of agricultural labour. Though the aim of the agricultural classes in the Navsari district is at present to get some sort of labour legislation which will improve conditions for them in this respect, it cannot be expected that proposals will be countenanced that will favour one class at the cost of the other. The only solution of the problem is the introduction of more and more labour-saving machinery that will diminish the need for human labour in the fields. Similarly the cost of draught cattle is also soaring high and in course of time, this will also lend an impetus to the movement for the adoption of machinery.

48. The field for agricultural improvements is too vast and too technical to be closely defined here, but in a general manner the improvements may be grouped as productive and ameliorative or protective. The first of these are naturally the most important and include within their scope improvements of irrigation resources, introduction of modern farm machinery, rearing of live stock necessary for agricultural operations and extension or fresh purchase of holdings.

49. For the development of irrigation resources the most urgent need, in some parts of the State especially, is well sinking and boring. These operations are the most

Shortage of labour and the increasing cost of draught cattle necessitate introduction of labour-saving machinery.

Productive Works.

Great scope for oil engines and pumps.

popular productive works for which there would be large demands every year. Closely related to this is the installation of power pumps for individual or co-operative irrigation projects. This has already made considerable progress in some parts of the State and there are others where some propaganda work would succeed in popularising this method if conditions are suitable. Great benefits have been reaped in this direction by the farmers in the Baroda district, one division of which has more than 60 p. c. of such installations undertaken by loans from Government for this purpose. Shortage of water-supply in the well and the difficulty of working small installations has to a certain extent prevented the movement from spreading in the Amreli and Kadi Districts. But with dependable small engines now available and the spread of mechanical knowledge, it has now been made possible to work even small outfits with advantage. Moreover, combination outfits like ginning and pumping and flour mill will further facilitate their economic use, while portable outfits have to a certain extent got over the difficulty of shortage of water-supply. Altogether there is now such a variety of ways in which this power could be used, and there is such a large variety of types to choose from, that suitable financial facilities will in the opinion of the Director of Agriculture increase the demand for such installations.

50. Another type of improvement is the boring of wells and sinking artesian wells where the existence of necessary supply has been established. Artesian supply to be useful for agricultural purposes must have a certain volume of outflow and to secure this, the cost will be very high. If the present explorations in the Kadi District are successful, it may confidently be expected that there will be a large demand for money for this purpose from the agriculturists in that part.

51. Bunding of small streams for local irrigation purposes is not too ambitious an idea to be undertaken by a large-land owner or a society of farmers. It has been successfully attempted at one or two places

Bunding of small streams for irrigation purposes.

in the Amreli district as a result of private initiative and there must be many other sources for such water-supply in the State which could be utilised for this purpose, if money were available which could be conveniently repaid from the increased yield of the land. There is also another method of private irrigation adopted by large holders at some places of irrigating the low lying areas of the holdings from water stored in small ponds on higher levels within the estate. This to be successfully done, requires suitable financial arrangement.

52. The next consideration for productive improvements

is connected with the use of modern agricultural machinery. The most important of this for our purpose, is the tractor and the attendant power farming tackle. As shown above, about half a lac has already been advanced for this purpose by Government and as a result, its use has been extended and made popular. We have in the State to-day, in actual operation, about a dozen types and its further adoption in the Kadi and Amreli districts is now merely a matter of time and suitable financial arrangements. The Director of Agriculture thinks that tractor power has come to stay and that it might soon be the outstanding feature of the farming operation in this tract. We may confidently expect a genuine demand in the near future from agriculturists for loans for the purchase of tractors.

53. The gradually increasing familiarity with self-propelling power makes the way clear for the introduction of many other kinds of power machinery for agricultural purposes. Power-driven gins, flour mills, chaff-cutters, oil mills, rice-hullers, cane-crushers and grass-presses, etc, all such labour-saving machinery, which prepare the produce for the market, will follow in the wake of tractors. There is scope for some of these in nearly every part of the State. Thus an increasing demand for funds is likely to be expected as the agricultural industry advances in the State.

54. The live stock industry in the State has been engaging for some time past the serious attention of the Government. We have every reason to fear that several good breeds in the State have deteriorated considerably and the problem both of milch and draught cattle is becoming very acute. As we have stated before the cost of draught cattle is causing a great drain on the resources of our agriculturists. It is not unlikely, therefore, that in the near future serious efforts will have to be made to put the live stock industry on a sound basis. This industry is a very important adjunct of the agricultural industry. Besides the efforts made by agriculturists on small scale, there is plenty of scope for the commercial raising of farm live stock, dairing, and the development of horse breeding under suitable conditions. On the other hand, the natural adjustment between the professional live stock producers and their users in the old days of land abundance has given way slowly under pressure of modern farming conditions. The mutual accommodation of these two interests is becoming increasingly difficult. It is also believed in some quarters that the professional breeders will be non-existent in course of time and the burden of raising his milch and draught cattle will be thrown on the farmer himself. This will be an important phase of agricultural progress during the next fifty years and it will require considerable outlay for which the farmers will have to seek the assistance of a land mortgage bank.

◆ 55. There are certain parts of the State such as Kadi and Amreli which are peculiarly suited for horse-breeding. The one time fine breed of horses of these tracts is now very nearly extinct. There are signs, however, of a revival of interest in this direction. The Military department alone requires about a hundred horses of suitable size, colour, age and soundness, worth about Rs. 50,000 every year, showing that there is good scope for horse-breeding operations at suitable stations in the State.

56. Besides the directly productive improvements, there are other measures which should be indirectly beneficial although a direct measurement of profit could not be so easily ascertained. There are many pieces of land which are not productive up to their innate capacity because of their not being properly drained. At many places there is also the problem of fencing to protect the crops from being attacked by wild animals or stray cattle. These and many other similar works will require a supply of capital on terms which will make the investment profitable to the farmer.

57. But the problem of all problems in agriculture before the Government is that of the small and scattered holdings all over the State. This is retarding the progress of agriculture and is making the introduction of labour-saving machinery difficult, if not impossible. The whole programme of consolidation of holdings is before Government and in some directions a start has been made by the prevention of subdivisions and by giving certain facilities for their consolidation. Also a commendable beginning in this direction has been made by the Co-operative department by organising two or three consolidation societies. Though the whole programme has not been adopted for some reason or another, the shortage of agricultural labour is bound to bring a pressure on Government for the solution of the problem. And as recognised everywhere, the only successful solution of this problem lies in the consolidation of small and scattered holdings. Consolidation needs finance without which exchange of fields and the improvement of sites cannot be effected. In this connection, we cannot do better than quote the recommendations of the Economic Development Committee of 1919. "Along with the consolidation and prevention of subdivisions of holdings, the State must take adequate measures as mentioned elsewhere for the introduction of a through system of agricultural banking. No consolidation can take place unless the banks are

ready at hand to finance the cultivator. The bank must be willing to redeem burden on old holdings, to defray expenses of new improvements as also the cost of the proceedings." In any scheme of agricultural finance, we must think of and provide for this requirement.

58. Besides these main features of agriculture, there are many others of equal importance which will have to be taken into consideration in any scheme of rural reconstruction and for which suitable financial facilities will be required. There is the whole problem of the Kaliparaj people who have parted with most of their land and who are now reduced to being tenants-at-will of relentless saokars. Provision will have to be made to redeem their land by repurchasing it or to start farm colonies for them with the necessary financial assistance.

59. All these improvements could be undertaken either by individual agriculturists or by co-operative societies. As the co-operative movement progresses, we expect that the work of these improvements will be taken up on co-operative lines. A large bulk of our agriculturists are poor and the co-operative undertakings would be more suitable for them. But the societies would not go to saokars for loans and it would not be within the scope of the existing banks to provide credit for these objects. We must, therefore, create suitable institutions to make long-term loans available for such undertakings.

D. LOANS TO LOCAL BODIES FOR IMPROVEMENTS.

60. While studying the working of the various types of land mortgage banks in Europe, we were struck by a provision in the constitution of the Credit Foncier de France to the effect that it could grant loans to local Panchayats and wotks of agricultural utility.

bodies for communal works. This suggested a line of inquiry to our mind, which though it does not come directly within the scope of our investigations, is of considerable importance, so far as the agricultural industry is concerned. In considering the scope of and the possible demands for loans for agricultural improvements, we have in the preceding section confined our attention to works which could be undertaken generally by individual farmers or by co-operative societies formed for the purpose. But there are certain major works which though they are not directly of an agricultural nature go a long way towards helping the agriculturists in their professional pursuits. These could be undertaken and are being undertaken at some places by the Gramya, Mahal, or Prant Panchayats. However, as the resources of these bodies are very much limited and as the practice has been so far for them to undertake works which they could finance only out of their annual income, it is not possible for them to undertake important measures which would benefit the whole agricultural area within their jurisdiction. If they want the improvements they must either increase taxation or borrow money. Under present conditions it is difficult to persuade the Panchayats and the Muncicipalities to impose additional taxes. But if some facility for obtaining loans for long-term re-payable by instalments could be created for them, they would be able to put into operation schemes of an ameliorative nature.

6I. Amongst works of this nature are the construction

The kind of works
Panchayats could and
do undertake.

of roads for transporting agricultural products, measures for relieving villages from water-logging such as is seen in many parts of the Kamrej Taluka, construction of small culverts or wooden bridges for preserving communications with the fields in the monsoon, protective works for river erosions, repairs of village tanks, bunding streams for water-supply, improvement of water courses, construction of wells and water works, rural tramways and railways, etc.

62. The need for agricultural market roads is so great that at our present pace it would take decades to complete the programme. It is not an uncommon complaint from agriculturists from outlying districts, away from railway lines, that they are losing considerably in the realisation of the value of their market products for want of transport facilities. Besides this, the lack of good roads involves great hardships to the bullocks so much so that the average life of a bullock is reduced appreciably in certain talukas because of this. There are also some crops such as fruits which bring nothing to the farmer for want of easy transport facilities. Adequate supply of roads in the agricultural areas will help the industry considerably.

63. Proper draining of fields and the disposal of surplus water is of a more directly agricultural nature but which the individuals cannot undertake without giving rise to mutual animosities, either between one farmer and another or between a whole village and another. The work has, therefore, to be undertaken by the Village or the Mahal Panchayat. Many riverside villages suffer from erosions caused by floods and by the deviating current every year. Very often many valuable pieces of lands are washed away and cases of farmers having been rendered landless are not unknown. Protective works necessary for preventing this, are generally of such magnitude that few individual farmers could be expected to undertake them. Similarly repairs of village ponds or the bunding of small streams for eight months or permanently are things which could quite legitimately be accomplished by the Panchayats.

64. Though no individual could undertake any of these works, they would not be unwilling to submit to a small levy by the Panchayats in proportion to the use they make of these facilities or the amount

The need for agricultural market roads.

Field drainage, prevention of erosions by the action of the rivers and bunding for irrigation purposes.

These works would bring in revenue to the bodies undertaking them.

of protection that they afford them. A farmer would not mind paying an anna or two as toll every time he uses the road if he gets a metal road from his village to the market town. Some of these works would, therefore, be in a sense remunerative and might be made to pay for their own costs in the long run.

65. The income of a small Village Panchayat may not be more than 100 or 200 rupees. It may want to have its pond repaired which is estimated to cost a few hundred rupees. While it could quite easily spare Rs. 50 every year for this purpose, it could not pay for the whole cost in a lump sum. What, therefore, happens is that these necessary repairs are never undertaken and Rs. 40 or 50 that it could spare for this purpose are utilised for something of a less important nature. On the other hand, if it could borrow the necessary amount from a bank at the outset and pay back those Rs. 40 or 50 that it could spare every year, it would naturally undertake the work and the repairs would be made. It is the same with other works. While the Panchayats might pay something towards the initial cost every year, they cannot spend the whole amount from their revenues at once.

66. These loans to Panchayats and Municipalities have to be of a different nature from those to individual agriculturists. While in the latter case there will always be land worth double the amount as mortgage security against the loans, the former could not be expected to give any such mortgage security. But it will be quite safe for the bank to make loans to the Panchayats for such purposes on the security of their general revenues. If necessary, the various Panchayat acts could be modified to suit this need. In fact, there is a vast field for rural engineering apart from municipal, which requires development for the health and prosperity of the agricultural population.

PART II.
Land Mortgage Banking.

CHAPTER III.

LONG-TERM AGRICULTURAL FINANCE.

A. Systems of Land Mortgage Banking in Foreign Countries.

67. In the previous chapters we have discussed the needs of our agricultural industry for finance for the relief of indebtedness and for agricultural improvements. All these needs could only be met by obtaining loans for long-terms and by the creation of suitable institutions that would provide them. For this purpose, special types of banks have been organised in many countries of the world and in this chapter we propose to give a summary of the working of some of the important types. Some efforts have recently been made in India to organise similar institutions, and we shall at the end of the chapter give a short resume of what has been done in India. This would help us as a guide in formulating a system of banking for our needs.

Various types of land mortgage banks to be described in this chapter.

68. But before we proceed further, it is necessary to mention that in most of the countries there are two distinct types of banks—one to supply short-term credit to co-operative societies of the Raiffessen types and others to grant long-term loans on the mortgage security of lands. It is this latter type that is needed for the purposes set forth in the preceding chapter and it is this type that is referred to in the discussion that follows.

The two types of agricultural banks.

69. In almost all countries of Europe and in America, there are either state, semi-state, or private institutions, which undertake the business of financing agriculture. It is freely recognised there that agriculture is also an industry and that like all other industries, it

Agriculture as an industry has its own financial needs.

requires a carefully devised system of financing. There, a farmer is not expected to provide capital of his own for his stock in trade, any more than an industrialist or a businessman is expected to provide all the capital necessary for his purpose, without the aid of financing institutions. Moreover though in some of these countries agriculture is of secondary importance to trade and industry from a national point of view, the truth about the categorically different nature of the financial needs of agriculture on the one hand and of trade and industry on the other, has been long recognised and special types of institutions and facilities have been developed to meet their specific needs.

70. The nature of these institutions, their constitution, their methods of doing business, are as varied as the countries themselves or even more, and this variation is due mainly to local agricultural conditions, systems of farming, social habits of the people and lastly the historical and political influences. It would not be possible to go minutely into the details of the working of the various systems of agricultural finance in many countries of Europe and America, nor would it be possible to examine thoroughly even the land mortgage bank systems in every country. We do not also consider that it would be profitable or useful to do so in the present instance. Even for those, who do not know any European language other than English, there are three excellent books which provide all the information that is necessary on the subject, one by an Englishman, Mr. J. R. Cahill in the form of a report, to the Board of Agriculture and Fisheries, which was a result of his inquiry into agricultural credit and agricultural co-operation in Germany; the other, a report issued by the American Commission appointed to investigate the co-operative agricultural finance, production and rural life; and the third, a report of the National Monetary Commission in the volume entitled "Miscellaneous Articles on German Banking."

71. We consider it necessary to give a brief summary of the Landschaften or the Land Mortgage Credit Associations which have obtained the greatest attention from persons interested in this problem. We would also take the opportunity to discuss briefly the Land Credit Institution and the National Small Holdings Land Mortgage Institute of Hungary, which both because of the nature of their constitution and their comparatively long history, represent interesting types. We will attempt a very brief summary of information available about Credit Foncier de France. It is a short step from France to Egypt. We would, therefore, consider also the working of the Agricultural Bank of Egypt. Finally in this section, we propose to discuss the system, obtaining in America under the name of Farm Loan System which because of its comparatively recent growth and of some original features in its constitution and working deserve our best attention.

GERMANY.

72. The first Land Scaff, that of Scilicia, was established by the Cabinet order of Frederik the Great in the year 1769. This was followed by four more Land Schaften by the year 1788. The fundamental idea of the Land Schaften consisted in the substitution of the collective mortgage system for the individual mortgage in which creditor and debtor deal directly with each other. The Land Schaft, in its essence is the intermediary between the land that needs credit and the capital that seeks investment. Its aim is to afford the advantages which the mortgage bond payable to bearer has over the individual mortgage deed, namely, the possibility of marketing the former at any time and the added security of the institution and of those joined together under it. These bonds enable the Land Schaften to satisfy the needs of the agriculturists for credit under cheaper and more suitable conditions than it would be possible otherwise.

73. The Land Schaften are public corporations under State supervision, which is exercised in Prussia by a Commissioner or by the Minister for Agriculture and Forests.

The officials of the Bank, their appointment and privileges.

Some Land Schaften, however, do not have an independent permanent Commissioner. The boards of directors of the Land Schaften have the character of public authorities. In this capacity they not only introduce and supervise the coercive proceedings against dilatory debtors and demand legal and compulsory sale, but they also have been given public duties of other kinds such as the making out of certificates of clear title and the fixing of the amounts of loans. The officials of the Land Schaften also are indirectly state officials. They are under oath, are subject to the code of discipline, and enjoy the privileges of state officials, with regard to communal taxes. The higher officials are chosen by the credit unions and their appointments need to be ratified by the King or the royal Minister. The salaries of the members of the board of directors who are elected from amongst the constituent farmers are nominal and based on compensation for loss of time and out of pocket expenses.

74. Within the limits of State supervision, the Land Schaften are self-governing and independent in the management of their business.

Privileges of the Land Schaften.

The executive authority is generally in the hands of the board of directors. Associated with this is a Board of Representatives. Of the many privileges given to Land Schaften, the most important is the right to levy executions on mortgage property without legal process. By a later law of 1897, Land Schaften were given the right of foreclosure of personal property as well as the power to take over management of the real estate as receivers. Another important privilege given to the Land Schaften is that the bonds issued by them are valid investment for trust funds. Each member of the Land Schaft has a right to be granted the use of credit in the ways provided by the law. The Land Schaft cannot, without valid reasons, decline to make loans that are

asked for. The purpose for which the loan is desired is not generally inquired into by the Land Schaft, except in one instance, that of the Land Schaft, of Margravate.

75. Credit is created by means of the issue of mortgage bonds bearing interest and made payable to bearer. These mortgage bonds are obligations of the Land Schaft and represent the mortgage claim of the same amount. They are drawn up by a special commission of control who must satisfy themselves by the examination of the mortgage documents in question, about the existence of an equivalent amount of mortgageable property and who must be convinced that the document is properly stamped. The effect of the latter provision is that the keeper of the land register records the surrender of the redemption of the mortgage security only on proof being given to him by a certificate that mortgage bonds for a corresponding amount are withdrawn from circulation. There is thus always a guarantee that no more mortgage bonds are issued than there are securities available. The legal question whether the holders of these bonds have a lien on the mortgage is not of much significance for the Land Schaften, in as much as they are not allowed to enter into business of other kinds and therefore there are no other creditors except the bond-holders. As to the further material guarantees besides the mortgage securities, for making the bonds and their interest safe, there is a good deal of variation in the methods of the various Land Schaften. None of them have a stock capital. But the reserve funds belonging to the banks and savings from fees charged by the Land Schaften as a corporation are the chief security for the bond-holders. The amortization deposits of the debtors are a further security. In some Land Schaften all the properties belonging to the members form a collateral against these bonds, while in others, the property that is really mortgaged alone is liable. But the general guarantee is the historical foundation on which the mortgage system has developed. The rate of interest on the bonds has varied with the general monetary conditions. Land Schaften have never resorted to the issue of premium bonds.

Bonds, their issue and the security behind them.

76. The limits to which loans are made are determined by definite valuation of the property.

Loans and the basis of valuation of the property given in mortgage.

The proportion of the amount of the loan to this valuation varies from Land Schaft to Land Schaft; from half to two-thirds. The difference, however, is not very important, since where the proportion is fixed low the valuation is usually liberal. Each Land Schaft has detailed provision, concerning the estimating of the value of the property. In practice, the basis for this valuation is of three kinds :

1. The Land Tax.
2. A simple estimate of the value made on the basis of the Land Tax.
3. A formal estimate of the value.

77. In the first case, loans are made to a certain multiple of the land tax on property, usually upto fifteen times the land tax without further inquiry into the value. Under the

Methods of valuation explained.

second method a simple estimate of the value is made, based mainly on the land tax. Under the third method an especial estimate of the value of the property is made. The second method is applied advantageously in making loans on small properties, and the third in the case of large amounts. The first and the second or the first and the third alternate with each other so that those who desire only a small loan can select the cheap and convenient standard of the land tax. The formal estimate of the value under the third method is partly an estimate of the value of lands and partly that of its product. But generally the value is so measured that it does not represent the purchase price so much as the value of the product. These estimates are made by local deputies who as members of the Land Schaft are jointly responsible for their correctness.

78. The loans granted by the Land Schaften can be repaid by the debtor after giving a notice before the statutory period. But the Land Schaften cannot recall these loans except on definite grounds such as the destruction of property, gross waste and the like. But as the debtor can cancel his debt the Land Schaften can also recall the bonds as they have to maintain a balance between bonds issued and the securities held. Originally the bond holders had the right of returning the bonds for redemption when the Land Schaften were new institutions and when it was feared that these bonds might not be taken up without such a right. This right to return the bond for liquidation has since been cancelled and now they cannot be returned to the Land Schaften even in the event of non-payment of interest. Some Land Schaften give loans in the form of bonds which the debtor takes to some other bank for converting them into money. The others give loans in cash, the borrower not being saddled with the responsibility of marketing the bonds.

79. Some of the newer Land Schaften collect assessment from their debtors to cover administrative costs. The older ones meet such expenses of the Bank. The costs from the interest on corporate property which was created in the former times by the additional payment of the debtors. The sums given by the state form only a small part of these funds.

80. One of the curious practices of the Land Schaften is that the debtor is not obliged to return the whole loan, and in the old Prussian Land Schafft regulations, he was not called upon to return even a part of it. Newer Land Schaften, however, insist on the payment of one-half to three quarters per cent. towards the amortization of the debt besides the interest due. But after the debtor has paid a certain percentage of his debt, he can claim to be released

from further amortization payments. After that the farmer can remain a permanent debtor to the Land Schaften as long as he holds the mortgaged property and pays the interest. Besides, in most Land Schaften the debtor has the right after the redemption of ten per cent. of his debt, to demand new credit for this amount. In this case, however, a revision of the estimated value of the property is made.

81. The minimum property on which a loan could be made or the minimum amount of the loan granted varies considerably from Land Schaft to Land Schaft, because while the newer Land Schaften were founded for small peasant proprietors, the older ones were originally intended for the properties of the noble classes alone.

82. An effort was made in 1873 to co-ordinate the Land Schaften into a Central Land Schaft. The aim was to promote an international investment paper for the creation of a unified security. Some nine Land Schaften joined this Central Land Schaft. The law regulating the Central Land Schaft is so designed as to allow the member Land Schaften the greatest possible freedom. The Land Schaften reserve their right to issue provincial mortgage bonds. Loans in central mortgage bonds are granted through the provincial Land Schaften, according to the latter's principles of making loans, but changes in the principles of estimating the value and in the terms on which loans are made by these Land Schaften are subject to approval by the Central Land Schaft. The board of directors of the Central Land Schaft are chosen from the administrative heads of the provincial Land Schaften. But the experiment of thus co-ordinating the various Land Schaften has not succeeded and some of the Land Schaften have withdrawn from the Union.

83. One of the services that the Land Schafthen have rendered to the German agriculturists is that besides giving them unrecalable credit on the security of their property, they have given them the advantages of a fall in the rate of interest, but not the disadvantage of a rise. Because in the former event, the debtor can pay off his old debt by buying bonds of an equivalent value from the market and get a new loan at a lower rate. The charges of oppressiveness, delay, and expensiveness in loan proceedings are seldom heard, and of late, most of the Land Schafthen have introduced simplified principles for estimating the value for small loans. This has reduced the cost of negotiating a loan. Some of the Land Schafthen make it a practice to carry on propaganda to induce the small holders to make use of this kind of agricultural credit, especially amongst those who have recalable debts at higher rate of interest on the mortgage of their property.

What the Land for Schafthen have done the farmers.

HUNGARY.

84. Considerably different but nevertheless successful system of land mortgage credit has also been developed in Hungary. This system is represented there by two important institutions, (1) The Hugarian Land Mortgage Institute for large land owners and (2) the National Small Holdings Land Mortgage Institute. The State gave to both these pioneer institutions the support of its influence and its resources but has not at any time tried to interfere in their management in an excessive way. As a matter of fact, these institutions do not belong to the State, which merely confines itself to the drawing up of rules relating to them, supporting them financially, and exercising certain rights of supervision.

85. The law lays down that the articles of association of these institutions must embody the conditions relating to loans and the principles of estimating the value of the properties mortgaged. They are further required to create a special reserve fund representing not less than

Securities for bond holders prescribed by law.

5 p. c. of the total loans granted with a minimum of 4,00,000 Crowns and that this fund should be managed separately. Moreover, if the land mortgage bank wants the further concession of making their bonds tax-free and eligible for investment of trust and charity funds, the reserve funds should amount to 30,00,000 Crowns. This reserve fund is maintained exclusively as a security for owners of mortgage bonds and has to be invested in securities specified by the Government,

86. The loans are given upto an amount of 50 p.c. of the estimated value of the property offered in mortgage and the banks are prevented from issuing bonds for a greater amount than the loans granted. The mortgages held by the bank serve as a security for the totality of the bonds issued. The institutes are also required to submit to the court half-yearly accounts and to publish them.

Further provisions regarding security.

87. Loans are granted by the banks usually for 50 years and are repayable by half-yearly amortization instalments which include the interest on the bond, the redemption percentage and a small amount to cover working expenses. The banks can recall the loan from the debtor only when he does not make regular payments or when the value of the estate has diminished considerably. The debtor, however, is allowed to redeem the loan either in part or whole in a lump sum at any time he likes. But he has to pay compensation amounting to more than 2 to 3 p. c. of the sum redeemed. Bonds which are issued for specific periods are redeemable at par on the due dates, but if the amount of out-standing loans decreases, bonds for a corresponding amount have to be withdrawn from circulation by the bank irrespective of the date of redemption and the banks have a right to do this. In theory the loans are paid to the farmers in bonds, but in practice, the banks negotiate the bonds for the debtors for the payment of a certain percentage for expenses and commission. This amounts to about 1 per cent of the loan.

Conditions regarding Loans.

88. The Hungarian Land Mortgage Institute is altruistic

The Hungarian Land Mortgage Institute, its constitution and concessions.

in character and it is not its aim to make profits. The treasury contributed one million crowns at the outset towards the working capital of the bank.

The institute enjoys a special right of selling the mortgage property by auction after a summary process, if the debtor does not pay the instalments as stipulated. The bonds issued by this institute are exempt from taxes, stamp and other duties, and are eligible for investments of trust and charity funds. The stock capital of the institute was provided by 209 founders, who cannot receive more than 5 p.e. interest on their shares. After the interest is paid, the profits are taken to the reserve fund. All the debtors have to become members of the institute, but only the large borrowers are allowed one individual vote, the small ones being grouped by districts to elect representatives for general meetings. As a further security for the bond holders, each debtor has to pay a small amount in a mutual guarantee fund against loss and bad debts.

89. The founders have the special right of electing the

The management in the hands of the representatives of the holders of the founders' shares.

President, the committee of control and of amending articles of association. In other respects they have the same rights as members. The committee of control manages the affairs of the

Institute. District and Local committees are appointed from amongst the members and these committees are consulted while granting loans.

90. The institute makes the valuation of the property

Valuation of the property made free of charge by the bank.

offered for mortgage, free of charge, except in cases of very large estates. One per cent of the loan granted goes to the mutual guarantee fund.

If a debtor wants to sell his property and if the new buyer is willing to accept the mortgage, the debt is transferred to the name of the latter. If the buyer is not willing to carry on the debt, the debtor to the bank has to return the loan without any compensation for premature repayment.

91. The National Small Holding Land Mortgage Institute is designed especially for small holders. It enjoys the same privileges as the Hungarian Land Mortgage Institute, except that of selling the property of the debtor by auction. But it is allowed a much more speedy trial in the court. The organization of the institute is more or less similar to the Hungarian Land Mortgage Institute. But there is an important difference in as much as the borrowers in this Institute have some share in the control and management of the bank. The founders' shares are transferable with the permission of the Managing Board in the case of this institute.

92. There are no district or local committees and the loans are given direct to the debtors. But the bank employs an agent in each district. The minimum amount for loans is 60 crowns and the bank generally gives preference to applicants for small amounts. Only when these are satisfied, it accommodates applications for larger sums. The bank does not inquire into the purposes for which loans are taken. But before granting them, it satisfies itself that the title to the land mortgaged is valid, and that the amount is used towards a settlement of all previous debts, if there are any. In cases of failure regarding the payment of instalments the bank is allowed by the rules to take action against the debtor even after one failure. But it generally does not do so till three half-yearly payments have not been made. When the property is sold by auction, the price received is subject to a deduction first for the judicial expenses and for all government dues on the property, before the bank can realise the amount due to it, the balance going to the debtor. However, if the new buyer wants to undertake the further amortization of the loan, the bank gets in cash only the overdue instalments, the interest on them and the expenses. The balance of the loan taken over by the new buyer is deducted from the selling price and what is left is given to the original debtor. The

bank is also allowed to raise funds by receiving deposits, but the amount of the deposits is restricted by the rules to five times the amount of its capital. But this is not a reliable source as the depositors have only a second claim on the assets of the bank, the bond holders having a prior claim to settlement.

AUSTRIA.

93. In Austria, the co-operative territorial mortgage institutions have been found to be most suitable for agricultural purposes in general. These institutions have very little stock capital, the bulk of the working capital being raised by the issue of mortgage bonds. These bonds are secured in the first instance by the properties mortgaged, next by the total assets of the institution, and finally by the guarantee of the Provincial Governments. As in Hungary, the loans are amortizable by small annual payments. The conditions on which advances are granted by these institutions are very rigorous. The estimate of the value of the property is made by sworn experts, which is further re-examined by the trustees of the bank themselves. Loans are granted on fertile lands in amounts not in excess of $\frac{1}{3}$ of the estimated value. One noteworthy feature of these banks is that none of them has ever suffered loss in the compulsory realisation of their claims by forced sales.

RUSSIA.

94. The land mortgage banks in pre-revolution Russia were exclusively Government concerns. The credit given by these banks on mortgage property was of a very liberal nature. The repayment of the loan was spread over 55½ years as a rule. The rate of repayment including amortization, expenses of running the banks, and the interest, did not generally exceed 4½ per cent of the amount of the loan. Any costs over and above these were borne by the government. That there was always a great loss to the government is evident from the fact that the funds for this purpose were secured by issuing bonds bearing 5 to 6 per cent. interest.

ITALY.

95. In Italy mortgage credit to agriculturists is granted by some seven institutions. The important amongst these are the Institute of Land Credit, the Institute of Pious Works, Savings Banks, and the Mortgage Banks. Loans are granted on first Mortgages repayable by amortization instalments extending over a period of from 10 to 15 years. The funds for the loans are raised by these institutions by issuing bonds. By an act of the Government, an investment in mortgage bonds is considered equivalent to an investment in Government securities. In public estimation also, these bonds range on the same level with the Government bonds. Sometimes the prices of these bonds are even higher than the Government bonds. But this depends mainly on the rate of interest which varies from $3\frac{1}{2}$ to 5 p.c. The bonds are redeemable and there is a possibility of repayment of a block every semester. This prevents the prices from going above par. One of the reasons for which loans are made is to enable the settlement of claims between the several direct heirs to an estate by one of the claimants to prevent the estate from being subdivided. Loans are made only on condition that the money in each case is to be devoted to some object directly connected with agriculture. The borrowers are required to state in their application the purpose for which the loans are wanted and the period of the loan is fixed after taking into consideration the purpose for which it is to be used and the amount borrowed.

FRANCE.

96. Land credit institutions in France were brought into existence by a special Act of 1852. The basic principles of this law remain unaltered, though many amendments have been made in details. The law is divided in five sections. The first specifies the functions of land credit institutions and the ways in which they may be organised; the second lays

down rules for granting loans; the third for issuing bonds; the fourth contains measures to be taken for adjudicating titles, protecting loans against the claims of third parties and the methods of recovering the loans; and the fifth contains the special privileges and restrictions for the operations of the loans.

97. The law did not lay down whether these institutions should be of a co-operative nature in the form of associations of borrowers or joint stock companies. It allowed both the forms, but all the institutions which were started were of the type of joint stock companies. After some experience France decided that in this field of land credit, it was better to have centralisation and unity of action than competition between several institutions, and allowed by a decree, the Land Bank of Paris, the first of these many institutions, to operate in the whole of France and to absorb the other companies. It was renamed La Societe du credit Foncier de France. The Credit Foncier was given a monopoly for the first twenty-five years after which it was not renewed. But owing to Government help in various forms, it managed to overcome all competitors and is the only land mortgage bank of consequence in France.

98. The President of the bank is the representative of the State and has control over all affairs not otherwise assigned. He is a permanent official with a fixed salary. He must, however, hold 200 shares of the bank which are inalienable, so long as he is in office, and should be deposited with the bank as a guarantee of good conduct. Besides the President, there are two paid Vice-presidents who must hold 100 shares each on the same terms as those of the President. The board of directors is composed of the President, at least twenty share holders and three officials of the ministry of finance. The Vice-presidents and the auditors sit on board but have no votes. The members of the board receive a daily allowance

for attendance. On being proposed by the President, amendments to the by-laws of the bank might be made at general meetings, but they require two-thirds majority and the approval of the Government.

99. The share capital of the company which exceeds forty-five millions francs is designed mainly as a guarantee for the debentures and is invested in readily realisable assets.

Share capital and its investment.

The law is strict on the form of this investment and prescribes that one-fourth must be kept in Government bonds, and one-fourth must be invested in the erection of the company's office buildings or in loans to French colonies or protectorates or in other gilt-edged securities. The bank can use the remaining half for granting loans.

100. In the first instance, a dividend of 5 p. c. is allowed to the share-holders out of the earnings. After this dividend has been paid, the bank must set aside the sum between five and twenty per cent. of the balance for a dividend equalisation fund, which is compulsory. The board may also provide for special reserves. After this the balance of the earnings might be used for further dividends. When the dividend equalisation funds come to one-half the share-capital, no further payments need be made into it. The investment of these funds rests with the board of directors.

101. The Credit Foncier operates in the whole of France, Algeria, and Tunis. Its head offices are in Paris. The primary aim of the bank is to lend sums on mortgage to land-owners, repayable either at long-term by amortization, or at short term with or without amortization and to issue bonds upto the amount of the loans granted. With the consent of the Government, however, it may use any system which would facilitate lending on real estate, the advancement of agriculture, the improvement of the soil, and the extinction of old debts. One of its important features is that it is authorised to lend

Loans granted to farmers and to Local Bodies.

with or without mortgage to departments, municipalities, syndical associations for land development, hospitals, public establishments and on drainage projects and to issue bonds also against these loans. No mortgages need be taken for these loans. The budgets, valuable assets, large properties and the high character of the management of such institutions have proved to be ample security. These loans usually run for a period of thirty to forty years.

102. The Credit Foncier also does ordinary banking business and takes deposits and the law has laid down rules and regulations for this branch of the bank's work. However, the money realised by the sale of bonds is generally used for long-term loans. The loans are for periods between ten and seventy years at the choice of the borrower. Those under ten years are called short-term loans. The former must be paid in instalments. The latter might be paid in one lump sum. For its loans to public authorities, where there are no specific mortgage securities, the company usually has a claim, second only to that of Government for taxes and other assessments, and it is enforceable by the same means provided for recovering taxes.

103. The bank grants loans also on real estate other than agricultural land, such as buildings, mills, factories, etc. But the property mortgaged must have a steady and certain revenue and must be capable of returning money in a regular manner. The amount of the loan cannot exceed one-half the value of the mortgaged property. This maximum is reduced to one-third for properties liable to easy depreciation. No limits are fixed as to the amount of the loan that could be given to any one person or on any piece of land.

104. Applications for loans have to be made on forms supplied by the bank, and they must set forth the amount and the length of the period for which credit is wanted and the name of the applicant's attorney. If the applicant

is a department, municipality or corporation, authority for the application and the resolution of the body providing for the repayment of the loan must be attached. The applicant must state the location, nature, value, revenues and taxes of the estate offered as security and must produce papers proving his title. The bank then verifies these statements regarding the value of the property and the borrower's capacity to repay through its field agents. The board then determine the amount of the loan and a conditional contract is drawn up, containing the terms of the loan. By this contract, the bank bind itself to pay and the applicant to receive the amount applied for, if the title to the property is found valid. The contract prevents the applicant from transferring his property or encumbering it until the contract is closed or called off.

105. The bank has a very valuable privilege with regard to the examination of the title. It has certain important privileges of the bank. to assure itself first that the title is clear of all registered claims from the public records. But for unearthing all unregistered claims it is allowed by law to issue a short notice officially, requiring the third parties to show their rights within three weeks. If claims are presented as a result of this notice, the bank may at its discretion, oppose them at the cost of the applicant or cancel the conditional contract and reject the application. If no claims are presented, no third party can afterwards contest the bank's priority of claim. In France a mortgage has to be renewed every ten years to keep it alive, but this condition is dispensed with in the case of this bank. All the costs for raising the loan are paid by the borrower. They average about 3.5 per cent of the amount borrowed.

106. The repayment of all long-term loans is by amortization instalments and the law provides that this instalment must not exceed the reevnue that could reasonably be derived from the mortgaged property. This prevents the bank from exacting and the borrower from obliging himself

to pay, an instalment larger than that which could be paid from the returns of the soil. The rate of interest on the loans must not exceed the rate of interest on the bond, by more than three-fifths per cent. So long as the borrower pays his instalment regularly, the bank can never recall the loan. The borrower also cannot pay off the whole loan except as due, but he might pay half a per cent more towards repayment, if he chooses. The courts cannot grant a debtor of the Credit Foncier any delay in the payment of instalments, nor can such payment be stopped by any legal proceedings initiated by a third party. A creditor either of the company or of its borrowers can not interfere by any process of law with the repayments.

107. In case of default, the bank may obtain an order of court putting it in possession of the mortgaged property, after fifteen days' notice. The bank charges a higher rate of interest on arrears. During the period of possession the bank receives the revenues and crops and it is authorised to rent or farm the land, make necessary improvements and repairs and do anything for its upkeep as an owner. The receipts are applied to the payment of the loan and the expenses. When the bank's claim is satisfied, it must render an account to the debtor, give him the balance at his credit, and surrender possession of the property. On the other hand, if the debt is not repaid by the management of the property, the bank may apply to the court for an order for enforced sale. This procedure requires only one month. The bank can take recourse to this procedure also in the event of the bankruptcy of the borrower, failure to repair damages, and failure to give notice to the company within one month, of any conveyances he may have made affecting the title or possession of the property or from any deterioration resulting from fires.

108. For its long-term loans, the bank is financed by the issue of bonds. Originally, the Credit Foncier had adopted the Land Schaft practice of granting loans in bonds, but

Bonds and their varieties.

it has now ceased doing this. The loans are now granted in cash only and are repayable also in cash. The bonds issued are of four kinds. The first class is for long-term mortgage bonds; the second for loans to departments, municipalities, public corporations, etc.; the third are of three or five years maturity for short-term mortgage loans, and the fourth, which are guaranteed by the Government, are for loans for drainage projects. The maximum amount of bonds in circulation is fixed at twenty times the share capital. They are issued in denominations of twenty francs and upwards.

109. The first class of bonds, those for ordinary long-term loans on the mortgage of land, have no fixed date for maturity, but a certain portion is repaid and cancelled every six months by drawing lots. At each drawing, enough debentures must be called in so that those left in circulation do not exceed the total amount of the outstanding loans. Most of the bonds are premium bonds and carry prizes when drawn. A drawing in one or more issues is held every month. It is in the nature of a lottery and creates quite an attraction for the bonds. This is a common practice with many institutions in France issuing bonds.

110. There are some special privileges attached to the bonds of the Credit Foncier. They cannot be seized by any legal process, nor may any suit be brought to stop the payment of principle or interest on them by any creditor of the bond holder. They are trust securities and may be held by the bank of France as collateral against currency issue. The bonds are free from stamp duties, but in lieu thereof, the bank has to pay a small annual tax. The Credit Foncier is allowed the use of the internal Government revenue offices for making its remittances to holders of bonds and for collecting dues from borrowers. It can also deposit its funds in the national treasury and keep a current account there.

111. La Societe du Credit Foncier de France, to give it its full title, is a joint stock capitalist institution, but owing to the close control exercised by the Government over its operations, the interests both of the borrowers and of the bond holders are generally safeguarded. Besides, there are two important features about the working of the bank that are worthy of attention. In the first place, the scope of its operation is very wide, unlike that of the Land Schafften, in as much as the Credit Foncier can grant loans not only to agriculturists on the mortgage of land, but to local bodies and public institutions, whose operations are directly beneficial for agricultural development. Agricultural drainage, construction of agricultural roads, small irrigation projects, etc., are things which no agriculturist can undertake individually, and which would not fall within the scope of the banks for granting loans for agricultural purposes on mortgage of land. There must be some agency for granting loans to these bodies and the Credit Foncier method of doing it is a practical one. The second important feature is that of issuing premium bonds, which tends to lower the rate of interest on the bonds.

UNITED STATES OF AMERICA.

112. Of all the foreign systems of long-term agricultural credit, one recently introduced in the United States of America, called the Federal Farm Loan System, is extremely interesting. It has been devised after a very careful study of all the systems operating in Europe by two important commissions of experts, appointed to investigate co-operative agricultural organisations and institutions. The system, besides securing close Government supervision and reasonable control, is founded on a thoroughly co-operative basis. Thus there is no question of profits as whatever profits there are go back to the borrowers themselves. Further, this system contemplates a gradual devolution of management and control of the banks

Federal Farm Loan System co-operative from top to bottom.

from the Government to the representatives of the borrowers, as the stock capital provided by the Government is substituted by that subscribed by the borrowers themselves. The co-operative idea embodied in the system extends to the entire organisation. The farmer who borrows subscribes to stock in the local association, and the association in turn subscribes an equal amount of stock in the Land Bank. As the Act provides, the Land Banks will ultimately be owned co-operatively by the National Farm Loan Associations of the borrowers, such associations being themselves co-operatively owned by their members. The co-operative feature of this system extends even further, for the Act provides that a Land Bank shall be liable for the obligations of every other Land Bank in proportion to the amount of its resources. All that we attempt here in connection with this system is to give a brief outline of it.

113. The Farm Loan System was brought into operation in the United States of America by an Act of the Congress in 1916 to supply long-term credit facilities to agriculturists, to develop and expand farming operations. The whole machinery operates under the supervision of the Government, who have established the Farm Loan Bureau, which is in charge of a Federal Farm Loan Board. The control of the entire system is centralised in this board, which is composed of five members, who are appointed by the President of the United States of America.

114. The whole of the United States of America is divided into 12 districts for this purpose and there is one Federal Land Bank in each district. Each district has one Registrar to assist the Farm Loan Board in supervising the issue of Farm Loan Bonds and to keep custody of all mortgage securities against which these bonds are issued. In addition, there are also valuers for each district to estimate the value of land. The functions of the Farm Loan Board are two-fold: (1) The approval of the issue of bonds. (2) Final approval of the mortgage securities.

115. The organisation and management of each land bank is in charge of a temporary board of five directors appointed by the Farm Loan Board. The Federal Farm Loan Act provides, however, that when the subscriptions of the borrowers to the stock of the bank have reached a certain limit the management of each bank will be handed over to a board of nine members, six of whom will be elected by the representatives of the borrowers, and three appointed by the Government, to look after the interests of the public holding the bonds.

116. The loans are made to individual farmers through the Local Farm Loan Associations of the borrowers, who endorse the mortgage security. These associations of the borrowers form the centre of the whole system. All the members contribute towards the expenses of the association in proportion to their borrowings, the contributions amounting to about 1 p. c. of the loan.

117. The minimum amount of stock on the subscription of which each bank could start business was kept at 7,50,000 dollars. The Act allows anybody to subscribe to the stock of these banks, but nearly all the stock at the beginning had to be taken up by the Government. The one important provision in the Act with a view to safeguard the co-operative character of the system and to prevent genuine borrowers from being swamped at any time by non-borrowing stockholders in the management of the banks, is that no stockholder who is not a borrower can exercise the right of voting in virtue of his holding. The stock held by the government is not entitled to receive dividends but carries voting power with it. This investment of the government funds is not of a permanent nature, because the Act provides that when the amount of the capital stock subscribed by the borrowers through their associations reaches 7,50,000 dollars, the bank

should apply semi-annually 25 p. c. of further subscriptions to the retirement of the stock originally subscribed. This retirement is assured, because each borrower is required to subscribe an amount equal to 5 p. c. of his loan in the share capital of the Farm Loan Association to which he belongs, and the association in its turn has to take up an equal amount of the stock of the land bank to which it is affiliated. The banks are allowed to issue bonds upto 20 times their capital and surplus. But as this capital will always be increasing by the compulsory subscription to the share capital by the borrowers, there is no limit in practice to the amount of the bonds that the bank can issue, provided the proceeds are utilised for giving loans.

118. Federal Farm Loan Bonds are lawful investment for all trust funds and the funds of insurance companies. To make the bonds popular the Farm Loan Board in the beginning secured the co-operation of certain bond houses and banks who had a large number of investing clients. These bond houses and banks formed themselves into a syndicate for introducing the bonds on the market. But in the beginning owing to the more urgent call of other investments created for the necessities of the war, the bonds did not find a good market and the Government bought most of them at par. All these bonds are issued against the totality of mortgages and are, therefore, like debentures of the banks. But they are issued and sold in advance of making loans to meet the estimated requirements for a definite given period.

119. These bonds usually run for a period of 20 years but are redeemable any time after 5 years from the date of issue. They are issued in various denominations and the interest on them is paid half-yearly. The five year redemption period corresponds to the minimum period for which a loan could be made. Interest coupons are attached to the bonds and can be cashed when due at any Federal Land

Bank. All Farm Loan Bonds are exempted from State or Municipal income-tax and the mortgage deed and the deeds of trust are exempted from any form of taxation.

120. Amongst the important features of loans to the farmers are the long-term of the loan, uniform low rate of interest, and the amortization form of repayment with the further right of paying the entire debt off whenever the borrower desires to do so after the first five years. The Act provides that the rate of interest on the loans must not exceed the rate of interest on the bonds by more than one per cent, and in no event should the former exceed six per cent, exclusive of amortization payments. The rate of interest on the bonds and the form of the bond are uniform throughout the country. The difference of one per cent between the rate of interest on the bonds and that on loans covers expenses and creates profits for the bank.

121. Loans are given for a period of 5 to 40 years, the exact period between these limits being optional with the borrower. But as shown above, the farmer has the option to pay off his entire loan or part of it after the first five years. This secures him the advantage of paying off his mortgage and borrowing again if the rate of interest has fallen in the meantime. The amortization instalments are according to schedules prepared for varying periods.

122. The banks can give loans only on first mortgage on land and only to its owner or to one able to become an owner, and only if he is engaged in actual cultivation. No loans could be given to guardians, executors, administrators, or trustees.

The loans are given to provide for the purchase of land of agricultural value, for the purchase of equipment, fertilisers, and live stock necessary for the farm, to erect buildings or for the general improvement of the farm lands and to liquidate the old debts of the owner of a piece of land. But a farm on

the security of which a loan is given must be sufficiently large to yield, at the hands of an average farmer using average methods, an income sufficient to support the family of the borrower and to meet the interest and the amortization payment. Loans cannot be given for an amount higher than half the estimated value of the land mortgaged, plus 20 per cent. of the permanent insured improvements on the land. The value of the land for agricultural purposes alone is taken into consideration in making the loan. When the value is settled and the loan sanctioned, the applicant is required to furnish abstract of title which is examined by the legal department of the bank.

123. For the expenses of valuation and examination of the title, the banks charge the borrowers reasonable fees not exceeding actual cost. As a general rule, the fees are less than the cost of service and the difference is paid by the bank from its earnings.

Expenses attendant on valuation and examination of the title to the property.

124. Each bank is required by the Act to carry 25 p. c. of its net earnings to a reserve fund and each Farm Loan Association 10 p.c., as an additional security against the bonds in circulation. The rest is distributed as dividend to the share holders in proportion to their stock holding or in other words in proportion to the amount of their borrowings.

Disposal of Profits.

EGYPT.

125. Of all the agricultural banks, there is none the organisation of which has attracted so much attention in India as the Agricultural Bank of Egypt, possibly because in framing its constitution and in devising the method of its work, the conditions obtaining in Eastern countries, especially the existence of small and improvident farmers, illiterate and highly indebted, were taken into consideration. As early as 1844, the Government of Egypt made a very modest begin-

Origin of the National Bank of Egypt.

ning by advancing 27,000 bushels of seed to Fellaheen. The experiment, which was continued, proved a great success and brought to the notice of the Government the necessity of establishing an agricultural bank. In June 1898, the National Bank of Egypt was established and the Government assented to the creation of this bank, because one of its aims was to facilitate the extension of agricultural credit facilities to the Fellaheen. The National Bank of Egypt began its operations amongst the farmers on a small scale in one district and encouraged by the success of this initial outlay, the operations were extended and more money was advanced. Within four years, this branch of the bank's business grew so much that it absorbed an undue amount of the bank's capital and affected its general banking business. Therefore, a separate institution was established in 1902 with an authorised capital of £25,00,000 and the agricultural loans advanced by the National Bank were transferred to the new institution.

126. The present share capital of the bank is £ 37,40,000. This has all been subscribed together with an authorised debenture capital of £ 65,70,000 which has been issued in two series of bonds bearing interest at 3½ p.c. The reserve fund of the bank amounted in January 1922 to L. E. 8,38,73'.

Working Capital of the Bank.

127. The agricultural bank of Egypt is a purely private joint stock institution financed in London, and receiving concessions from the Egyptian Government. The debentures of the bank are guaranteed by the Egyptian Government. The sole object of the bank is to make advances to small farmers under the following conditions:

Conditions attached to Loans.

1. Advances not exceeding the sum of £ 300 each and recoverable in 5½ years at the latest. These advances are to be secured on the first mortgage on lands, the value of which must be at least double the amount of the advance.
2. Advances not exceeding the amount of £20 and recoverable in 15 months at the most.

128. The bank which used to charge 9 p.c. on its loans, now charges 8 p.c. The recovery of the loan including the interest is accomplished through the agency of the 'Sarafs' (Talaties) of the villages, who receive from the bank a commission of $\frac{1}{2}$ p.c. on all sums recovered. The bank is administered by the board of directors composed of the Governor of the National Bank of Egypt and five members, two of whom are chosen from amongst the members of the board of directors of the National Bank of Egypt.

129. The operations of the bank are further controlled by the commissaries of the Egyptian Government. An important provision in the terms of concessions by the Government to the bank is that the sums remaining unpaid on instalments due are provisionally deducted from the profits of the bank, but when they are recovered they are again credited to the profit and loss account. The result of this provision is that the officers are prompt in the collection of loans and careful in giving advances. The first charge on the net profits is the interest on the bonds issued by the bank. The company is further required to carry 5 p. c. of the interest actually received on its loans to a reserve fund which has to be invested in securities approved by the Government. The interest earned from this investment has to be added to the reserve fund itself. The Government on its part has guaranteed to the bank a net profit representing three per cent. of the capital invested in loans to the farmers. But the Government can be called upon to fulfil this guarantee only if the amount of the reserve fund is not sufficient to pay expenses, interest on bonds, and the 3 p. c. dividend. This subvention from the Government to the bank has to be made good in the following years from the loans or instalments due and not received in the year, when they are collected,

130. It would be seen from the above that the agricultural bank of Egypt is a joint stock bank, necessarily out for profits, without any element of co-operation or philanthropy in it. The borrowers of the bank are borrowers pure and simple and have no further interest in the institution itself. The Government by its willingness to guarantee the bonds of the bank, the title of the mortgaged estate, and a minimum of 3 p. c. profit, has secured for the Felaheens the advantage of getting loans at from 8 to 9 p. c. interest. But within this limit the bank can make as much profit as it possibly can. There is no limit to the amount of the profits and therefore there is nothing in reason to induce the bank authorities to reduce the rate of interest to the Felaheens. Thus the Felaheens who contribute to the enormous profits of the bank have not only no voice in the management of the bank, but have no relief in the form of rebate or reduction in the rate of interest. The fact that in the year 1922, and for several years previous to that, the bank was in a position to give to its deferred shareholders a dividend of £ 40, on a share of the face value of £ 5, after paying interest on preference shares and 13 p. c. dividend on its ordinary shares, clearly demonstrates that the bank could, if it desired, reduce the rate of interest considerably, had it been established on a co-operative basis. However, as it is an important institution and as its rules and regulations for transacting business and its constitution might be useful for the ultimate consideration of this question by the Government, we propose to submit copies of the concession decree and the statutes of the bank in Appendix No. 8.

CHAPTER III.

B. Land Mortgage Banking in India.

131. We have now discussed almost all the systems of land mortgage banking in the world. So far, none of the Indian provinces or the State has been able to bring into existence any bank or institution designed mainly for granting long-term credit to agriculturists on the security of land except in the Punjab, where the work has been commenced on a small scale in the district of Jhang and at Mianwali. We, however, understand that preparations have been well advanced for starting four district mortgage banks in Madras at an early date. So far as we have been able to find out, Baroda State was the first to formulate a definite scheme of a land mortgage bank for the redemption of the old debts of the agriculturists. As shown before, this scheme was placed before the Government by the Registrar of Co-operative Societies in 1916. But since then the attention of the various Governments in India has been drawn to this problem and at several places committees were appointed to consider this subject and formulate schemes. Thus the need for the long-term agricultural credit facilities is being felt everywhere, especially as the co-operative movement develops. Efforts are now being directed at some places to satisfy this need. Even in this respect the Government of Baroda were the pioneers, because apart from the definite preparation of a scheme which the Government did not accept owing to the temporary unfavourable conditions in the money market, a beginning was made by its undertaking to finance co-operative banks at a low rate of interest to enable them to give loans to co-operative societies for long-terms to liquidate the old debts of their members. With what success the experiment was attended we shall examine at a later stage.

132. Nearest home, in the Bombay Presidency the Gujarat Divisional Co-operative Conference appointed a committee to consider the question of land mortgage banks. The conference at Ahmedabad had definitely resolved that some facilities for land mortgage credit were necessary and the committee was asked to frame a scheme suitable to the conditions of the Presidency. It was also asked to report if the arrangement for land mortgage credit should be made through the agency of existing co-operative organisations or whether it was necessary to start a new type of co-operative association for the purpose.

133. The committee's proposals though very brief are very clear and emphatic. After careful consideration of all the issues involved, the committee came to the conclusion that the business of land mortgage banking was of too responsible and complicated a nature to be undertaken either by the ordinary agricultural credit societies or by the central banks. They believed that it was undesirable to mix up short term business with long term credit. The principles governing the two types of credit being different, they recommended that the conduct of the two lines of business should be entrusted to separate agencies. They, however, thought that the credit societies and central banks could help by making recommendations for loans and that the land mortgage bank should invariably send intimations to the societies when advances were made to their members. They also recommended the formation of a land mortgage bank for a district, the district here meaning not the revenue division known by that name, but a larger tract with more or less similar agricultural and economic conditions.

134. The membership of the bank should be open to all khatedars and farmers in the area on their taking up at least one share of the bank with a face value of Rs. 50. Borrowers should be members and therefore they should be made to contribute to the share capital upto one-twentieth of their borrowings. Dividends on the shares should not exceed the rate of interest paid on the mortgage bonds issued by the bank. The liability of the share holders should be limited.

135. The business of the proposed land mortgage bank should be confined to the granting of loans on the security of the first mortgage on agricultural lands. The bank should take no cognisance of persons with uneconomic holdings of land and loans should be made only to persons with economic holdings. But the bank should be allowed to give loans to render an uneconomic holding an economic one by sinking a well, carrying out some other improvements, or purchasing a piece of adjacent land. The bank should also be permitted to assist in the bringing under cultivation of cultivable wastes and forest or fallow lands. Though the bank should be allowed to give loans after careful inquiry for the liquidation of old debts, loans for the improvement of lands and of the methods of cultivation should have preference over all other classes of advances.

136. With regard to the valuation of the land offered for mortgage, the work should be entrusted to trained and experienced officers possessing a knowledge of the land revenue system, as it was considered to be the most important part of the bank's business. The Government should assist the execution of the proposed scheme of land mortgage banks by giving to each of them in the initial stages the services of a trained full-time officer for valuation purposes. For the examination of the title deeds of land offered for mortgage, each bank should engage or co-opt on its board of management persons competent to do so. After the valua-

tion was made and the title approved, loans might be made by the bank upto an amount not exceeding one-third of the estimated value of the land. The bank should issue periodically series of bonds upto the limits of the outstanding loans. The bonds in each series should all have the same rate of interest and the same terms of repayment. Interest on bonds should be made payable half yearly and the period of bonds might be from 10 to 50 years according to the period for which loans were given. In fixing the period for the repayment of the loans the borrower should be given a wide margin of time so that he could make the repayments without any strain on his finances.* For facilitating the work of recovery legislation should be passed conferring on land mortgage banks powers of foreclosing mortgages by a speedy procedure. Another concession by the Government to the bank should be that the bonds of the bank should be recognised as Trust securities. The Government should further guarantee the payment of interest on the bonds issued to make this new type of security popular with the public.

137. In concluding their report, the committee recommended that the rate of interest on the long-term loans to agriculturists should be much lower than that charged by the co-operative credit societies, but it was impossible under present financial conditions to issue bonds which would be readily saleable at less than 6 to 7 p.c. interest. Adding to this 1 p.c. to cover the expenses of management, doubtful debt, and losses, loans could not be made by the bank at less than 7 to 8 p.c. As this would be too high a rate for the agriculturists, the committee proposed that the bonds should be issued at 5 p.c. or so and that the Government should be requested to assist in popularising the bonds by investing some funds in them. The bonds taken up by the Government could be realised, as the credit of the banks developed and they were in a position to raise money on favourable terms. The committee also proposed that the Provincial Co-operative Bank at Bombay and the

Concessions from the Government.

Imperial Bank of India as repository for the balances of government should be asked to assist by investing in the bonds a part of their surplus and that the Court of Wards and the minor's estates might also be approached with a similar request. Finally it was suggested that the Government should consider the possibility of getting insurance companies to invest their funds in the bonds of the land mortgage banks.

138 The report of the committee was discussed by the Bombay Provincial Co-operative Conference held at Poona in September 1923, but no definite decision was taken to start land mortgage banks. So far as we have been able to gather the matter is now in the hands of the Bombay Central Co-operative Institute, who are considering the subject and obtaining opinions on the scheme from various persons.

139. The Government of Burma have also taken up this matter and there the matter has developed beyond the committee stage. A draft bill was prepared for introduction in the Legislative Council embodying a definite scheme for the establishment of a land mortgage bank. The scheme of the Burma Government has some very useful features and as it is the only definite scheme with full details of organisation and management in India outside Baroda, we give here a brief sketch of the scheme. By the Burma Bill, the business of carrying out the provisions of the Burma Land Mortgage Credit Act is entrusted to a Board specially created for the purpose. This Board is to consist of five members all appointed by the Government, and to have corporate character in all its doings. The President of the Board must be an officer of the Government or a pensioner with land revenue experience, while one member of the Board must have experience as a banker for at least five years and another should be a chartered accountant or skilled in accountancy. One member of the Board should have experience of agriculture or a trade or occupation connected with it.

140. The bill specifies six definite sources for the working capital of the Bank.

Working capital of
the Bank.

1. A Foundation Fund of ten lacs of Rupees provided by the Government.
2. Issue and sale of negotiable bonds.
3. Payments made by borrowers in return of debts.
4. The general reserve.
5. Payment from Government for initial expenses and the salaries of the staff for the first five years.
6. Other funds authorised by the bye-laws.

141. The bill lays down that the bank is not to have a share capital besides the Foundation fund provided by the Government out of the profits from the price control on the export of rice and hence there is no question of the distribution of profits. All profits are to go to the reserve fund, which should not be touched except with the sanction of the Government and only for purposes definitely mentioned in the sanction. All repayments towards the principal by borrowers must be taken to a sinking fund for redemption of the bonds when due. But the sinking fund might be invested for short period in securities approved by the Government. The accounts of the bank should be audited annually by an officer of the Government and should be published in the Government Gazette, together with the report of the auditor of the Board of Commissioners.

142. The bill requires that the bank should give loans both to the co-operative societies of farmers of small means and to individual farmers actually engaged in agriculture. The bank must, however, give preference to the former,

Loans should be granted on first mortgage on land upto sixty per cent. of their estimated value plus one half of the estimated value of buildings and machinery fixed on the land. Loans to co-operative societies should be given on first sub-mortgage of first mortgages held by the societies. Besides the mortgage, personal security of borrowers and surities should be taken by the bank. The valuation of the land should be according to the rules made under the act for the purpose.

143. The mortgage deed for the loan in every case should be in a prescribed form and should lay down that all disputes shall be referred to arbitration in the first instance and that the Commissioner or the society (when the loan is through a society) should have power to sale the land mortgaged, by public auction without the intervention of a civil court, if the annual repayments were not regularly made by the borrowers.

Summary powers for collection

144. Another provision in the bill is that besides making loans to societies, the Commissioners can also purchase from funds in their hands, bonds of other approved co-operative land mortgage societies if they are duly covered by mortgage security. The bonds issued by the Commissioners should be payable to bearer or order and negotiable by endorsement and delivery. These bonds should have a first charge on the securities held by the Commissioners. All the bonds issued should have a certificate to the effect that the total liability of bonds in circulation is covered by loans outstanding and fully secured by mortgages or bonds of other approved societies, the president of the board being responsible for the fulfilment of this condition. As a further safeguard, it is provided that the amount of bonds in circulation and the amount of loans should be published in the Gazette half-yearly.

Conditions regarding the issue of bonds.

145. Amongst other concessions to be given to the bank by the Government, besides the Foundation fund, expenses for five years, free audit, etc., are those declaring the bonds of the bank equivalent to Government securities and making interest on the bond free of tax. The bonds are not to be redeemable except on maturity, but the borrowers of the bank may repay their debt prematurely after giving the Commissioner six months' notice.

146. In case of default, if it is a co-operative society, the Registrar of the Co-operative Societies, on the application of the Commissioner, must ask the society to make payment within a month. If the society in question fails to carry out this order, the Registrar must cancel its registration and take further action. If it is an individual borrower, the Commissioner may after one month has elapsed, and must after defaults exceeding three annuities, give three months' notice to the borrower and on its expiry sell the mortgaged property or such portion of it as would suffice to cover the defaults and cos's, the balance going to the mortgagor or to a civil court when there is another claimant. For any deficit, after this forced sale, the borrower remains responsible.

147. The bill gives the Commissioners powers to make inquiry into the constitution, working, accounts and financial conditions of societies to which loans have been given or whose bonds have been bought by them. This inquiry can be made either by the Commissioners themselves or through agents, and if they are dissatisfied with the results, they can demand the return of the whole or part of the loan. The Government also reserves to itself these powers.

The bill leaves it to the Government to make regulations under the Act on the following subjects :

1. The additional qualifications, term of office and grant of leave of absence for the Commissioners.

2. The emoluments payable to the Commissioners and their President.
3. The form in which their accounts should be kept and published.
4. The securities which may be deemed to be approved.
5. The form of agreement to be executed by the borrowers.
6. The period for repayment of the loans.
7. The form and the denominations of the bonds.
8. The conditions as to the re-purchase of bonds.
9. The provisions which the bye-laws of co-operative land mortgage societies that desire to have their bonds bought by the Commissioners, should contain.

148. As we have observed before, the constitution of the Burma Land Mortgage Bank, as proposed in the draft bill presents some useful features for the consideration of a similar project for Baroda. But the one great defect of it is that it makes the bank an out and out Government affair. Though it eliminates the element of profits-at-any-cost, it certainly suffers from the defect of not making the borrowers for whom the bank is designed, in any way interested in or responsible for the welfare of the institution. It contemplates the bank not as a live co-operative financial institution but as a mere Government department. But the concessions that the Burma Government propose to give and the responsibility that they are to undertake are certainly generous. Moreover, the scheme certainly makes for economy in labour. This is obvious from its doing away with the feature of share capital which generally involves a considerable amount of work on the part of the bank officials. It is, however, a question whether the economy effected is worth having when it pre-

Constitution of the
Burma Land Mortgage
Bank examined criti-
cally.

vents the borrowers from having any interest in the bank beyond that of getting loans. In contrast to this, we commend to the notice of the Government the admirable feature in the United States Farm Loan System which provides for the gradual substitution of the capital invested by the Government by that subscribed by the borrowers themselves and the gradual devolution of powers from the Government to the borrowers and their associations.*

149. As observed before, actual work in land mortgage banking has been attempted only in one province in India. This is at Jhang in the Punjab. The Jhang co-operative mortgage bank is now about six years old. During the year ending 31st July 1924, it had advanced about Rs. 50,000 to some thirty persons.

150. The working capital of the bank has been obtained by the issue of shares of the value of Rs. 10 each, debentures, and deposits from members and non-members. While all members are required to hold at least one share of the bank, the members who borrow from the bank must hold one share for every five hundred rupees he borrows. No member, however, is allowed to hold shares of a value exceeding one thousand rupees. The liability of the shareholders for any deficiencies in the assets of the bank on liquidation, is unlimited.

151. An important provision in connection with the granting of loans is that the maximum amount shall not exceed fifteen times the estimated annual net income, after deducting land revenue of the land mortgaged as security. Besides the specific security, a borrower is required to mortgage all his immoveable property as additional security, besides giving two personal reliable surities. The bank has reserved to itself the right of recall-

*We now learn that the Burma Government have withdrawn this bill and a special officer has been appointed to make further investigations and submit his report.

ing loans after six months' notice, if the mortgaged estate becomes subject to forced administration or forced sale, or if it is in danger of being swept away by river or floods. On the other hand, if it becomes depreciated in value, the bank can ask for a suitable partial repayment. But if a loan is not applied to the purpose for which it was taken, the bank can ask for full repayment immediately. The rate of interest on all loans is fixed at eight per cent and the maximum period for which loans are granted at twenty years. The borrower is at liberty to repay to the bank whole or part of the amount borrowed at any time, but in the event of his doing so he has to pay interest for six months on all bonds that have to be withdrawn, in consequence of his premature payment. The bank can also make it a condition of any loan for redeeming mortgages or old debts that the borrower should use seeds, implements and methods of cultivation prescribed by the bank authorities on the advice of the agricultural department.

152. The bank is authorised to issue debentures of the value of Rs. 50 and multiples of that amount for varying periods, bearing interest at a rate not exceeding six per cent. The amount of the debentures issued should not be greater than the assets represented by mortgages held by the bank. The bank can redeem debentures before they are due for repayment on giving three months' notice. If the debentures are not presented for payment within one month of the prescribed date, after due notice has been given, the holder can have no claim on the bank for interest.

153. The borrower has to pay all expenses incurred for the valuation of the property offered for mortgage and also those in getting it redeemed from a previous mortgage if the bank undertakes this. The profits of the bank are indivisible and are credited to a reserve fund, which is invested outside the bank and maintained as security for the debenture holders.

154. We have examined the model bye-laws proposed for the four district mortgage banks that are to be started in the province of Madras. They are in all important respects similar to those outlined above, and need no special discussion.

155. In Mysore the Co-operative committee appointed by the Government under the presidency of the Honourable Mr. Lallubhai Samaldas has recommended the establishment of a land mortgage bank with a share capital of ten lacs to start with and authorised to issue debentures of not more than fifty lacs. These bonds should be payable at the end of twenty-five years, but redeemable by the bank after ten years on six months' previous notice. The bonds should carry interest at the rate of 6½ p.c. the payment of which should be guaranteed by the Government.

156. The committee recommended that the amount of each loan should not exceed five thousand rupees in ordinary cases and ten thousand in special ones, while the maximum period recommended for loans is twenty-five years. Loans should be made for all recognised agricultural purposes as well as for redeeming old debts and the bank should have a right to recall loans that have not been utilised for the purpose specified in the application. The interest on loans should not exceed 8 per cent. In case of default on the part of the borrower, the bank should have the power of foreclosing the mortgage, without recourse to a civil court. The committee also recommended that the bank might be advanced rupees five lacs at 6½ per cent. in its initial stages.

157. We understand that the Government of Mysore have not taken any decision on the recommendations of the Committee dealing with the establishment of a land mortgage bank.

CHAPTER IV.

UNSUITABILITY OF THE EXISTING INSTITUTIONS IN THE
STATE FOR LAND MORTGAGE BANKING.

158. Having set forth the methods of work of the long-term financing institutions elsewhere, it would be useful to examine the suitability or otherwise of the existing institutions in the State for undertaking mortgage banking, before we formulate our own scheme for the consideration of the Government. This is all the more necessary in view of the fact that the suitability of these institutions for this work was strongly urged on our attention by some witnesses, connected with the co-operative movement. But before we examine this question, it would be necessary to dispose of another important question in this connection. It was urged upon us, by some witnesses, that long-term loans on mortgage of land should be granted only to members of the primary credit co-operative societies in the State, and that this should be done by reorganising the financing institutions existing at present in such a manner that they could undertake the work of granting short-term as well as long-term loans to the societies.

159. In connection with the liquidation of the debts of members of the Co-operative Societies, three important points have been raised by the witnesses examined by us, in the course of our inquiry. The first issue raised concerned the necessity of a new institution for organising the work of granting long term credit. The second was whether to make use of the existing agricultural credit societies or to find some other agencies for giving long-term loans to those who belong to the societies. The last question was whether the facilities of long-term credit should be restricted to the members of the societies or whether it should be for all agriculturists

irrespective of this consideration. But we propose to deal with them in the reverse order, because the last is the easiest to dispose of, while the first two require some careful consideration on our part.

160. We have been impressed by the fact that many of those connected with the co-operative

The Committee urged to restrict the advantages of long-term loans only to members of the Primary Co-operative Societies.

societies, whom we consulted were strongly in favour of restricting the advantages of long-term credit to those who were members of the agricultural credit societies. When driven into a corner by the series of questions put to them by some one or the other of us, some of them would admit that others outside the societies also might be considered, while some would hedge in this qualification by stipulating that loans for amounts less than Rs. 5,000 or Rs. 10,000 should not be given to non-members of Societies. This much they granted only to make it possible for the bank to accommodate large holders for important agricultural improvements.

161. In recommending this restriction to the committee, they took their stand on their honest

The argument for such restriction and the answer to it.

apprehension that if it was made possible for a non-member to get the advantages of long-term loan facilities, either directly or through some other agency, he would not join the society and in consequence the movement would suffer a set back. If this was true, we could not have had nearly 700 societies with some 22,000 members on the rolls. As they have joined the societies in the past for certain definite advantages that the societies offered them, they would naturally join them in the future. Those who have not joined them would not join so long as the reasons for their not having joined the societies existed.

162. The agricultural credit societies of the type we have in the State were designed with a view to grant loans for the current and seasonal expenses of their members. With this view the joint unlimited liability of the members was made a central feature of these Societies. There must be many amongst the agriculturists who are in a position to finance their short-term needs without any outside aid and yet it is quite possible that they might require long-term loans for the liquidation of old debts carrying a high rate of interest or for agricultural improvements. It would not be reasonable or fair to compel them to join a society which caters for the short-term needs of the members and to accept unlimited liability for the short-term loans of other members. It would be equally unfair to penalise them by refusing to give them long-term loans for not joining an agricultural credit society. We do not compel persons who have no need for fodder or grain storage to join fodder or grain storage societies, nor do we lay down that those who would not join these societies should be denied the advantages of other forms of co-operation. It would be as absurd to compel a farmer who does not grow cotton to join and accept a share of a cotton sale society, as to ask a member who has no need of short-term credit to join a society for granting that credit. After all, all types of societies have their own sphere of work and their own utility. To our mind the argument that people would not join the co-operative credit societies if they could obtain long-term loans through some other agency therefore does not go very far. The fear on the part of those connected with the societies is groundless. There is an unlimited field both for the increase in the number of the primary co-operative societies and their membership even without their having an additional bait of long-term loan facilities. We do not enter into the discussion of the question why the primary societies of the type we have at present should not undertake both these types of work. This question will be considered at a later stage. Here we limit our remarks to the subject whether those who have not joined the primary societies existing in the State should be given the advantages of any scheme of land mortgage banking that we might recommend.

Each type of Primary Co-operative Society has its own sphere of work.

163. When those connected with the co-operative credit societies urge that there should be no long-term loans for those who have not

The restriction if imposed would exclude nearly ninety per cent of the agriculturists from the benefits of any scheme framed for the purpose.

joined the primary credit co-operative societies, they entirely lose sight of one very important aspect of the question. Out of a total of about 3 lakhs of khatedars in the State according to a previous estimate, some 60 to 70 p. c. are in debt and need the facilities for long-term credit. The remaining 30 to 40 p.c. account for the prosperous ones and the non-cultivating holders of land. At the lowest estimate, thus, the problem of indebtedness must be considered in connection with the needs of nearly two lakhs of agriculturists. Out of these two lakhs, the agricultural co-operative societies number amongst their membership only about fifteen thousand. The figures at the end of the year 1924-25 for the number of members of the agricultural societies stood at 16,000. If we restrict the advantages of long-term loans to those who have joined the societies we have to rule out of consideration as many as 184,000 khatedars, that is nearly twelve times the number represented by the co-operative societies.

164. There are to-day large tracts of the Raj where the co-operative movement has not even

The Committee cannot accept the recommendation to restrict the facilities of a land mortgage bank to members of the primary societies.

forced its way. We know of several talukas where the number of co-operative societies is nominal. It is not that those living in these talukas have all refused to consider the question of organising themselves into co-operative societies. It is not their own fault that they are not members of co-operative societies. Out of the three thousand towns and villages there are co-operative societies at the most in about 600. We refuse to countenance the idea that we must ignore 1,84,000 of khatedars and 2,400 towns and villages in the consideration of this problem. It is not possible to start a co-operative society in every one of these villages and towns in the near

future and therefore it is our duty to formulate a scheme under which any one from amongst these two lakhs of persons and from these 2,400 villages might, if he so chooses, be able to take advantage of the facilities granted by the State. We do not for a moment believe that all these two lakhs of khatedars will take advantage of the institution that we propose and that it would be possible for them to do so. But we do believe that under our scheme, there will be, amongst those who will take advantage of the facilities, those who are members of the primary societies as well as those who are not. The primary societies and the co-operative movement are not identical things. As the land mortgage bank will also be of a co-operative nature, all those who would join it as members will automatically come within the co-operative movement, and the movement would develop to that extent.

165. Now we come to the consideration of the question whether the agricultural credit societies should be the agencies for granting long-term loans to those who belong to them. In this connection also we were told often that the loans to members should be given only through the credit societies to which they belonged. It was urged upon us that if this was not done members would be tempted to leave them, thus retarding the progress of the co-operative movement. But we have disposed of this argument in connection with the consideration of the question whether loans should be given to those who are not members of these societies.

166. The other line of argument adopted in support of this recommendation was that the societies which have been doing the short-term credit work were inherently the best possible agencies for giving long-term loans in addition to their present short-term business. As this argument was also put forward to support that no loans should be given to those who were not members, our discussion on this subject will also be applicable to

the one previously considered. The reasons advanced to prove this suitability of the societies for this kind of work were that they had experience of lending, that they could realise the instalments for repayment in an easier manner, that they could look after the proper use of the loans given being made, that they could ascertain better the credit, the needs and the stability of a person and that they would be in a position to accept the liability for the debts of their members. They believed that this additional work would neither put strain on their resources nor create difficulties in the keeping of accounts.

167. The agricultural co-operative societies in the State and elsewhere are designed with the definite object of granting short term loans to their members. Their constitution, and their rules and regulations have been framed with this object in view. Their system of accounts is fashioned on the requirements for this work. Their whole history and traditions have helped in giving them this specialised function. Their resources have been developed with an eye to grant loans repayable in the harvesting season. They are the simplest type of the various forms of co-operative organisations and it is for this very reason that they are chosen for the initial stages of the movement. All these reasons definitely point to the fact that they cannot be entrusted with the work of granting long-term loans either without a radical change in their nature or without straining their constitution. With the work of land mortgage banking, considerations that do not affect the simple work of an agricultural co-operative society arise. The introduction of land mortgage banking involves a much more complicated form of accounts, problems of the valuation of property, legal considerations as to the validity of title, a greater responsibility and a more rigorous system of exacting repayments. But with a few exceptions amounting to not more than a score, the agricultural co-operative societies in the State have not come to that stage of development when they could dabble in higher finance.

168. But even if we consider, for a moment, that the societies are suitable agencies theoretically for undertaking the work of giving long-term loans, there are reasons why they should not be utilised for this work. There are many societies where the secretary and the president do not

Even if suitable theoretically, the stage of their development would not justify additional burden of a more responsible type of work.

know how to keep accounts. Even after so many years we have not been able to train efficient secretaries for all the societies. It is because of this that we have still to continue the objectionable system of paid group secretaries. In several societies it is common knowledge, that accounts are written once a year, and even that is not done regularly and properly. We know that the department is doing what it can with the resources at its command to train up secretaries from amongst the members of the societies themselves but it is not an easy work and we do not believe that for years to come we will be in a position to claim that we have a well trained secretary with a suitable successor to follow when necessary, for each one of even the A, B and C class of societies. It would be easy to imagine what would follow in the matter of keeping accounts if the societies were burdened with the far more complicated and responsible work of mortgage banking. Analogous to the question of keeping accounts and partly dependent upon it is the one of corrupt practices in the management of the societies. One has not to go far to hear complaints regarding false debits entries against the names of members who have never been given a loan and of the absence of credit entries for loans repaid. In some cases this is due to the ignorance of keeping accounts, the inability to do it, or to laziness, disinclination and procrastination on the part of secretaries or presidents. In others it is due to the evil designs of the responsible members in charge. When the question of only the short term credit is concerned the inadvertent omission is easily detected at an early date. The effects, however, would be disastrous in connection with mortgage banking when the credit of not one small society, but of a comparatively huge bank with bonds

in circulation is involved. Thirdly, we have also come across a complaint that in many societies the few important members take the trouble of obtaining funds from the central Bank or the Financing Union only when they themselves are in need of loans. When the humbler members of the societies want loans they either put them off by promises that they will soon do it or they make a commission out of it. Out of the existing societies, there is quite a fair number who are dormant and not doing any work even of a short-term nature. They cannot, therefore, be expected to render any service in granting long-term loans on mortgages to their members. The fact is that almost all the Co-operative Banks, Banking Unions and Agricultural Banks complain of large sums of money lying idle on their hands. This is not an effect of any lack of need for loans on the part of members of the co-operative societies. These surpluses could be accounted for only by the fact that several societies in the State are not working properly even so far as the work of giving loans for the seasonal demands of their members.

169. When the societies are not working very efficiently even in their limited sphere of granting short-term loans, when the accounts of some of them are not satisfactory, when the honesty of the workers in several societies is not above suspicion, and when the amount of loans overdue even in the comparatively good years is about 16 p. c., when the societies are not in a position to satisfy more than a small part of even the short-term needs of their members, it would not be wise on our part to recommend to the Government that the work of mortgage banking which is admittedly of a far more difficult nature and which would necessarily have to be of a greater magnitude should be done through the agency of the present co-operative societies.

170. We consider it necessary here to disclaim any intention whatever of criticising or running down the work of the department of Co-operation. We are not ignorant of the efforts made by the department to remedy this state of affairs as much as possible. The criticism

Not wise to recommend to entrust the work of land mortgage banking to societies.

No intention to criticise the work of the Co-operative Department.

made above on the general conditions of the co-operative societies, which is also applicable to the co-operative movement in other parts of India, is recorded solely with a view to examine the question of their suitability and ability to undertake the work of long-term finance. We are not unaware of the existence of some very good societies, to which the criticism made above would not apply, but they are not many. The state of affairs disclosed above is due partly to lack of sufficient staff for the work of supervision of the societies and partly to the conditions prevailing in the villages. A large part of our peasantry is still unlettered and illiterate. Mutual jealousies, want of confidence in one another, absence of public spirit, individual and sectional animosities and an utter absence of idealism are responsible for the conditions of the societies in which we find many of them to day. In these circumstances, small village societies, in out of the way places, without means of communication and very often with their memberships confined to the poorer and also less efficient classes of farmers, may not be able to show better results, when we consider that the co-operative movement in the State is not of a very long duration,

171. The central feature of the co-operative movement as seen in the primary Raiffessein type of societies, is the human and personal element. Because of this the defects noticed above in connection with the societies are bound to appear in one form or another every where till a higher degree of co-operative spirit is developed. Even more necessary than the work of granting short-term loans to members, in this form of organisation is the work of developing their character, of introducing thrift and self-help and many other moral qualities that have an important bearing on the economic conditions of the farmers. On the other hand, the work of mortgage banking, is recognised on all hands to be extremely impersonal, as devoid of human element as possible, and of a more exacting nature. Thus there is a fundamental contrast both in the ideals and the

The ideals and aims of the two types of agricultural banking different.

aims of these two types of work. It is possible that if we mix them in one organisation, the limitations that affect the work of the societies would wreck the whole business of mortgage banking. We shall not labour this point here as it has been very well done by Mr. Wolf, whom we quote at a later stage in support of our view.

172. There are many other reasons why we do not consider it safe to entrust two types of credit work to the same society. Anybody who knows anything of finance knows that the combination of these two is bound to result not merely in confusion in accounts but in endangering the credit of the institution to a greater extent in times of crisis. An important consideration in this connection is the nature of the liability of the borrower. Unlimited liability is the central feature of our agricultural credit societies. With rare exceptions it is not usual to ask for unlimited liability from those taking long-term loans on the mortgage of land. There is a definite purpose in keeping the liability of the member of an ordinary agricultural society unlimited. There, there is no specific security against the loans granted, the loans are only for short periods, and are repayable in a lump sum. Often the members are such that they are not in a position to offer definite securities beyond their good faith. Finally, in their case the rate of interest at which they could get money on so very slender individual credit would be either prohibitive or unnecessarily high without the provision of unlimited liability. In the case of land mortgage banking all these considerations do not operate. For very loan granted there would be a specific security worth nearly double the amount of the loan. The loans are for every long periods and might quite considerably be carried over from one generation to another. The rate of interest in this form of banking depends on the rigidity of the valuation of the properties mortgaged, the assistance from Government and the general credit and resources of the institution issuing

bonds. It is all very well for a person to accept unlimited liability for the debts of several other persons when the loans are for small amounts and only for short-terms. But one cannot expect many to undertake unlimited liability when the debts are for very large sums as they would naturally be if we are going to attempt debt redemption and when their repayment is not a question of months but of years. If the liability for both these kinds of loans is going to be of different type we cannot see how this work of mortgage banking could be done through the agency of societies whose membership involves indefinite and unlimited liability. And there is just a chance, that if we combine these two types of works and keep the liability unlimited it might even scare away some of the solvent members of the existing societies.

173. We are not alone in thinking that the co-operative societies of the type we have are not

The opinion of the Hon'ble Mr. Lallubhai Samaldas.

suitable for the work of giving long-term mortgage loans. The Hon. Mr. Lallubhai Samaldas in his statement supplied to us is against the use of the agricultural credit societies in unequivocal terms. This is what he writes :—
 “ It may happen that a certain number of agriculturists feeling shy of the principle of unlimited liability on which societies are based may hold aloof, because they can meet their ordinary requirements out of their own capital or may have established satisfactory relations with their saokars. These may all the same require finance on satisfactory terms for extraordinary requirements for the purpose of land improvement or debt redemption. Further there may be individuals who may have joined the local credit societies, but whose needs for these special purposes may be so considerable as to make it undesirable for the small credit societies to stand guarantee for and to arrange to meet without detriment to the interest of the other members. In any scheme of long-term mortgage credit that may be devised, it will be necessary to meet the requirements of both these classes of agriculturists,

The need of long-term credit cannot be met by the existing credit societies for various reasons:—

1. The overshadowing of personal credit by mortgage may entail a neglect of co-operative principles.
2. The combination of short-term business financed out of deposits or short dated credits with long-term loans financed out of funds raised on specific security is unsound and risky.
3. The inquiry and valuation preliminary to grant of loans have to be entrusted to a trained agency controlled by and responsible to some central organisation.
4. The maintenance of valuable documents, title deeds, etc., cannot be entrusted to ordinary village societies.

A separate bank should, therefore, be created for the Baroda State to provide long-term credit out of the resources raised on mortgage security."

174. The Hon'ble Mr. Lallubhai Samaldas is one of the greatest authorities in Gujarat on the co-operative movement in general and co-operative finance in particular. It is not possible to brush aside his opinion in a light hearted manner.

Hon'ble Mr. Lallubhai, one of the greatest authorities on the co-operative movement and finance.

175. There is another support for our view from no less an authority on co-operation than Mr. Wolf. Mr. Wolf writing in the Wealth of India, February 1916, page 82 says:—

Mr. Wolf emphatically against Raiffessen societies taking up land mortgage work.

"I dare say there is room for better organisation for mortgage credit in India, and that will be a great boon to Royts, but it ought to be organised by means of district-institutions which might very properly be of a co-operative order. And you can have no linking up of mortgage credit

institutions and personal credit institutions for the purpose. Very strong pressure has been brought to bear upon the German Raiffessen Bank who lend their service locally to central mortgage institutions: and it would otherwise have suited their book very well to comply had not the question of responsibility stood in the way. It was plausibly argued (as it has been done during our inquiry also) that there was no body better equipped to value proper by local property than a local bank, nor to collect repayments. However, very wisely the Raiffessen Banks declined with great firmness. Mortgage credit is a question of the security of title, of valuation, and of the power of recovery—you cannot divide the responsibility. It is very well to talk of Mortgage Bonds being the first rate gilt edged security. They may be so. They are in the German Land Schafts. In the United States many mortgages readily granted are found altogether the other way (the farm loan system described by us in an earlier chapter was not in existence when this was written). Provided a strong lending body, it will have to keep matters in its own hands. It must be able to value for itself. Itself will have to deal out the money. It may easily repay itself by sinking fund as you propose, and at a lower rate than that you speak of, spreading repayments over longer terms. But the present Co-operative Banks ought to keep their hands off such business."

We see no necessity for making any comment on the strongly worded opinion. It speaks for itself.

176. This is not all. Another body of people most intimately connected with the co-opera-

The opinion of the Bombay Committee. tive movement in Gujarat are no less clear in their opinion on this question.

The Committee under the presidentship of Rao Bahadur A. U. Malji appointed to consider the question on Land Mortgage Banks, state that " after careful consideration of all the issues involved, the committee have come to the conclusion that the business of land mortgage is of too responsible and complicated a nature to be undertaken either

by ordinary agricultural credit societies or even by Central Banks of the type now in existence. It is also undesirable to mix up short term with long-term credit. The principles which govern the two types of credit are somewhat different and hence the conduct of the two lines should be entrusted to separate agencies."

177. Besides these valuable opinions, the practice obtaining in most of the countries, of keeping land mortgage banking and short-term personal banking separate, lends additional force to our view. All the important countries in the world have separate institutions for short-term and long-term credit. As we have described the systems in operation in other countries in details elsewhere, we do not propose to go over the same question again.

178. The last question raised in connection with the co-operative movement and land mortgage banking is whether the existing co-operative banks, banking unions and khetiwadi pedhis could be entrusted with this work without creating any special institution for this purpose. Should the existing Co-operative banks, Banking Unions and Khetiwad Pedhis be entrusted with the work of mortgage banking. The arguments stating forth the difficulty of accounts, undesirability of mixing up of two types of credit, the probable danger resulting from it and the specialised nature of these institutions, constitution, rules, regulations, history, traditions, outlook and training, their limited resources and limited clientele, etc., that we have advanced while considering the question of the primary societies also apply with equal force to this aspect of the question. Also the opinions of very responsible persons quoted by us have an equal bearing on this question as on that of the co-operative societies.

179. In connection with this question of entrusting the work of land mortgage banking to the institutions existing at present, it will be necessary to consider whether the banks and the unions, looking to their present constitution, their very limited credit and their multiplicity would be able to issue bonds that will

The bonds of such small institutions not likely to attract much notice on the money market.

be acceptable to the investing public. It should not be forgotten that they are after all small banks doing a very limited amount of business. It is not possible that their bonds on the money market will attract much notice and the issuing of bonds is the only recognised method of supplying land mortgage credit.

180. Apart from this fact if there were so many bond issuing agencies there is bound to be conflict amongst them. The rate of interest payable on bonds will differ according to the position of the issuing agency. Their prices on the market will also be far from uniform. There is bound to be competition amongst the banks and unions in the marketing of their bonds and competition of this kind is fatal to the co-operative spirit. It might be argued that of all these banks and unions, the Central Co-operative Bank at Baroda alone might do the work of issuing bonds for the whole State. But as it happens the Central Co-operative Bank by its very constitution exercises no control or has no authority over the existing unions, pedhis and other Banks and such control and supervision will be necessary. It will be difficult to induce all these independent institutions to accept such an authority or control of the Baroda Central Bank. Moreover the unions are merely organised combinations of the co-operative societies that are their constituents. And this control of the Central Bank will thus have to be extended to the societies in the other districts also. This means a radical revision of the organisation of the whole co-operative movement in the State, which will disturb the working of the societies, unions and banks for a considerable time. Moreover, we will have to create a separate financing agency for the societies affiliated to the Central Co-operative Bank at Baroda at present, because if this were not done, the rate of interest for the societies affiliated to the unions and the other banks will necessarily be higher than that paid by the societies affiliated to the Central Bank at Baroda. And

Conflict likely to arise between the institutions in marketing their bonds owing to their multiplicity.

if a separate bank for the Baroda societies was started, it would exactly amount to our own proposal to have a new and independent institution for the purpose of land mortgage banking.

181. If these institutions are intrusted with both these types of work, they will be liable in Strain in- years of years of severe famine or scarcity to a scarcity. rush from the depositors who finance the institutions for their short-term loans to societies. Necessarily the recovery of their loans to the societies will be problematic at such times, while there will be fresh demands from the societies for further loans. Even without the additional responsibility of bonds in circulation their natural depreciation in these times, the necessity to meet demands of interest due on them, the position would be awkward enough for the bank. Imagine the plight of an institution that would be subjected to a double strain from two sides when its resources would disappear and when the demands on them would be multiplied.

182. But this would be nothing compared to the complications that would issue in consequence of the institution being taken into liquidation. The co-operative bank might employ highly trained men to keep the accounts of the two branches of their activity separate without any confusion. But no institution can keep its general assets, its capital, its reserve funds, in two water tight compartments. In the event of liquidation or crash which of its creditors would have the first claim on its assets? Would it be expedient to satisfy the bond holders first and to ignore the depositors leaving them to look after themselves? If there were a provision to this effect in the constitution of the bank, would not the depositors shrink from entrusting their money to the bank? And would this not affect the short term business of the bank? On the other hand, if it were provided that the capital and the reserve funds of

The existing banking institutions cannot under take land mortgage banking as there would be conflict between the claims of depositors and bond holders.

the bank will entertain first the claim of the depositors would it not affect the marketing of the bonds as well as the rate of interest payable on them? Moreover, if the Government undertook to guarantee the bonds, would it not insist upon some further security in the form of capital and reserve funds. Every land mortgage bank has to show to the investors in its bonds some tangible security in the form of capital, reserve funds, and mutual guarantee funds besides the mortgages on land, because the latter become, in times of successive bad years, valueless and difficult of realisation. These are all very relevant questions and their combined force goes to show that it would be extremely unwise to entrust land mortgage banking work to the existing banks and unions.

183. It was suggested to us in the course of our inquiry that a separate and independent institution might be established for the work of land mortgage banking but that it might be required to give loans through the existing co-operative banks and unions. These in their turn could lend to the societies affiliated to them and the societies might give loans to their members. We have considered at great length why the work should not be done through the existing type of agricultural societies. With regard to the banks and unions also, we have shown the utter inadvisability and the danger of mixing the work of these two types of credits. All that will apply with equal force even if these banks obtain their funds for long-term finance from an independent institution instead of going in the market with their own bonds. In addition to all these, this suggestion is impracticable on the ground that the money passing through three agencies, the land mortgage bank, the co-operative bank or union, and the society, will necessarily be very dear to the ultimate borrower, even if each of these agencies raised the rate of interest merely by $\frac{1}{2}$ p. c. in addition to the rate of interest payable on the bonds. This would be prohibitive and would defeat the very

Even with a separate land mortgage bank, the work of mortgage banking cannot be done through the agency of the existing banks and societies on the grounds of economy.

aim of the scheme to provide long-term credit for the farmers at low rate of interest, and it is a question whether a margin of $\frac{1}{2}$ p. c. will satisfy these agencies. The arrangement would be highly uneconomical and we, therefore, cannot support it.

184. It would be interesting to examine at this stage the results of the provisional scheme of the Government for debt redemption by long-term loans sanctioned by H. H. the Maharaja Saheb in the year 1918. By that scheme it was arranged that the Government should give a deposit of one lakh of rupees to the central co-operative Bank at Baroda and Rs. 50,000 to the Bhadran Bank at $3\frac{1}{2}$ p. c. per annum on condition that they should double their paid up capital. Government also promised to consider sympathetically similar proposals concerning the Amreli Bank. It was stipulated that they should advance the necessary amounts to co-operative societies for a period of 10 years at 5 p. c. and that the co-operative societies should give loans at 6 p. c. for 10 years to individual members to redeem their old debts on first mortgage of land worth double the amount of the loans. A little later the Government also sanctioned Rs. 50,000 more on the same conditions for the Mehsana Co-operative Bank and the promise in connection with the Amreli Bank was also fulfilled. Let us see how these exceptionally favourable facilities have been availed of by these four banks for which it is claimed that they should be entrusted with the work of land mortgage banking on a much larger scale. The Mehsana Co-operative Bank and the Amreli Bank were not able to increase their paid-up capital to the extent required by Government and were, therefore, not able to take advantage of these facilities. Recently the former has increased its capital and the Government have renewed the offer made in 1918. The story for the Bhadran Bank is a little more encouraging. It has been able to double its capital but no co-operative society in the Taluka has come forward to take advantage of

this facility. The Baroda Central Co-operative Bank had been able upto the time this committee came into existence to lend some 54,000 rupees out of the lac sanctioned for it.†

185. Let us first examine the Amreli and the Mehsana Banks that have not been able to double their capital. The paid up share capital of the Mehsana Bank at the end of March 1924 stood at a little over Rs. 20,000 while that of the Amreli Bank was a little over Rs. 30,000 out of which Government had contributed Rs. 18,000. How could one persuade oneself that these institutions which could not double their small capital of Rs. 20,000 and Rs. 30,000 within a period of 5 years even with a temptation of a guaranteed loan at as low a rate of interest as 3% for the benefit of their own customers, could successfully undertake the work of land mortgage banking with all its complications and difficulties in addition to their present work ?

186. The Bhadran Bank has shown itself capable of doubling its paid-up capital. But it might as well have not doubled it because it has not been able during these five years to persuade even a few societies to take up such a small sum as Rs. 50,000 at a very favourable rate of interest for the redemption of their members' debts.

187. The Baroda Central Co-operative Bank has the best results to show. During the last five years it had at any rate disposed off about half the sum offered to it. By the end of July 1920 the Bank had granted Rs. 11,598. By July 1921 it had disposed off a further amount of Rs. 8,904. Between that time and March 1, 1922 it gave Rs. 5,100 out of the Government grant for debt redemption. During the year 1922-23 no loans were granted at all and between April 1923 and 1924 about Rs. 23,000 more out of the grant had been disposed off. By the end of 1924 its loans from this grant of one lakh amounted to Rs. 54,500, leaving a balance of Rs. 45,500*.

† We have been informed since the drafting of this report that the bank has almost disposed of the balance

188. When we find that out of the four banks to which

The experiment has failed, showing not that there is no need for long term credit, but that the work cannot be done through the existing banks and banking unions.

Government made this very tempting offer, three were not able to make any use of it at all and the fourth was able to utilise only a little more than half of the amount in 5 years, we cannot help questioning their suitability for the work of land mortgage banking. It cannot be that there was no indebtedness among their members. It cannot be that the members were so unreasonable as to refuse loans at 6 p. c., when they must actually be paying a much higher rate. It cannot be that amongst the indebted members there were not enough persons who could give the required mortgage security. It cannot be that the rate of interest was too high for them, because they paid even on their short term loans 8 to 9 p. c.. It can only be that these institutions were not adopted to do this kind of work. We have absolutely no fault to find with the Boards of Directors of these banks. We absolve them from all responsibility for this failure. The fact is that the work of these institutions is overshadowed by personal credit and short term loans and that their manner of work cannot be adjusted to a different type. Otherwise the disposal of 2½ lakhs between four banks was a matter of months and not years. The situation disclosed by us in no way proves that there is no indebtedness, or no demand for long-term loans. It only proves that the agencies that the Government selected were not the right kind of agencies for doing this kind of work and that they had not created the necessary organisation to deal with this work. They had their own work to do and they naturally gave their best attention to it. And when they could not do this work on such a small scale with money ready for them at a rate of interest which they could never obtain anywhere, how could it be believed that they would be able to undertake the work and be able to develop it so as to meet the needs of the agriculturists in general with the additional burden of raising money for it at nearly double the rate of interest. It is evident that the Government has to look for different types

of organisation if it desires that long-term facilities for the redemption of old debts and for agricultural improvements should be available to its subjects. However, we think that the one use that could be made of these institutions in connection with this work would be as local agents for local purposes such as disbursement and collection of money, without undertaking any financial responsibility.

PART III.

**Recommendations of the
Committee.**

CHAPTER V.

LAND MORTGAGE BANK FOR BARODA

A. An Examination of the Various Types.

189. Having shown the need for the establishment of a land mortgage bank in the State, for the redemption of old debts of the agriculturists and for promoting and financing agricultural improvements, the question now before us is to settle the central principle or principles that should govern the organisation of such a bank. We have prepared the ground for the consideration of this question by our description of several systems of land mortgage banking in various foreign countries and our examination of the suitability or otherwise of the existing institutions in the State for this work.

190. In our opinion, the principle underlying the long-term loans to agriculturists should be that they should be repaid from the earnings from the land. Loans are made to-day to the farmers for very short periods, from one to five years, (at least that is the understanding at the time of making the loans), even when it is obvious that it is impossible for the borrower to repay it from the earnings of his land within so short a time. It is impossible to expect the sowkar to realise that the financial needs of farming are different from those of other industries and must be met in a different manner, if agriculturists are to prosper. We, therefore, want new principles in the granting of loans to agriculturists. They might be new, so far as we are concerned, though the long-term feature of it would not be new even to us, because it is embodied in our rules for *lagavi* and co-operative grants. The principles that we propose to recommend have been tried successfully in many countries for a long time.

191. His Highness the Maharaja Saheb in asking for the appointment of this committee draws attention to the Agricultural Bank of Egypt and the Credit Foncier de France.

Useful to examine the relative merits of the types discussed before.

We have shown in a previous chapter the constitution and the methods of working of these institutions along with those of some others. It would, therefore, be useful at this stage to examine in brief the relative merits of the various types of institutions, that we have described. We hold that having studied the various systems our aim should be to incorporate in our scheme the best and most suitable features from each of these. Coming later into the field of mortgage banking, we should profit by the experience of others.

192. In our examination of the various systems of land mortgage banking, we have come across four different types. The first is the thoroughly co-operative institution like the Land Schaft or the American Farm Loan System. The second is the Hungarian type, where philanthropy and patronage are the principles on which the banks are run. The third is the capitalist type, represented by the agricultural bank of Egypt and the Credit Foncier de France. The fourth is the purely Government type as was proposed in Burma. So far as absence of the element of profit is concerned, there is nothing to be said against the last. A State socialist and advocate of the nationalisation of banking would delight in this experiment of state banking. But so long as the conception of State is, what it is, this type is not suitable for us. It has its own disadvantages. In the first place, the interest of the borrowers in the institution would be confined to obtaining loans. The success or failure of the institution would be immaterial to them. What we want to encourage among our agriculturists is self-help and the desire to organise themselves. At present they rely too much on things being done for them than on doing what they need themselves. And in these circum-

A State owned and State managed institution unsuitable.

stances, a state owned and state managed institution is bound to create demoralisation. An institution like that would be nothing more than an exalted form of *tagavi* giving.

193. The joint-stock capitalist type of institution represented by the Agricultural Bank of Egypt or the Credit Foncier is equally undesirable, at least so far as agricultural finance is concerned. In this connection, we have said what we had to say on this subject in connection with the discussion of the constitution of the Agricultural Bank of Egypt*. Such an institution might, in exchange for certain concessions, accept a maximum limit to profits, but its entire attitude towards the problem, which the Government wants to solve will not be sympathetic. Its aim will naturally be to get as much out of the agriculturists as possible within the prescribed limits. It will never be able to appreciate, at their proper value, the exact nature of the needs of the agriculturists and even if it were able to do so, it would not do for it to give preference to these needs, as it will have to work for the benefit of its share holders and not that of its borrowers. So far as the agricultural banking is concerned, this type is also unsuitable, and we consider it our duty to record our opinion against a joint-stock capitalist land mortgage bank.

194. The Hungarian type is old fashioned and has no place in the modern economic organisation. It is possibly a result of the later Eighteenth Century code of morality which talked so much about the responsibility of the rich, their duties towards the poor, the merits of being charitable and all the rest of it. The Hungarian banks were originally started by some charitably minded well off persons who subscribed to the entire original share capital, retained full control and management in their hands and restricted the dividends on their stock to very small amounts.

* Chapter III (A), para 130.

It is clear that they had no idea of making money out of it and that they were actuated by the motive of helping the agriculturists. But it is obvious that they had no belief in the ability of the farmers to run the show even at a later stage. They believed in doing things for the needy and feeling virtuous, not in helping others to do things for themselves. They have, like the agricultural bank of Egypt and the Credit Foncier, no doubt succeeded in helping the farmers and in making long term loans available for them at low rates of interest. But the economic advantage is not the only one that merits consideration. The demoralisation that we spoke of in connection with the idea of having a state owned and state managed bank is even greater in this type. There is further no guarantee that the attitude of the founders' successors will be the same as that of the original founders. By the constitution, they may not be able to aim at greater profits, but this very fact might make them indifferent and hence inefficient in the management of the institution. For the permanent assured success of an institution of the type of a land mortgage bank, there is nothing more reliable than the active share in the management and interest of the borrowers themselves in the institution.

195. The German Land Schafften and the Federal Farm

The American type with state management gradually giving way to the representatives of the borrowers most suitable.

Loan Bank of America represent the co-operative type. They are both excellent in themselves. While the former is a result of natural growth, the latter though new has been a result of a comprehensive study of the various institutions in Europe on the one hand and of the peculiar needs of the American farmers and farming conditions on the other. The organisation of the Federal Farm Loan System is much more elaborate in as much as it finds room for local associations of the borrowers as intermediaries between the bank and the borrowers. We have considered it useful to embody this feature in a modified form in our scheme. Both these systems provide for a strict and rigorous government

supervision over the working of the institutions, but while it is more or less permanent in the Land Schafte, the American system provides for a gradual devolution of control over management in certain respects from the Government to members of the banks. We have also adopted this plan of slowly educating the members of the institution so as to enable them in the end to play an important part in the management of ordinary affairs of the bank and to develop it into a thoroughly co-operative institution in course of time.

196. As a result of this examination of the various types of institutions we come to the conclusion

The bank should be organised on co-operative principles.

that the first and most important consideration, in connection with the establishment of a land mortgage bank for the State, is that it should be of a co-operative nature. We are emphatically of opinion that the new institution that we propose should have its constitution based on co-operative principles or in other words it should be ultimately controlled, managed, and owned by those very persons who make use of its facilities and not by outside capital. The success of the institution would fundamentally depend on the fact whether the agriculturists to whom it would grant loans are interested in the success of the institution or not. Before they could be so interested, they must be made to feel that it is their own institution, managed by them, for their own benefit.

197. The first economic aim of the co-operative movement is the elimination of the factor of

All profits should go to members so as to reduce the rate of interest on loans.

middleman's profits and the conducting of business solely for the benefits of the co-operative community. The surplus profits of a co-operative institution could either be kept indivisible for the stability and improvement of the credit of the institution as a whole, or when distributed, distributed in the proportion of loans to members, as a rebate on the rate of interest charged, thus bringing about a reduction in the rate of interest. This central

idea of co-operation could be secured only if those who make use of the facilities granted by the institution, have a hand in the management of the institution.

198. Though the type of land mortgage bank best suited to the needs of our people is one organised on a thoroughly co-operative basis, it will be necessary to introduce certain modifications in its organisation during the initial stages for reasons which we shall have occasion to state a little later. However, these modifications that we propose for the first few years would not be of the same type as those introduced in the organisation of our co-operative financing agencies for short term credit. The circumstances have changed since the time of their establishment; difficulties that attended the pioneers have now disappeared and the co-operative movement and the co-operative spirit are more familiar things. There should, therefore, be no mixing up of the co-operative with the capitalistic or philanthropic elements, by allowing persons other than those requiring and taking the help of this institution, to take up shares and consequently a voice in the management of the concern.

199. We must not forget the system for a land mortgage bank first submitted to Government in 1916. If we want a scheme, based on co-operative principles, the question might arise why should not the committee adopt the scheme which has been before the Government for nearly a decade. The one reason why we do not adopt that scheme in its entirety is that it was framed with the sole aim of solving certain problems in connection with the development of the co-operative movement. While we have also kept that aim before us and while we have striven hard to prepare our scheme in such a manner that it would supplement the short term finance work of the co-operative societies without in any way competing with them,

In the organisation of the bank there would be some modification of the co-operative principle in the initial stages.

The Committee cannot adopt the scheme of 1916, because its scope was very narrow.

we have drafted our scheme with a view to meet the demands of the agricultural class in general and not of a particular section of this class. As the basis and scope of the scheme of 1916 was very much limited, it was natural that certain provisions in that scheme were narrowed down to suit the requirements of its limited sphere of operation.

200. The scheme of 1916 did propose a separate institution for land mortgage banking work, but this institution was also to do the work of an apex bank granting short term loans to various co-operative financing institutions. This was, however, not a result of failure to recognise the inadvisability of mixing up the two types of credit work in one institution. The inadvisability was clearly recognised but the combination of work was proposed because of the difficulty of organising separate institutions at that time. We, however, hold that it would be best to keep these two types of works apart from the very start. We have shown in the preceding chapter how the experiment of asking the existing institutions to undertake long-term work even on a small scale and with funds ready for them at an unusually low rate of interest has failed. If we want an apex bank for the financing institutions in the co-operative movement, we must either create a new bank or give this work to the Central Co-operative Bank at Baroda.

201. The previous scheme contemplated the granting of loans through the medium of the primary co-operative societies. This was inevitable so far as the scheme was concerned, in view of the fact that it was designed exclusively for the then existing co-operative societies. But even that scheme did provide that in special cases the bank should grant loans also to khatedars who were not members of the co-operative societies. We have shown at some length in the previous chapter our reasons for not utilizing the primary societies for the purpose of granting

Not advisable to combine the work of apex bank and land mortgage bank in one institution.

The intermediary between the bank and its borrowers.

long-term loans. It is not that we want to do away with the feature of an intermediary agency. What we propose to do is to create a special type of local association of the borrowers more or less on a co-operative basis to meet the specific needs of this type of banking.

202. Finally, the scheme of 1916 proposed a combination of the capitalist and the co-operative principles of ownership and control.

The combination of the capitalist and the co-operative principles not necessary to-day.

We have had experience of this system and we do not think, we would be justified in repeating the experiment. The difficulties that existed in 1916 do not exist to-day, not at least in all their intensity. Besides we have the Federal Farm Loan System before us to show us another type, that eliminates the difficulties attendant upon the initial stages of the working of a land mortgage bank. We have, therefore, adopted a purely co-operative structure, modified in the beginning by the State having a hand in the management and control which will gradually diminish as the business of the bank develops. Those are the important departures that we have made from the principles of the scheme of 1916. The rest is a further development of the features of that scheme in greater details. As we recommend a work of much bigger dimensions and greater magnitude, it has been necessary for us to prepare a more comprehensive and thoroughly worked out scheme, embodying detailed suggestions about all important matters.

B. Constitution and Concessions.

203. We have advisedly said in the previous section that the type best suited for our needs

Government to provide share capital in the beginning, which should be gradually replaced by the subscriptions from the borrowers.

is the purely co-operative with certain modifications. It is impossible to start a purely co-operative land mortgage bank and manage it on strictly co-operative lines at the outset, unless we have

a reasonable number of borrowers ready to start a bank. Though the main bulk of the bank's working capital will be obtained by issuing bonds, there must be some capital to start with. It is not possible to organise a large number of intending borrowers and to get sufficient capital from them to start business. It is, therefore, necessary that the Government should provide the initial capital, and should undertake to commence the work of the bank, on the understanding that the investment of the Government capital and the controlling share of Government in the actual management of the business would be merely temporary. As soon as the work is commenced and loans are being granted, each borrower should be required to be a member of the institution by taking up a definite number of shares of the bank in proportion to his borrowings. When the amount of such subscriptions from the borrowers has reached a prescribed limit it should be arranged that every fresh subscription after that, should be utilised towards the gradual reduction of the Government capital and gradual retirement of the Government from the management of the bank up to a certain limit. By that time, the credit of the bank should have been established sufficiently to dispense with this help.

204. We recommend that a bank with an authorized capital of Rs. 10,00,000 should be established. One half of the subscribed capital should always be in the form of a reserve or uncalled liability of the share holders as an additional security for the bonds that the bank will have to issue. This reserve liability of the share holder should not be drawn up on except in the event of voluntary or compulsory liquidation of the bank. The share capital of ten lacs should be divided into one lakh shares of Rs. 10 each. Half of the face value of the shares or Rs. 5 for each should be payable on application, the other half remaining as the reserve liability. The bank should commence business on shares worth Rs.4,00,000 being subscribed. The Government should take up this first issue of shares worth Rs. 4,00,000 and thus provide

Rs. 2,00,000 the capital necessary for the bank to commence its business. After this first issue the bank should not be allowed to issue any shares except to its borrowers. Each borrower should be required by the rules of the bank proposed to subscribe to shares worth 10 % of the face value of his borrowings which should be in multiples of hundreds. After such subscriptions from borrowers have reached the amount of Rs. 4,00,000 or equal to the subscription of the Government, half the amount of every additional subscription should be utilised towards the retirement or repurchase at par of the shares held by Government till all the shares held by them are cancelled.

- 205. It is a practice, at some places to do away with the feature of the share capital altogether.

Reasons why there should be share capital.	Strictly speaking share capital is not very necessary for a land mortgage bank.
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We have, however, thought it necessary to provide for this feature on three distinct grounds. The first and the most important consideration is that the small share capital amounting to 5 % of the loans held in cash and five per cent as a reserve liability of the share-holders forms a very good guarantee for the bonds issued by the bank. It is an additional attraction for the bond holder. The second reason why we recommend this feature is that it enables the bank first to give loans up to the amount of its share capital and thus makes for economy. In the absence of such funds in the hands of the bank, it would either have to issue bonds every time a loan is required or to issue bonds for a good round sum and hold the proceeds in its hands till the loans are made. The third reason why we have recommended the capital feature is that the share holder has a sort of a tangible interest in the bank.

- 206. The bank will have to raise a very large part of its working capital by issuing bonds in the money market. That is how the mortgage banks granting long term credit are financed all over the world.

Board of Trustees to safeguard the interests of the bond holders.	
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As the bonds issued by the bank will be public securities circulating in the open market a certain amount of responsibility will devolve on the Government to safeguard the rights and interests of the bond-holders. The bank could not be left to see to this work. It would be necessary, therefore, to establish a Board of Trustees consisting of three members, the Accountant General of the State who should be ex-officio member and chairman, one representative of the shareholders elected by the Board of Directors of the bank, and another member representing the bond-holders appointed by the Government. The bonds before being issued should be authorised by the Board and should contain a certificate to that effect. Before granting this certificate the Board should satisfy themselves that the bank holds legally sound mortgage security for the amount prescribed by the rules. They should keep these securities in their custody and realise them only on the bank supplying a proof that bonds of the value equivalent to that represented by these securities have been withdrawn from circulation and cancelled. They should further see that interest is paid regularly on the bonds and that they are repaid on due date, if they are for a specified period.

207. The bank should further be required to obtain their approval for every appointment of its Board of Trustees to exercise general supervision over the bank. Besides this, the Board should exercise general supervision over the working of the bank and should make a report to the Government every year concerning the affairs of the bank. The Board should be held responsible for the proper observance by the bank of the provisions of the Land Mortgage Bank act that would have to be enacted and the rules and regulations made under it.

208. The management of the bank should be in the hands of a Board of Directors consisting in the beginning of five members. As the Government will provide the initial share

The Board of Directors and its constitution.

capital all the five members of this Board will be appointed by the Government. When the share capital subscribed by the borrowers reaches the limit of Rs. one lac the number of directors might be raised to any suitable number not exceeding nine, and one of these should be a representative of the share-holders. After this as the share capital subscribed by the borrowers increases, the number of directors to be elected by the borrowers should be increased gradually to four out of nine. When the share capital subscribed by the borrowers exceeds that of the Government, five or a majority of directors might be elected by the borrowers. And ultimately when the whole of the capital provided by the Government is substituted by the subscriptions of the borrowers, the share holders should have the right of electing all the Directors except three to be nominated by the Government to protect their own interests as well as those of the bond holders. The resolutions of the Board should, however, be subject to the veto of the Huzur, when they violate the provisions of the Act.

209. The entire management of the bank should be in the hands of this Board of Directors, subject to the final authority reserved to the share holders under the Land Mortgage Bank Act. They must be primarily responsible for the giving of loans, valuation of property mortgaged, keeping of proper accounts, administering the funds, ascertaining the validity of titles, collection of instalments payable by the borrowers, issue of bonds, marketing them, making arrangements for the payment of interest on bonds on due date, withdrawal of bonds from circulation whenever required and all other matters pertaining to the general management of the bank.

210. The third body in connection with the land mortgage system that we recommend would be the Land Mortgage Associations, which should be as a rule the agency between the land mortgage bank and the borrower. The

aim should be to organise one such association for every taluka and more than one when the taluka is very big or when it is split up by a river or for similar other geographical or ethnological reasons. It would be difficult to organise such associations for every taluka in a short time, and it would not be possible for the bank to postpone its operations till the time these associations are formed. In the beginning, therefore, the bank should grant loans directly to borrowers but as soon as there are about 12 to 15 borrowers in a taluka, an association of these borrowers should be formed. These associations should be merely of an advisory character and they should have nothing to do with the cash dealings of the bank with its borrowers, which would be conducted through its accredited agents.

211. There is a vast field for the operations of these local associations. At the present stage it is not possible for the bank to have many branches in the state. The people in the villages will not come to know about the existence of the the land mortgage bank, the services that it can perform for them, and its method of work. The intending borrower will not know whom to approach both for information and accommodation. They would naturally fight shy of an institution away in Baroda and would not take advantage of it to the same extent if there was in the beginning no local body to give them information, to encourage them, and to help them. The necessary propaganda work for the services that the bank would offer to the agriculturists will be very necessary for several years and this work could best be performed by such local associations of persons who are borrowers themselves. As it will be an institution controlled by the borrowers and meant solely for the borrowers it will also be to their interests to make all efforts to increase the membership and the business turn over of the bank. They would, therefore, perform the very important and useful function of bringing the institution to the notice of those who need its services and bringing the intending borrowers to the notice of the institution.

212. As it will be an out and out members' institution, it will be always to the interests of the Functions of these existing members to examine the associations. credentials of the new members who propose to join them and to advise the bank with regard to the fitness or otherwise of the new applicants. These associations would be in a better position than any other body to inform the bank from their intimate local knowledge about the stability of the applicant, the nature of his need, value of his property, validity of his title to the property he offers for mortgage, and his ability to repay the loan. With regard to the technical matters of valuation and the examination of title, though the bank will have to make independent investigations the recommendations and the opinions of the local association on all these points will be of great value to it. Another important function that the associations could perform, and which such associations do usually perform, is that of a guaranteeing union. It would be to the advantage of the associations to offer to the bank some form of additional security for the loan to their members, besides their mortgage security and the liability on the shares held by them, and to offer to its intending members some form of guarantee that by payment of a small amount at the outset, they would materially lessen their chances of being called upon in any eventuality to sacrifice their share capital. This would be done by the provision of making it compulsory for every member joining the association to pay one per cent of his total borrowings to its stock. This contribution should be repayable to the member when he has cleared his debt and ceases to be a member of the association. The interest from the investment of the guaranteeing fund of the association would form its regular income, which it would be competent to the association to utilise according to its own needs for the purposes of propaganda and the expenses of management. The guaranteeing fund itself should remain in tact except in the event of making good a loss to the bank on its lending to any member of the association, resulting after the disposal of the mortgaged property. Thus the

larger its guaranteeing fund, the association will make it more attractive to the bank to give preference to the intending borrowers recommended by that association.

213. The proposed Land Mortgage Act should, therefore, provide that on the number of borrowers reaching fifteen in any taluka, the borrowers should form themselves into an association and that thereafter, each new borrower should automatically become a member of his taluka association on his taking a loan from the bank. The intending applicants might or might not submit their applications for loans through the association, but the bank should be required to send all applications received direct to the associations concerned for their opinion and recommendation before taking any action on them. It should be made obligatory on the association to submit its opinion within a prescribed period after the receipt of the application either from a borrower or from the bank. The opinion and the recommendation of the association should not be binding on the bank, but it should be binding on the bank to obtain such opinion and to give it a careful consideration in arriving at its decision with regard to the granting of the loan. We believe that these associations if properly organised, will be an important part not only of the Land Mortgage Bank Scheme, but of the co-operative movement in the State.

214. The liability of the borrowers will be confined to the amount of their loans, while their liability as share-holders to the creditors of the bank will be limited to the face value of the shares held by them.

It is not merely that unlimited liability is undesirable in an institution of this kind; it is unnecessary. It would be absolutely necessary if the bank undertook to loan on purely personal security. But here we propose to give loans on specific security worth double the amount of the loans granted. It is not possible that except in the most extreme eventualities, the depreciation of the land values would be more than

50 per cent. We have no speculation in land here as in America, and our valuation of the property offered as security would be not on its price due to any special advantages of a non-agricultural nature which might disappear in future, but on its price as an agricultural asset. For decades now, the land values have appreciated and there is no tendency towards a decrease. If it is necessary, the margin might be raised to sixty instead of fifty per cent. This is the first security for the bond holders who will be the only creditors of the bank, but it is not the only security. Even if a borrower fails, and even if during the interval the value of his property has depreciated more than 50 or 60 p.c. it is not possible that he would fail immediately after taking the loan. If he fails a few years later, by the form of repayment that we shall recommend, he would have paid a certain percentage of his borrowings already, which would create an additional security, besides the margin of 50 or 60 per cent of the value of the property. Supposing that the property has depreciated so much as to swallow the whole proceeds from the sale of the property as well as the instalments paid by him and still leave a balance of debt outstanding, there would be his subscribed share capital to the extent of 10 per cent of his borrowings. Even if this should not suffice to meet the balance of outstanding debt against him, the bank has the guarantee fund of the association to which he belongs representing one per cent of the total borrowings by all the members of the association to make good the loss from. Thus the loans of the bank, so far as the bank would be concerned, would be secured first by property worth double the amount, the instalments paid up-to-date, the defaulter's share capital and the whole of the association's guarantee fund. For the bond holders there would be the additional security of the whole of the bank's share capital subscribed with the reserve liability of the share holders, the bank's reserve funds and when all these have failed the guarantee of the Government which we propose to recommend. Again it should not be forgotten that except in the event of the most extraordinary circumstances conspiring to bring

about the ruin of the bank, it would not be that even on a very liberal estimate more than a certain percentage would fail, and of these failures again a very small percentage would fail so ignominiously that their mortgaged property together with the shares held by them and their other property would not be able to meet the debts outstanding. This small fraction which we might take as a possible eventuality would be quite easily met from the guarantee fund and the reserve fund of the bank. The possibility of Government having to make good its guarantee referred to above would be thus a very remote one and in the ordinary course of events not at all likely to arise. Such an event would not be possible unless the whole of the agricultural industry was totally ruined.

216. We, therefore, recommend that the liability of the borrower should be confined so far as his own debt is concerned, to his whole property mortgaged as well as free being affected, and only partial so far as the debts of the other members are concerned, to the amount of his subscription to the share capital of the bank, and also to the amount of his subscription to the guarantee fund of his association. The liability of the association would be confined to the unpaid debts of its members, after their mortgage security and their share subscriptions have been utilised towards the repayment of their debts up to the amount of its guarantee fund. The liability of the bank should be restricted to the balance of the amount unpaid on the bonds issued by it, after utilising all the resources cited above, up to the extent of its subscribed share capital and reserve and other funds. Finally, the liability of the Board of Trustees or the Government would be for any balance of bonds unpaid in the event of liquidation of the bank, after all its resources have been exhausted.

217. The last consideration in connection with the establishment of a land mortgage bank is one regarding the concessions to be granted to it by the Government. In the first instance, we recommend that the Government should pass an act and

The nature and extent of the liability of the borrowers, the associations, the bank, and the Government.

Concessions from Government with regard to the share capital and the bonds of the bank.

prepare rules and regulations embodying the general principles governing the establishment of this bank, its constitution and the method of its work. Next, as we have recommended before, Government should supply the initial stock capital of Rs. 2,00,000 in cash to enable the institution to commence working. Government should also underwrite the issue of the bank's bonds up to Rs. 10,00,000. The bank would naturally place the bonds on the money market and make every effort for their successful disposal but no one could gauge how the bonds would be received by the investing public and other institutions and it is, therefore, necessary that it should be assured, in the last resource, of the bonds being taken up by Government. In addition to this the Government should guarantee the interest and the face value of the bonds in the event of liquidation of the bank. Without such a guarantee from the Government, we believe, it would be impossible for the bank to negotiate its bonds in proportion to its requirements for very many years and at a reasonable rate of interest. As we have tried to show previously it is hardly likely, looking to the various forms of security provided for in the constitution of the bank against these bonds, that the Government would ever be called upon to make good this guarantee. Such a guarantee would, besides assuring an unhampered sale of bonds, materially lessen the rate of interest that the bank and ultimately the farmers would have to pay. Without such a guarantee the rate might be prohibitive and the aim of the Government in establishing this bank might be totally defeated. These three concessions that we recommend are not likely to cause the Government to undertake any sacrifice of a pecuniary nature if the institution is successful in its operations. The share capital as well as the bonds held by Government would be entitled to receive dividends and interest respectively in the same manner as the shares and bonds held by others and that the Government would be paid back its original investment in course of time.

218. Another concession that we propose would, unlike the others, involve some definite sacrifice on the part of the Government. As we have explained before, we are averse to any form of permanent charity or an

Government to pay working expenses for the first five years.

element of philanthropy in the composition of the bank. It should be our first aim to make it self supporting and independent. But we consider it necessary that the Government should give some definite pecuniary help to the bank to help it over the initial difficulties which beset the path of all such institutions. We recommend that the Government should bear all preliminary expenses not exceeding Rs. 5,000, and the cost of the necessary establishment of the bank not exceeding Rs. 10,000 annually, for the first five years. It is not possible that owing to the limited number of loans that the bank would be able to give during the first few years it will make any considerable amount of profit to meet these costs, and we believe that this would be a very useful concession that would set the bank on a road to success. This has been a common feature of many land mortgage systems in the world and we sincerely hope that the Government would not grudge this small sacrifice in the interests of the farmers.

219. We also find it necessary to recommend that the interest on the bonds issued by the bank should be declared free of income tax and the bonds themselves should be exempted from stamp duty.

Bonds to be exempt from stamp duty and interest on them to be tax free.

220. As the bank would be of a co-operative nature registered under the Land Mortgage Bank Act, it should get all the concessions like exemption from stamp duty and registration fees etc., that are given to the institutions registered under the Co-operative Societies Act. The Land Mortgage Association also being of a co-operative nature should get these concessions. The bank should also have the right of free approach to the records of the registration department with a view to ascertain the validity of title of the land offered for mortgage. The bank would naturally make every effort to ascertain the validity of the title to the

The bank to have all concessions granted to institutions registered under the Co-operative Societies Act, and the right to ask for information about any outstanding claims on a property offered to it for mortgage.

land offered for mortgage but to safeguard its interests we recommend that the Government should add a special provision in the proposed Act. This provision should authorise the bank to insert a notice in the Adnyapatrika giving details of the property offered it for mortgage, requiring persons having claim on it to communicate it to the bank within a fixed period, and giving the bank first claim subject to Government dues over the property in the event of no such claim having been submitted to it within the prescribed period, in the same manner as it is done in the case of Tagavi grants by the Government. In Egypt, the Government always guarantees the validity of titles to the Agricultural Bank of Egypt while in Mysore the Committee on Co-operation in their proposals for the establishment of a land mortgage bank recommend a concession similar to this in connection with the notification about claims on property.

221. As it is necessary to tap hitherto untouched resources for the proper financing of the agriculturists, we recommend that Government should include the bonds of the bank in the list of valid and lawful security for the investment of Trust, Charity and Ward's funds.

Bonds to be included in the list of gilt-edged securities.

222. Finally, there is one more concession that we consider very important for the success of the bank. Legal proceedings of a civil nature are generally costly and the disposal of civil suits in the ordinary course of events takes a long time. The bank of the type we propose cannot afford to run to court every time there is a default to obtain the court's decree and to wait for a long time get it. If it gets involved in legal proceedings the ordinary business of the bank as well as its credit would suffer considerably. Further in the interval between the default and the disposal of the suit the property concerned might depreciate. After mature consideration we hold it to

Right of fore-closure without reference to a Civil Court as well as the suspension of the provision to leave a margin of property for maintenance.

be very necessary for the bank to have the right of foreclosing the mortgage and selling the property by public auction in the case of default after giving the defaulter three months' notice to pay the instalments without any reference to a court of law. All the incidents and rights attendant to an English mortgage should be made applicable to all mortgage transactions entered into by the bank, whereby the right either to enter into possession and to sell or to sell without entering into possession of the property, without having recourse to law will accrue to the bank. In order to put this provision in effect, the local Transfer of Property Act should, if necessary be amended. It is equally necessary for the successful working of the bank that the provision in law with regard to leaving a margin of property for the maintenance of the borrower in the event of fore-closure be waived in the case of this bank. We, therefore, recommend that the Transfer of Property Act and other measures concerned should be amended to this effect.

223. The concessions that we propose should be given to the bank for a definite preliminary period to secure re-examination and re-consideration of the whole problem in the light of experience gained. We, therefore, recommend that these concessions should be granted for ten years in the first instance. At the end of this period, the Government should review the work done by the bank and then revise the concessions or renew them for a further period as justified by the circumstances at that time.

224. Though we have suggested that the bank and the local associations should be organised on a co-operative basis, we have recommended that they should be registered under a special Land Mortgage Bank Act. This needs a word of explanation. We have recommended a special act after careful consideration, because we have come to the conclusion that the Co-operative Societies Act as constituted at present would be inadequate to meet the specific

The concessions to be subject to revision after ten years.

Why should there be a separate Act.

requirements of a complete system of land mortgage banking in the State. The Co-operative Societies Act is designed to meet the requirements of simple types of societies, rural and urban and their financing agencies. It contains a few rules and does not deal in details with provisions for management, liquidation and many other intricate questions of law and procedure. If at all, the Joint Stock Company Act would be more suitable but the whole spirit of the proposed institution is opposed to the essence of this legislation. If the bank is registered under the Co-operative Societies Act, its constitution will have to be elaborately drawn up, providing detailed regulations in all matters where the Act is either silent, defective or contrary to the spirit of the proposed institution; and if we do this, it will certainly result in our having to evolve a thoroughly unworkable system of rules. It is to avoid all these difficulties that we have proposed a special act. The Government would be able to secure better supervision over the working of the bank than it would if it were registered under the Co-operative Societies Act or joint Stock Company Act. As in the case of the Agricultural Banks Act, the administration of the Land Mortgage Bank Act might also be entrusted to the Department of Co-operation.

225. It has been suggested to us by our colleague Dr. Pagar that instead of one bank for the State, we should organise one for each district, with a common Board of Trustees for Bond issue for all. This suggestion has been made on the ground that the conditions in each district are different and therefore methods of granting loans will have to be adjusted accordingly. We readily realise the force of the argument and would have gladly accepted it but for the fact that there would be many difficulties in organising and managing such banks in the districts. We very much doubt if we could get a sufficient number of competent State nominees—official or non-official—to serve on the directorate. We, therefore, recommend that one bank may be organised in the first instance to operate in the Baroda District. After some experience, if it is found safe to extend its area of operation to other districts, the facilities might be thrown open to the agriculturists of the other districts. On the other hand if our experience does not justify such extension of its scope, separate banks might be organised for the other districts.

CHAPTER VI.

MANAGEMENT OF THE BANK.

226. We have discussed in the previous Chapter the general principles that should underlie the constitution of the proposed bank as well as the constitution itself. It now remains for us to outline certain salient features about the management of the bank. As it will be a new institution it will naturally take some time to adjust its machinery to the requirements of the people. However, there are certain matters about which it is not necessary to make experiments. We, therefore, propose to make some recommendations in connection with the granting of loans and issuing of bonds.

LOANS.

227. The purposes for which the bank should undertake the granting of loans would depend partly on the resources of the bank and partly on the nature of the general demand for loans. There could be no question that the first business of the bank should be to give loans for redeeming the old debts of the agriculturists, especially those that carry a high rate of interest and exert an undue pressure on their finances. In this connection a suggestion was made to us during the course of our inquiry that the bank should undertake to provide loans for liquidating debts that were made for productive purposes. While we admit the moral soundness of the suggestion we doubt its practicability. It would tax the energies of even a numerous and efficient staff to carry on investigations into purposes for which each individual debt was contracted. It would be fruitless in connection with the existing old debts to go closely into their origin and to assign them their moral values. We, therefore, recommend that in granting loans, the bank should not enter into the

question of the causes of these debts except when there is some definite information on hand to show that some particular applicant for loan is habitually extravagant and that it would be altogether useless to attempt the liquidation of his debts.

228. Another legitimate purpose for which loans should be given by the bank is agricultural improvement including the purchase of costly implements, building of a farmhouse, sinking and repairs of wells, purchase of land, etc.. We have shown the advantages and the scope for such works, and the bank should try to accommodate all applicants for loans for this purpose so long as they have a practical scheme.

229. It is scarcely necessary to analyse the purposes for which loans are taken to-day by the agriculturists from the sawkars to show that the two mentioned above are not the only grounds on which the agriculturists seek these loans. It is a matter of common knowledge that year after year many a debt is contracted for purposes other than economical. While we might deplore the fact, we cannot ignore it. The social demands on the agricultural classes are there. They cannot be wiped off by an act. They would be there for years. We cannot expect an ordinary farmer to have the moral courage to resist this demand and the endurance to submit to the howl of disapproval from his community that his resistance is bound to create. We have to include some of these demands at the present stage in the list of the necessaries of a farmer's life. And we are told that an average, good, efficient farmer ought to be able, unless he is exceptionally unfortunate, to provide for his farming expenses, the maintenance of his family, and occasional social demands. It would be a credit to the moral fervour of a bank if it ruled out from within its scope all applications for loans for purposes other than productive. But let us consider what would happen if it refused such loans.

230. We might take it that the refusal of the bank to accommodate farmers with sound security for unproductive purposes would not result in the abolition of such social demands. They are a part of his social life. So long as he considers it necessary to meet them, he will naturally go and get a loan from a sawkar. The result would be that instead of discouraging expenses in connection with marriage, death etc., the bank would merely drive the agriculturists for their loans to more undesirable and less scrupulous agencies. And the evil would not stop there. These very farmers would in course of ten or twelve years reappear before the bank as cases to be helped because of their burden of old debts. These debts at that time, in all possibility would be twice or three times the original demand. Thus as a result of the bank's refusal, the agriculturists who would have reduced their debts by that time to nearly half of their original borrowings or less would find themselves indebted for nearly double these amounts.

231. However desirable it may be, social reform cannot be made an integral part of the bank's activities. We have to take the agricultural society as it stands to-day and try to help it as far as possible. We, therefore, cannot recommend that the bank should grant no loans for purposes other than productive. All that the bank might be expected to do is to give preference to demands for old debts and agricultural improvements, though even there it could be argued that it would be better to prevent fresh people from entering into debts with unscrupulous sowkars than to help chronic cases. However, it might be provided that other things being equal, the bank should give preference to loans for redemption of old debts and agricultural improvements, if it had not the funds to grant accommodation to all the applicants for loans. In any case, loans for unproductive purposes should be given very sparingly and after careful inquiries.

The result of the bank refusing loans for unproductive purposes.

Loans for unproductive purposes should not be refused but given after careful inquiry.

232. Another important question in connection with the giving of loans is the period for which the loan should be given. In this respect, practices differ considerably in other countries. The Land Schafft grants its loans, in a way, for perpetuity because after the borrower has paid about ten amortization instalments, he is not required to pay more than the interest due every year. After these ten years, he might pay off his loan or a part of it any time he likes or he may not pay it off at all except under certain circumstances such as great depreciation in the value of the property mortgaged, etc.. The loans there are looked upon as part of the working capital of the agriculturist in the same way, as the loans of the industrialists against their plant buildings and machinery. The conditions prevailing in India are, however, radically different and this part of the Land Schafft scheme would not be suitable for our purpose.

233. Loans in all other countries are always for a definite period. In America the Federal Land Banks grant loans for any period up to 50 years. The choice as to the number of years over which the loan is to be spread is generally left to the borrower. In Egypt loans are limited to 20½ years. Various suggestions have been made to us with regard to the period for the repayment of the loans. Some have suggested 10 years, some 15, while a few have recommended 20 years and one or two 25 years. We, however, think that as every loan will be separately considered on its merits by the authorities of the bank for fixing the period of repayment, it would be better to put the maximum limit at twenty years.

234. With regard to the period for repayment for each individual loan it would be necessary for the bank to consider two important points. The period should be fixed in such a manner that under ordinary circumstances the farmer should be able to pay the

Loans should not be perpetual as in the Land Schafft.

Maximum period for the repayment of loans to be 20 years.

The period for repayment to be fixed with reference to the margin of profits from the land.

instalments from his agricultural earnings after keeping enough for his maintenance and for his farming operations. It should be the duty of the bank to fix the period in such a manner as to avoid any strain on his finances and to prevent him from having to go to a sowkar to create a new debt for paying the instalment due to the bank. On the other hand, the period ought not to be so long and the instalment so small that the borrower might be encouraged to squander money instead of paying his debt.

235. It would also be necessary for the bank to fix the minimum amount for loans as well as the minimum period for their repayment. These are important considerations in as much as the amount and the period so fixed should be such as not to affect the work of the primary credit societies giving short term loans. It is necessary to secure that these societies and the land mortgage bank should not encroach on each other's sphere of work. To avoid any possible conflict in the work of these two types of institution, we recommend that the minimum amount for loans should be Rs. 500 except that it should be Rs. 200 in the case of borrowers of the Kaliparaj communities and Rs. 300 in that of other similar backward communities. For amounts smaller than this, they should be referred to the village societies. With regard to the minimum period for the repayment of the loans, we think it would be best to fix it at seven years as five years is the maximum period for which the village societies give loans to their members. It would not be worth the while of the bank to give loans for amounts smaller than those specified above and for period extending over less than seven years.

236. The valuation of the property offered for mortgage will be an important part of the bank's work. In most of the systems, it is considered as the most responsible work on which the success of the bank generally depends. However there are two schools of thought

Valuation proceedings simplified in the land Scharfen.

in connection with this problem. The tendency in some systems is towards simplification in the process of valuation as far as possible with a view to reduce costs and delay in obtaining loans. Some of the Land Schafte have up to a certain extent done away with formal valuation altogether. For small loans they have adopted the land tax as the basis of valuation and they grant loans without any specific inquiry up to a certain multiple of the land tax. This is generally done in connection with the loans for small amounts. Even for large sums land tax is taken as an important factor in estimating the value of the property. As a rule, the choice is left with the borrower. If he wants to avoid additional payment for expenses of valuation and to get the loan immediately he can select the land tax basis. If he thinks that formal valuation would enable him to get a larger amount he asks for a special inquiry. It is just the other way in the American Farm Loan System. There, great attention is paid to this work and specially qualified officers are appointed by the bank to carry out the work of valuation on an elaborate scientific basis.

237. For us, economy of time and money should be an important consideration. If we bear in mind the two important principles that govern the process of valuation for the purposes of a land mortgage bank, the practice of the Land Schafte would be found more suitable for our State. One could estimate the value of an agricultural property either by considering the price that it would fetch if it were put up for sale or by estimating its average yield. The first basis would be fair if it was merely for ascertaining the compensation that should be given for the property if it is to be acquired. The price for which the land could be sold might also form an important consideration if the bank's only aim was to see that at any period, if it had to sell the property it should not be a loser. The bank that we propose will have no doubt to keep this consideration in mind but its chief aim will be not the recovery of its money at any cost but the granting of loans in such a manner that the

Land tax as the basis of the valuation for loan purpose.

borrower would find it possible to repay it from his income from the land. And this being the aim of the bank, it will have to accept the basis of agricultural output for its valuation purposes. Our settlement rates exactly represent the agricultural utility of the land. And on the basis of these rates, the bank could fix a suitable multiple of the land tax for each taluka as the amount to be given as loan. These multiples might have to be different for each taluka, but within any given taluka one rate would answer the purpose of the bank fairly well. We, therefore, recommend that for all loans under Rs. 2,000, the borrower should have the option either to accept his loan on the basis of the multiples of the land tax fixed for the taluka or to ask for a detailed inquiry as to the valuation. In the latter case, however, he should bear half the expenses of the valuation. For all loans above Rs. 2,000, the bank should undertake individual inquiry as to the valuation, the borrower contributing half the expenses. As a further convenience to the borrower, it might be provided that if he so desires, he might on the bank being satisfied as to the validity of the title, ask for an immediate accommodation up to the amount based on the multiples of land tax fixed for the taluka and then to adjust the amount of his loan according to the results of the valuation inquiry.

238. On the valuation being made, the bank's next business in the process of granting loans would be the examination of the borrower's title to the property. It is a very delicate task and fraught with no end of difficulties as we have no system of Record of Land Rights. The necessity for introducing such a system has been the subject of many a recommendation in the past but nothing has so far been done in connection with this problem. We have not even an efficient system of indexing of registered documents which would, in the absence of a Record of Rights, be of assistance to one engaged in the work of investigating the validity of a

The difficulties in connection with the examination of the borrower's title to the mortgage property.

particular title. Our laws of inheritance and our joint family system will no doubt prove a great hindrance to a bank of the nature we recommend in its operations, even if there was a complete record of rights. It is quite possible that a property may be registered in the name of one person with several other persons having a share in the ownership. These names may not be found on any Government records. The man in whose name the property runs might go and borrow from the bank money on the security of this property and in the event of foreclosure the bank might find that others besides itself have a legitimate claim on that property. It is, therefore, necessary to find some remedy for this difficulty which is bound to make its appearance.

239. The bank might be required to find out from the records of the Registration Department any claims on the property offered to it as a security, of the nature of mortgage or sale and it will naturally do so in its own interests. But these records would not give any clue as to the claims through inheritance on the property. Also the borrower will not be in a position to give the bank any title deeds for examination in the case of property come down to him from generations. The examination of the title will always create innumerable difficulties both for the borrowers and the bank unless the latter is invested with special powers. We have recommended the nature of these powers in the preceding chapter in connection with the concessions from Government. In all cases of granting loans, the bank should be required to give a notice in the Adnyapatrika in the same manner as is done by the Government in the case of tagavi loans, and exhibit one at the 'chora' or some other public place and also in any other manner that the bank might consider suitable, asking for information as to any claims on the property specified. In the absence of any such information being sent to it within the prescribed period the bank should have automatically a prior claim on the property up to the amount

Special powers for the bank to ascertain any existing claims on a property offered for mortgage.

due to it by the borrower. Without such power in the present circumstances it would be impossible for the bank to commence work. We also take this opportunity to recommend the introduction of the system of record of land rights at an early date.

240. After the process of valuation and the examination of title, the bank will have to decide the amount to be given. The maximum for this amount should be fixed while the minimum should be what the farmer wants under the prescribed maximum.

Loans to be granted up to fifty per cent of the estimated value of the mortgaged property.

The practice as to the proportion that the amount of the loan bears varies from country to country. At some places it is as high as 75% of the estimated value, but with a few exceptions it generally hovers round 50%. The Committee of the Gujerat Co-operative Conference recommends 33½ p.c. of the estimated value as the outside limit of the loan. This, however, is a conservative and unnecessarily cautious proposal. In the suggestions made to us the limit varies from 40 to 75%. We think that 50 per cent would be a proper limit and a margin of 50% will be a sufficient guarantee against depreciation. In connection with this question it may be observed that it is not the percentage for the maximum amount of loan that matters but the standard of valuation. If the valuation is fair and just and not unduly liberal or unduly cautious the margin of 50% should be quite sufficient.

241. The next question that we have to consider is with regard to the rate of interest to be charged on the loans given by the bank. This will naturally depend on the rate of interest to be paid on the bonds issued by it. But it will be necessary to consider the difference between the rate of interest on the bonds and the rate to be charged to the borrowers. We might, however, observe that the difference would not matter very much to the borrowers, because each

The difference between the rate of interest on loans and that on bonds not to be greater than 1½%.

borrower will be required by the constitution of the bank to hold shares of the bank in proportion to his borrowings, whatever will be left out of this difference after deducting the expenses of the bank and providing for a reserve fund will go back to the borrowers in proportion to their contributions to this difference in the form of dividends on shares. If the difference is greater the dividends will be greater, and as these dividends should be looked upon as a rebate on the interest paid to the bank by its borrowers, the real interest that the farmer could be said to have paid would be the interest that he pays minus the dividends that he gets. However it would be better to fix a maximum limit for the difference in the rate of interest to be charged. We suggest that $1\frac{1}{2}$ p.c. ought to be enough. A greater difference than this might encourage waste in the management of the bank. We made some inquiries as to the rate of interest the farmers paid to the sowkars. This was found to be from 8 or 9 per cent to double that amount according to the general condition of the taluka and the credit of the borrower. We are, therefore, of opinion that an uniform rate of interest of $7\frac{1}{2}$ to 8% for the whole area of the bank's operation would certainly be a relief to a large number of borrowers.

242 An important question in connection with the working of the bank would be the system of repayment of loans to be on amortization plan of equal instalments spread over a number of years. The debts could be repaid in three definite ways:-

- (1) In a lump sum at the end of the stipulated period.
- (2) The interest due plus a certain percentage of the capital every year.
- (3) Equal instalments spread over a given numbers of years.

The first system is out of the question. The agriculturists, looking to their ways and means as well as their debts, cannot be expected to create a sort of a private sinking fund of their own to repay the loan on due date. They

would invariably spend the surplus from their incomes in a wise or unwise manner and would have little or nothing to meet the debt with on the due dates. The second method though better than the first has a great defect, in as much as, the borrower will have to make heavier payments towards his debt at the beginning than at the end. Looking to agricultural conditions, this would be unsuitable, especially with regard to loans taken for agricultural improvements. The increased earnings from these important improvements would be higher during the later years than in the beginning. The third plan of repaying the loan and the interest on it by a number of equal yearly instalments is the best suited for the welfare of the farmer. The yearly instalment would include interest due and a part of the principal. As the interest will be less every year the greater part of the instalment will go towards repayment of the principal. By means of these small annual payments his principal is reduced little by little so that at the end of a certain number of years it is entirely paid up. The advantages of this system of repayment, which is known as the amortization system are many. These payments are generally small and would not exceed the amount paid as interest alone in most of the talukas by most of the borrowers. A payment of 9 to 10 of the loan annually would in a certain number of years extinguish the debt altogether. To-day the farmers are paying 9 to 10 or even more at some places annually towards interest alone. This system, besides encouraging thrift and systematic savings, enables them to have a greater surplus of funds on hand than if they were indebted to a sowkar. We, therefore, recommend that the bank should adopt definitely the amortization system of repayment.

243. With regard to the repayment of loans, it goes without saying that as long as the borrower goes on paying his instalments regularly and as long as the value of the property mortgaged has not depreciated to any considerable extent, the loan should be absolutely unrecallable. At the same time we think it necessary to

Borrowers to be free to pay off the loans any time after five years.

provide that the borrower should not have the right of repaying the loan in full during the first five years except with the permission of the bank. We consider this provision necessary, to discourage any tendency on the part of the borrower, to go to a sowkar in order to borrow a larger amount from him than the bank might have advanced. But he should have the right to repay it any time after the first five years, so that if the interest rate should fall, the borrower could pay off his old mortgage and borrow again on more advantageous terms. The rise in the rate of interest would not affect the borrower because the rate agreed upon at the outset would hold good for the number of years for which the loan is granted

244. The rate of interest on loans should be the same for all the loans granted within a definite period after the issue of a series of bonds. The rate of interest to be charged should vary only with a new series of bonds and the charge should not be greater than the difference in the rate of interest on bonds of two series. Again the interest charged to borrowers should be uniform throughout the area of operation of the bank.

Rate of interest to be uniform for all

245. With regard to the amount for postponement granted where genuinely necessary, it would be an unnecessary hardship, if the bank exacts the arrears as well as the new instalment due in the following year and this practice would defeat the aim of the scheme. A man with an income of about a thousand rupees from his land and with necessary expenses of about 800 rupees a year might be paying Rs. 200 per year to the bank in repayment of his debt. Let us imagine owing to failure of crops his income during one year is reduced to Rs. 400 and the bank grants him postponement for a year. Even then he would have a deficit of Rs. 400 for that year which would affect his financial position during the next year. To expect him to pay during the next year Rs. 400

The method of adjusting the payment when postponement is granted to be ascertained from experience.

to the bank against arrears and the new instalment due and to meet the deficit of Rs. 400 mentioned above would be asking too much of him. If the payment is exacted in this manner, what will probably happen is that he will have to get into debt to some sowkar for this amount or he will very likely get from a sowkar the maximum loan on the security of the property that he has mortgaged to the bank even at a higher rate of interest and pay off the bank. Thus the efforts of the bank, as well as those of the borrower for some years gradually to redeem him from debt would be wasted. It is, therefore, necessary to find a device by which the borrower could pay his arrears without any undue strain on his finances or without his having to break away his connection with the bank. One of the ways in which this could be secured is by extending the period of repayment of his debt by a year or two as the case may be if he desires it. But this is only a suggestion and it would be best to leave the bank free to find out the best means of adjusting the postponed payments from actual experience.

246. Another convenience that we propose to offer to

Loans to be given in cash but might be repaid with bonds of an equivalent value.

the borrowers with regard to the repayments of the loans is that they should be allowed the choice of repaying the loan in full at any time after the first five years either in cash or in the bonds of the bank of a series bearing a corresponding rate of interest of the face value of the amount of the debt outstanding. Thus, if for any reason the price of the bonds goes down in the market, the borrower will have the advantage of the reduction in the price of the bonds. Some banks make it a practice also of giving loans not in cash but in bonds of an equivalent value. The bonds are then cashed for the borrower by the bank itself for a small commission or the borrower takes it to some other agency and gets the cash value. Again some banks issue different series of bonds with different rates of interest at the same time, leaving the choice of the series to

the borrower. But looking to the general educational standard of our farmers and their lack of familiarity with banking practices, we do not think it advisable to add these complications in the process of granting loans. We, therefore, recommend that the loans should invariably be given in cash and the business of marketing its bonds should be done by the bank itself.

247. We must here consider an important point in connection with the question of repayments.

The bank to be authorized to show some leniency in exacting the annual payments from borrowers. For various reasons one might look upon a certain number of defaults in payment of instalments as a certainty, if not every year, at least in some years.

The bank would, no doubt, exercise every possible care in granting the loans and in collecting the instalments, but in the land where bad years at certain intervals are a regular feature of the agricultural industry, we have to provide for the contingency of defaults in payment, by some borrowers. As the aim of the bank would not be the rigid and non-elastic exaction of the annual payments regularly at any cost to the borrowers, it should have the powers to discriminate between cases of genuine necessity and wilful default, in connection with giving some temporary relief from repayment. At the same time there must be some limit prescribed by the act in the interest of the bond holders to the leniency that the bank might be authorized to show. We, therefore, recommend that the bank might be allowed on its own responsibility and at its discretion to grant an application for postponement of the payment of instalments due, on the ground of the failure of crops or some urgent unavoidable expense consequent on illness or death. Before granting such application, it should be obligatory on the bank to make inquiries with regard to the inability pleaded as an excuse. It should be a result of dire misfortune and not wilful neglect or extravagance.

248. At the same time the bank should not be at liberty to go on allowing postponement indefinitely.

The limits to the leniency to be shown. The postponement should be for one instalment at a time and for not more than two instalments consecutively except when the

borrower has already paid more than 10 instalments. In the latter case, one more suspension may be granted, in consideration of the payments towards the principal already made. It should be obligatory on the bank to proceed to realise its dues from the borrower by foreclosing the mortgage and putting it to sale after three months' notice, for any defaults exceeding the periods mentioned above.

BONDS.

249. The only known method of financing this land mortgage institution successfully is by the issue of bonds. In all the institutions whether co-operative, state managed or capitalist, issue of bonds for raising money for loans on mortgages is a central feature. It is impossible to get fixed deposits for long periods and even if one could get them it would be at a very high rate of interest and only for small amounts. So far as the bank is concerned the proceeds from bonds would be fixed deposits for long term, while unlike the deposits, the depositor will have the advantage of having a negotiable security marketable whenever necessary.

250. Our inquiries have led us to believe that with proper Government supervision over the work of the bank and Government guarantee, there would not be much difficulty in marketing bonds for sufficient quantities to meet the demands on the bank by the borrowers at 6% interest or 6½% at the most. All that is necessary is that the system should be launched under the auspices of the Government itself, that the government must in a measure maintain supervision over its operations and guarantee interest and capital in the last resource, and that the system should be so evolved as to command the confidence of the investing public. We have enumerated in the earlier chapter the various securities against the bonds and we believe that these securities would be satisfactory and would tend towards

making the bonds popular. For the convenience of the bond holders the bonds should be standardised, issued in convenient denominations and for a definite, stated period with easy and reliable means for the collection of principal and interest. We are convinced that there are funds available for long term investment at reasonable rates and in sufficient amounts. The only consideration is that for an investment of this kind to be attractive, the bond must possess safety and a certain amount of fluidity. If these are guaranteed, they need not carry a high rate of interest. To attract funds for investments in the bank's bonds, effective publicity and propaganda work would be necessary. The Bank of Baroda Ltd., and the other joint stock banks would also, we are sure, help in the disposal of the bonds amongst their clientele for the consideration of a small commission. We also recommend that arrangements might be made for selling the bonds at Government treasuries and through post offices if possible.

251. It will be best to have bearer bonds negotiable by endorsement. This would do away with the necessity of keeping a register of bond holders and transfer proceedings. As there will be no transfer fees to be paid, it will be an additional attraction to the investors. But this will require that the bonds should be accompanied by interest coupons for the whole period for which they are to run. Arrangements could be made by the land mortgage bank to cash the interest coupons at all Government treasuries, branches of the Baroda Bank and other joint stock banks, co-operative banks and banking unions. There will thus be a saving to the investors in the cost of collection of interest on bonds.

252. It will not be possible for the bank to go on issuing bonds all the year round. The bank would therefore have to issue bonds in advance for amounts up to the anticipated demands for a certain period or it would have to have some cash in

The bonds to be bearer bonds with interest coupons attached for the whole period, which could be cashed easily.

Loans to be granted from the capital and bonds to be issued at fixed intervals to make up these amounts.

hand out of which it could give loans and to replenish this amount by the issue of bonds at stated intervals for the amount lent. The former device would involve a loss of interest. It would therefore be better for the bank to use its capital for giving loans and to make up the amount by the issue of bonds. This arrangement of giving loans from the capital till they reach a certain amount and of issuing bonds for this amount to make up the capital is not only economical but makes for safety. An effect of this arrangement will be that at no time whatever, there would be bonds issued and in circulation, before granting of loans and having in the custody of the trustees mortgage securities for double the amount.

253. There will be some limit to the bonds circulating in the market. The usual practice with many of the land mortgage banks is that they fix a certain multiple of the share capital as the maximum amount for bonds that could be issued. The proportion between the capital and the maximum amount for bonds is generally the same as the proportion between the share capital subscribed by each borrower and the amount of his loan. We have recommended 10% of the loan as the amount which the borrower has to invest in the shares of the bank out of which 5% is to be paid in cash. This device automatically regulates the issue of bonds and prevents it from exceeding the amount of loans granted. We recommend that the bank should be allowed to issue bonds of the value of 20 times the paid up share capital or 10 times the subscribed capital including the reserve liability. Thus only when the bank can add Rs. 100 to its paid up capital or in other words lends Rs. 2,000 to a farmer can it issue bonds worth Rs. 2,000. This will ensure that at no time bonds in circulation will exceed the amount of loans given by the bank.

254. Like agriculture, the money market has also its seasons. There are times when money is cheap and abundant and it is easier to raise loans or market bonds then,

Bonds to be issued in the monsoon.

Bonds in circulation not to exceed twenty times the paid up capital.

than when money is scarce. Though we believe that in the long-run the bank will be able to build up a clientele for its long term bonds, of people who will not be affected by the conditions of the money market, it would always be better to consult the financial weather before going out. For our part of the country, monsoon is the best time for issuing loans or bonds so far as the general money market is concerned.

255. One of the most difficult and delicate questions in connection with the bonds is the method of their repayment. There are three alternatives which we propose to discuss here. The bank could issue bonds repayable at any indefinite period convenient to the bank. This would solve the most difficult problem concerning the disposal of the small amounts received every year towards the repayment of the loans from the borrowers. In the case of bonds for indefinite period the bank could utilise these repayments for fresh loans and could issue so many less bonds in its next series and this could go on indefinitely till it is to the advantage of the bank to buy them back from the market. The bonds of the Land Scheften are of this nature and so the problem as to what to do with the repayments does not arise there. But we do not think such bonds carrying no rights of repayment at par would be popular here. Even the Government Loans and all Municipal and Port Trust Bonds etc., are now issued for a definite period. This convenience will, therefore, not be available to the bank that we propose.

256. The second alternative is that the bonds should be paid on a specified date at par but should not be subject to withdrawal at any time before that date except by purchase in the open market. But in this connection the greatest difficulty that the bank would experience is that of the disposal of the amounts that will come in towards the repayment of the loans every year. In the first place the period for which loans would be given

Bonds running for indefinite periods would not be popular.

The disadvantages of bonds running for definite periods.

and that for which bonds will be issued will not be exactly the same. The period for loans will be of various durations according to the convenience of the borrowers. While for the bonds we will have two adopt one or to standard periods such as 15 years or 25 years. If the bonds are not recallable at any time before the due date the bank would either have to invest the money in government or other securities or deposit them with the banks. There is a third alternative that it could buy bonds from the open market for the amount that it has received towards repayment. But this could never be reliable because nobody could guarantee supply for sufficient amount for sale in the market. The holders of the bonds might, sit tight on them and in that case, the bank will have to buy them at a premium, which would never do. With regard to investment in other approved securities or in banks, not only there will always be a certain amount of risk, but there will be actual loss of interest to the bank. We are all familiar with the huge depreciation in the earlier Government securities which were in the pre-war days more or less at par. If the bank invested its sinking fund for the redemption of the bonds in gilt edged securities, it might find that on the date on which the bonds fall due, the securities held may not bring in sufficient amount to cover the repayment. Any land mortgage bank in 1910, if there had been one in existence, that had invested its sinking fund in 3½% loans for repayment of bonds due in 1925, would have found itself in a sad predicament. The loss would have been considerable. The risk involved in depositing the amount is too well known to need any discussion.

257. As to the loss of interest it is very well known that in the money market the investor always gets less than what the borrower has to pay. While the bank would be paying 6% or 6½% on its bonds for the money raised on them, it will have to invest a part of this very money at least at ½% less. This would be a permanent

Loss of interest if the amounts received from borrowers is not utilised in purchasing bonds.

loss for years which the bank would not be in a position to afford. It would be like borrowing money to lend it to some one at a lower rate of interest. This is not business.

258. On the other hand if the bank tried to utilise these repayments towards giving fresh loans it would cause no end of complications. Dangers of paying off bonds on maturity by issuing fresh bonds. If the money meant for the redemption of the bonds was used for giving fresh loans, the bank would not have the cash in hand on the due dates to meet the repayments of the bonds. It would then have to repay the bonds by issuing fresh bonds and utilising the proceeds for this purpose. But there are two dangers involved in this process. First the bank may not be able, for some reason or another, to sell bonds in sufficient quantities to meet the demands from the maturing bonds. If it is not able to meet its liabilities on the due date, as the tradition of the money market goes, its credit will be ruined for ever. The other danger is that in the long interval between the issue of bonds and their maturity, the general rate of interest in the money market might have risen and the bank might then have to issue bonds at a higher rate of interest. Thus if we recommend the provision of a sinking fund there is the question of risk as well as loss of interest involved in its investment, and if we do not provide for a sinking fund there is the difficulty of having not enough cash in hand to pay off the bonds when they mature.

259. We, therefore, come to the third alternative which is to make the bonds subject to withdrawal by the bank up to a certain extent every year before the date on which they mature. There are also several disadvantages connected with this practice. In the first place, it will diminish the attractiveness of the bonds as securities. The type of investors that are likely to invest in these bonds would not like the idea of being forced to surrender a part of their holdings or at least be liable to do so year after year. Such investors generally aim at a steady

assured income for a long period. If they are called upon to surrender a part of their holdings their calculations and arrangements are disturbed and they would prefer to go in for a security to which no such liability is attached.

260. It is also possible that the rate of interest might rise in the interval between the two issues of bonds. In the event of compulsory withdrawal of bonds by the bank of a value equivalent to the amount repaid by borrowers, it might happen that the bank would have to return the money carrying a lower rate of interest which it could keep for several years and borrow it at a higher rate for fresh loans. It is not businesslike to repay loans carrying a lower rate of interest, which are not due for repayment and to borrow for fresh needs at a higher rate.

261. After considering all these methods and the risks and disadvantages each of them carries, we have come to the conclusion that the third would be the most suitable for the purposes of the bank. In doing this, we are actuated by two considerations. The credit of the bank must never be allowed to suffer and the bonds should always be met on the date of maturity or before. At the same time, looking to the nature of the institution, all risks should be avoided as far as possible. We therefore suggest that the repayment of the bonds should be gradually made every year and the payments against loans received every year might be utilised towards the redemption of the bonds up to that amount.

262. We would, however like to leave the bank freedom to adjust its issue of bonds as it finds best. Our recommendation in this connection is only with a view to secure proper attention to the difficulties involved in the problem. This provision, therefore, with regard to the with-

Yearly withdrawal of bonds only a suggestion. Bank to be left free to devise its own method in the light of experience.

drawal of bonds from circulation up to the amount of repayment received every year from the borrowers might be regarded as a suggestion, and the bank should be left free to devise its own method of meeting the situation. It is quite possible that the bank might be able to float bonds without any obligation to pay them off on any specified date, or again it might find it possible to go on using the repayments towards fresh loans for some years and then conserve the repayments for all the loans granted for three or four years preceding the maturity of a particular series of bonds. No particular system therefore should be foisted upon the bank at the beginning and it should be allowed to evolve a system suitable to its own need in the light of its own experience. It is after all a problem of intelligent and accurate anticipation and corresponding adjustments and with a board of directors of average business accumen and knowledge of the financial world, the problem should not create insurmountable difficulties.

263. However, with a view to enable the bank to call

Bank to have right of withdrawing bonds from circulation any time after five years from the date of issue. upon the bond holders to surrender their bonds for the payment of their face value, if it finds it necessary to do so, we propose that a condition should be attached to the bonds that, while the bond holders would not have the right to ask for the repayment except on the date of maturity, the bank would be at liberty to recall bonds in circulation five years after the date of issue at any time after giving three months' notice in the newspapers and that if the bonds are not presented for payment on the due date, though they will be paid in full any time after this date, they will not be entitled to receive any interest after the specified period. To cause as little inconvenience to the bond holders as possible, we also think it necessary to recommend that in the event of withdrawal of bonds for a certain amount, the bank should as far as possible try to buy them back from the market if it is possible to do so without having to pay any premium. Only if the bank fails to secure bonds for sufficient amount in this manner, it should call upon the holders to present them for repayment. The numbers of the bonds to be so withdrawn should be drawn by lots.

264. With regard to the issue of bonds, we have received an interesting suggestion from one source. Premium bonds might be tried. The practice very common in continental Europe of issuing premium bonds has not yet been introduced in India, though we understand that the premium bonds of the French and Belgium Governments are being sold in India every year. One of the advantages of premium bonds is that the bank might be able to issue them at a very low rate of interest. A part of the saving from this difference in interest is paid every year as bonus on bonds withdrawn from circulation by drawing lots. If premium bonds could be successfully floated, there will no doubt be a reduction in the rate of interest to be charged to the borrowers. But it is difficult in the absence of any previous experience to gauge the success and the popularity of such bonds. We therefore, submit this suggestion to the Government for what it is worth with a recommendation that it might be given a trial for one or two issues.

PROFITS.

265 The bank should be required to take 25% of its net profits every year to a reserve fund. Disposal of profits and the limits to dividends. The rest after making provisions for bad and doubtful debts and for such other purposes pertinent to the management of the bank, as the directors of the institution decide, will be distributed amongst the share holders. But we think it necessary to adopt the practice of the agricultural Bank of Egypt with regard to the arrears of repayments. Whatever sums remain unpaid on instalments that are due and are not recovered in that year should be charged to the profit and loss account, and when recovered in any other succeeding year they should again be credited to it. This will prevent undue negligence in the collection of repayments and large accumulation of bad debts. It might be further provided that the dividends on shares in any year should not exceed eight per cent or the rate of interest on loans given during that year.

266 With regard to other minor matters connected with the management of the bank we do not propose to enter into discussion regarding them here. They will all have to be settled before the bank is established, but it would be best to leave it to the time when the bill for the Land Mortgage Bank is being drafted. In the beginning the Land Mortgage Bank might work through the agency of the co-operative banks, banking unions, khetiwadi pethies and the branches of the Bank of Baroda Ltd., for making payments for loans, paying interest on bonds, marketing the bonds, withdrawing the bonds from circulation and the collection of annual instalments from its borrowers, on a commission basis. But the aim of this bank should be to develop the taluka land mortgage associations in such a manner that within a course of few years they might be able to constitute themselves as taluka branch offices of the bank, able to undertake all the work of the nature mentioned above.

Conclusion.

267 We have tried to show the urgent necessity for starting a Land Mortgage Bank, the scope of its usefulness and the method of its work. We again beg to press upon the notice of the Government the urgency of this problem. We have been making an effort for the last 20 years or more to organise the farmers in co-operative institutions but our efforts have not been attended with the same success that they should have been owing to the handicap of old debts amongst them. The problem has been discussed a great many times and we think that the idea is now sufficiently matured for actual work. Before the bank comes into existence, the Government will have to undertake necessary legislation for the purpose and this will take some time. We, therefore, recommend very earnestly that the Government should take up this question on hand immediately and push the scheme through the preliminary stages.

The condition of the money market is fairly satisfactory and there will be no point in waiting for better times. We therefore suggest that if Government decide to accept our proposals an officer might be deputed on special duty to work out all necessary details, prepare a draft act, get it sanctioned and establish the bank.

268 Finally we beg to submit that in the above scheme we have been at special pains to arrange the working of the bank in such a manner that it may not conflict with the short term credit co-operative organisation that we have built up or any other commercial banking institution in the State. This bank when it comes into existence, will supplement the efforts of the existing institutions without being their rival.

Baroda,
30th September 1925

T. M. DESAI
Secretary.

MANILAL B. NANAWATI
S. M. PAGAR
MATOOBHAI H. KANTA-
WALA
VARAJBHAI VAGHJIBHAI
PATEL
R. S. PATIL
SEVAKLAL DALSUKH-
BHAI PARIKH.

MINUTE OF DISSENT.

269. I do not think it advisable to oppose the scheme of the Land Mortgage Bank as put forth by the Committee ; I, however, deem it my duty to bring to the notice of the Government that the Co-operative movement, I am afraid, is likely to suffer a set back, if the present scheme be put into execution exactly on the lines formulated in the Report.

The co-operative movement is likely to suffer a set-back.

270. The proposed Land Mortgage Bank should advance the necessary loans only for the purposes of liquidation of debts and agricultural improvements and not for all purposes as is recommended in the Report. Besides, the minimum amount that may be lent to any cultivator by the Bank should not be less than a thousand rupees because the channels of the rural Co-operative credit Societies should invariably be utilised for amounts less than a thousand rupees, unless a society is not prepared to loan that sum to any particular individual.

Loans should not be advanced for all purposes and should not be less than a thousand rupees each.

271. I am opposed to the idea of separate Land Mortgage Bank Act being enacted. If the Bank is to be called a Co-operative Bank, it should be registered, like other Co-operative Banks, under present Co-operative Societies Act, in which certain necessary sections comprising the special provisions that may be considered essential for the Bank may well be inserted. At any rate the separate Co-operative Land Mortgage Bank Act is not quite necessary.

The separate Land Mortgage Bank Act is not necessary.

272. Finally I venture to say that the descriptions given and the views expressed in connection with the working of the Co-operative Institutions represent, in my opinion, an exaggerated and one-sided picture, with which I record my disagreement.

Descriptions of Co-operative societies are exaggerated and one-sided.

30th September 1926

(Sd) SEVAKLAL DAUSUKH-
BHAI PARIKH.

A SUMMARY OF RECOMMENDATIONS.

Constitution.

1 There is a clear need for a separate institution for long term loans to agriculturists.

2 The agricultural co-operative credit societies and their financing agencies are not suitable agencies for giving long term credit. A separate institution is, therefore, necessary for land mortgage credit work

3 Of all the types of land mortgage banks, the co-operative, the philanthropic, the capitalist and the state-owned, the purely co-operative type, with a slight modification for the first few years is best suited to our conditions. The constitution of the proposed bank should, therefore, provide for the ultimate devolution of control, management and ownership from the Government to the members of the institution.

4 The Government should provide the initial capital and should undertake to commence the working of the bank on the understanding that the investment of Government capital and its complete control over management would be temporary.

5 The authorised capital of the bank should be Rs. 10,00,000/- divided into 1,00,000 shares of Rs. 10 each.

6. Government should take up 40,000 shares of the value of Rs. 4,00,000 and the bank should commence business with this amount.

7. Every borrower should be required to become a member of the bank by taking up shares of the bank of a face value of ten per cents of his borrowings.

8. The bank should not be allowed to issue shares to persons other than borrowers.

9. After the subscriptions from the borrowers to the share capital have reached Rs. 4,00,000/-, half the amount of every additional subscription should be utilised towards the retirement or repurchase of the shares held by Government.

10. The share capital of the bank will form only a small part of its working capital. A very large part of it will be raised by issuing bonds.

11. To safeguard the rights and interest of the bondholders, the Government should establish a Board of Trustees, consisting of three members, with the Accountant General as ex-officio member and president. Of the other two, one will be a representative of the share holders elected by the Board of Directors of the Bank and the other a representative of the bond holders nominated by the Government.

12. Every issue of the bonds should first be authorised by the Board and should contain a certificate to that effect. The Board should authorise the issue and grant the certificate after satisfying themselves that the bank holds sound mortgage security for the amount prescribed by the rules.

13. The Board should keep these securities in their custody and release them only on the bank supplying a proper proof that the bonds of the value equivalent to that represented by the securities have been withdrawn from circulation and cancelled.

14. It will be the duty of the Board of Trustees to see that the interest on the bonds is paid regularly and that they are repaid on due date.

15. The bank should be required to obtain the approval of the Board for the appointment of valuers, and the Board should exercise general supervision over the working of the bank and they should submit a report every year to the Government concerning the affairs of the bank.

16. The Board should be made responsible for the proper observance, by the bank, of the provision of the Land Mortgage Bank Act and the rules and regulations made under the Act.

17. The management of the bank should be in the hands of a Board of Directors consisting of five members appointed by Government in the beginning and might be raised to a suitable number not exceeding nine, when the capital subscribed by the members amount to Rs. 1,00,000. One of these should be a representative of the shareholders. As the amount of share capital subscribed by the borrowers increases, they should be allowed to elect four members from among themselves. When the capital subscribed by members exceeds that of the Government, this number should be raised to five and when the whole of the Government capital is withdrawn, the members should be allowed to elect six directors the rest being nominated by Government.

18. The entire management of the bank should be in the hands of the Board of Directors subject to the authority of the general meeting of the members.

19. The resolutions of the Board of Directors will be subject to the veto of the Huzur, when they violate the provisions of the Act.

20. As a link between the borrowers and the bank, Taluka Land Mortgage Associations should be established as soon as there are from twelve to fifteen members of the bank in a taluka. These associations should in the beginning be merely of an advisory character, but it is certain that as time passes, they will develop into very useful institutions.

21. Among the functions of the Associations will be:-

- a Giving information to farmers about the facilities granted by the bank.
- b Receiving applications for loans and forwarding them to the bank, with their own recommendation.
- c Creating a mutual guaranteeing fund for its members. Every member will have to contribute one per cent of his borrowings to this fund, which would be returned to him on the redemption of his debt, to the bank.
- d Central propaganda work regarding the co-operative movement.

22. The interest on this mutual guarantee fund will be the regular income of the Associations.

23. In the case of default by any member and in the event of the mortgaged property not fetching enough to pay off his debt to the Bank, the Association will be called upon to make good the loss up to the amount of the guarantee fund.

24. Unlimited liability of the members of the bank would not be desirable for an institution of this kind. A member's liability to the creditors of the bank would be restricted to the amount of his loan and the share capital subscribed by him.

25. The liability of the Board of Trustees of the Government would be for the balance of bonds in circulation left unpaid with interest due, in the event of liquidation of the bank, after all its resources have been exhausted

CONCESSIONS.

26. The following concessions by the Government are recommended:—

1. A Land Mortgage Bank Act embodying the general principles governing the establishment of the bank should be duly passed by Government.
2. Government should take up shares of the face value of Rs. 4,00,000 in the beginning.
3. Government should underwrite the issue of the bank's bonds up to Rs. 10,00,000.
 - (a) Government should guarantee the interest and the face value of the bonds issued by the bank in the event of the liquidation of the bank
4. Government should defray all preliminary expenses for the starting of the bank which should not exceed Rs. 5,000.
5. Government should pay the full cost of the necessary establishment of the bank not exceeding Rs. 10,000 annually for the first five years.

6. Government should exempt the interest on the bonds of the bank from the levy of income tax and the bonds from stamp duty.
7. The bank should be given all the concessions given to the co-operative institutions registered under the Co-operative Societies Act. The Co-operative Land Mortgage Associations should also be given these concessions.
8. The bank should be given the right of free access to the records of the Registration Department.
9. The bank should be given the first claim over the mortgaged property, in the event of no claim being submitted to it in reply to a notice in the Adnya Patrika, giving intimation of the proposed mortgage.
10. The bonds of the bank should be included in the list of valid and lawful securities for the investment of Trust, Charity and Wards' Funds.
11. The bank should be given the right to enter into possession or sell the mortgaged property after giving the defaulter three months' notice, without any reference to a court of law.
12. The bank should be exempted from the provision in the law with regard to the leaving of a margin of property for the maintenance of the borrower.
13. Government should undertake the establishment of a scheme of Record of Land Rights at an early date.
14. The Transfer of Property Act and other necessary Acts should be amended in the light of these concessions.

The concessions outlined above shall be subject to revision or renewal after ten years.

MANAGEMENT.

27. The first business of the proposed bank should be to give loans for redeeming the old debts of the agriculturists, especially those that carry a high rate of interest.

28. In granting these loans, the bank should not enter into the question of the causes of this debt as this is impracticable.

29. The bank should grant loans for agricultural improvements.

30. Loans for unproductive purposes should not necessarily be refused but preference should always be given to loans for redemption of old debts and for agricultural improvements.

31. The maximum limit for the period of repayment of the loans should be twenty years.

32. Subject to this maximum the period should be fixed in such a manner that under ordinary circumstances, the borrower should be able to pay the instalments from his earnings, after keeping enough for maintenance and for his farming operations.

33. The minimum period for the loans should be seven years.

34. The minimum amount for loans should be Rs. 500 but it should be Rs. 200 for the Kaliparaj people and Rs. 300 for other backward communities.

35. The bank should fix for every taluka, a definite multiple of land tax which would represent the value of the property. For loans under Rs. 5,000 the borrower should have the option to ask for loans on a summary valuation based on the land tax. For loans exceeding this amount, there should be an independent estimate of the value of the property.

36. The bank should not give more than fifty per cent of the value of the property offered for mortgage as loan.

37. The rate of interest charged on the loans by the bank, should not exceed that paid on the bonds issued previous to the granting of a particular loan by more than $1\frac{1}{2}$ per cent.

38. The method of repayment of loans by borrowers should be by amortization instalments of an unvarying amount.

39. The loans granted should be absolutely unrecallable so long as instalments are paid regularly.

40. The borrower should not have the right of repaying the loans in full during the first five years except with the permission of the bank.

41. The rate of interest on loans should be uniform from the issue of one series of bonds to another. It should also be uniform for the whole area of operation of the bank.

42. The borrower should be allowed to repay the loan in full or in part either in cash or in bonds of the bank.

43. The loans should invariably be given in cash.

44. The bank should have the power to grant an application for postponement of the payment of one instalment at a time and for not more than two consecutive instalments. But if the borrower has paid more than ten regular instalments, one more remission might be granted.

45. It should be obligatory on the bank to proceed to realise its dues from the borrower for any defaults exceeding the period stipulated.

46. When postponement is granted, the bank should extend the period of repayment by a year or two as the case may be if the borrower applies for it.

47. The bank should raise the necessary funds for loans by issuing bonds.

48. Arrangements should be made to sell these bonds at Government Treasuries and through the Post Office if possible.

49. The bonds should be negotiable by endorsement.
22 L.

50. The bonds should have the interest coupons for whole period attached to them which could be easily
51. The bonds should be issued in series at fixed intervals
52. The value of bonds in circulation should not be less than twenty times the paid up share capital of the bank
53. The bonds should be issued in monthly instalments as far as possible.
54. The repayment of the bonds should be made gradually every year by withdrawing bonds up to a certain amount in lots.
55. The bond-holder should not have the right to demand the repayment except on the date of maturity of the bond but the bank should have the option to withdraw the bond from circulation prematurely after giving two months' notice
56. The bank might be allowed to issue premium bonds carrying bonus on recall.
57. The bank should take twenty-five per cent of its net profit to a reserve fund every year.
58. The balance of the profits might be distributed to the share holders.
59. Before ascertaining the profits for distribution, the arrears should be deducted from the amount.
60. The dividend on shares should not exceed 8 per cent or the rate of interest on loans.
61. The bank should work in the beginning through the agencies of the Co-operative Banks, the branches of the Bank of Baroda Ltd. etc., on a commission basis. Its aim should be, however, to develop the Taluka Associations in such a manner that they might in course of time constitute themselves as Taluka Branch Offices of the bank.
62. The bank should be started at an early date.
63. An officer should be deputed on special duty to work out necessary details, prepare a draft act, get it sanctioned and to establish the bank.

ANNUAL REPORT
OF THE
Department of Commerce & Industry
Baroda State

FOR THE YEAR 1922-23
(ending 31st July 1923)

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ANNUAL REPORT

OF THE

DEPARTMENT OF COMMERCE AND INDUSTRY

BARODA STATE

FOR

THE YEAR 1922-23,

Ending 31st July 1923.

I. ADMINISTRATION, STAFF AND TOURS.

1. Mr. Manilal B. Nanavati held the office of the Director of Commerce and Industries and of the Registrar of Joint Stock Companies till 8th November 1922, when he proceeded to England to act as the Secretary to H. H. the Maharaja Sahab. Since then Mr. S. M. Pagar is in charge of the Department. Mr. Nanavati also worked as the Pragati Adhikari, Excise Commissioner and the Chairman of the City Improvement Trust. Mr. Pagar held the charge of the Pragati Adhikari till 19th January 1923. In addition, Mr. Pagar also held the charge of the Personal Naib Suba of the Baroda District upto 31st December 1922. The Director also worked as a member of the City Improvement Trust, Empire Exhibition Committee, Indian Central Cotton Committee, the Local Sub-committee, Finance Committee, Advisory Board, Electricity Board, Committee for the selection of Industrial Sites, Committee for the Acquisition of Land for Industries and the Baroda State Legislative Council and had to attend thirty-seven meetings of the above Committees during the year under report.

Mr. K. R. Dotivala, continued as General Assistant and Mr. T. P. Adalja as the Weaving Assistant.

2. The Director of Commerce and Industries spent 78 days in tour, and the Assistant Director and the Weaving Assistant 21 and 77 days respectively.

Touring.

3. Inquiries and appeals from persons engaged in or desirous of starting new industries were very numerous. In this connection, the Director has had more than 200 interviews during the year under report. This very fact shows that the public does appreciate the existence of the Department.

Interviews.

II. INDUSTRIES.

4. The whole country owing to the unsettled situation in the Central Europe is faced with a serious trade and Industrial depression. Our State being a part of the same economic system has not remained unaffected and hence no large Industrial and trading activities have been noticed during the year. Three of the recently promoted concerns have started their work, but it will take a long time before they are put on profit earning basis. The year, however, was not barren of results.

General Features.

5. The Commercial and Industrial public is thankful to Government for putting the direction of this Department from the very first into the hands of experienced and enthusiastic officers with progressive ideas. The result was a continuity of policy which created great confidence among promoters and investors alike. They are now only too glad to take interest in any sound proposition in the Indian States.

General policy of the Department.

The Department has, as usual, continued the policy of attracting new Industries by offering special concessions and facilities and has also made widely known the

Industrial utilities of the natural resources of the State through its bulletins. As a result of the policy Government have derived a revenue of Rs. 2,00,405-5-10 in the form of cotton excise duty and royalty on cement during the year under report as against Rs. 1,35,088-2-7 in the previous year.

6. In spite of the Industrial depression all the old and well established industries did satisfactory work during the year under report. The old Textile Mills declared dividends from 50% to 20%. Shri Sayaji Mills added a Weaving shed with 250 looms and a dye-house at a total cost of nearly four and a half lacs of rupees from its surplus profits. All the old and some established new concerns received fresh calls upto seventy-five lacs of rupees.

7. INDUSTRIES RECENTLY STARTED:—Out of the 15 textile mills projected during the recent years, six cotton mills and one Woolen Mill have commenced work. The opening ceremony of the Maharani Woollen Mills was performed by Shrimant Maharaj Kumar Dhairyashilrao on 13-12-1922, and that of the Darbhanga Mills by the Maharaja Dhiraj of Darbhanga on 16-1-1923. Five Mills are under construction and are likely to commence work in the current year. Schemes of two have not yet materialised and one has gone into voluntary liquidation.

The factory of the Union Dyeing and Bleaching Company Ltd. which went into liquidation last year was purchased by the Virgin Mills Ltd. a foreign company registered in Baroda and has already commenced dyeing of yarns. The Company thinks of erecting a Cotton Spinning and Weaving Mill along with the Dyeing Factory.

8. The Modern Chemical Works Ltd. continued to work throughout the year. They were in need of working capital which has been recently provided. The initial period of danger seems to be over and it is now hoped that it would work successfully.

The Alkali Industries at Dwarka and Kodinar have not yet materialised and owing to the financial and technical difficulties involved it would take a long time to establish these industries. The concessions for the Dwarka Alkali project were extended upto December 1924. The Kodinar Alkali lease is under preparation.

Owing to unfavourable conditions, the concessions given for wood-distillation were cancelled at the request of the party concerned but they are at liberty to apply again when conditions improve.

9. The Hume Pipe works at Miyagam have stopped work owing to unsuccessful experiments. The Fern Pottery Company Ltd. of Dehegam started work during the year under report. They used to manufacture slate pens and jars but owing to lack of expert help and working capital they had to discontinue this. They are successfully manufacturing moist paints which find ready market in Ahmedabad.

The Dwarka Cement Company manufactured during the year 1922, 29,300 tons of cement and has paid Government during the period Rs. 5,300 as royalty. The Kodinar Cement works did not materialise and at the request of the party, concessions were renewed upto 31st. December 1924.

10. The Asian Oil and Margarine Manufacturing Co. Ltd. of Kheralu has started crushing castor seed. The Baroda Oil Mill has already been converted into a proprietary concern and is reported to be doing fairly

good business. Similarly at Damnagar, a small factory for crushing sesamum has been started. It is highly necessary that the oil industry should be investigated by an oil Expert and suggestions for improvement be made.

11. Among the dairies contemplated in the previous year, the Uttar Gujarat Gopalan Company and the Baroda Panjra-Pole are working satisfactorily.

12. Though the conditions were not favourable some new concerns were promoted in the year under report and some of them materialised as mentioned below:—

- (1) A Nut and Bolt Factory, at Baroda. Its maximum capacity is one ton per day.
- (2) Bharat Swadeshi Slate Pencil and Paper Manufacturing Company, at Petlad.
- (3) The Gaekwar Dairy Farm, at Kalol.
- (4) The Kadi Industrial and Weaving Company, at Kadi.
- (5) An installation of Electric Supply Station, at Dabhoi, has been arranged.
- (6) A Hand-loom Factory, at Kalol
- (7) A Ginning and Pressing Factory at Bahadurpur, a Ginning and Pressing Factory at Bhatpur and two Presses at Dabhoi have been promoted.
- (8) A Power Weaving-loom and an Oil Factory have been started, at Damnagar.

13. At the end of the previous year one application for a loan of Rs. 2 two lacs for Loans to Industries. a Cotton Mill was pending. During the year under report, five applications for loans of the total amount of Rs. 21,40,000

were received. Out of these six applications, one for a sum of Rs. 50,000 was sanctioned and availed of. One for a sum of Rs. 20,00,000 was under consideration of Government, two were not sanctioned by Government and two applications were referred to the Baroda Bank. The Bank refused accommodation to one of them and the terms offered by the Bank to the other were not acceptable to him. They, however, succeeded to finance their concerns privately and were not in need of Government loan.

Of the loans promised in previous years by the State, the Kalol Cotton Mills Ltd. had availed itself of Rs. 3 three lacs direct with the Baroda. Bank under special arrangements with the State.

14. CONCESSIONS:—Besides the applications for loans, 13 applications for various kinds of concessions under Section 15 of the Rules for the Development of Commerce and Industries were received during the year under report. The last year's balance was 11. Of the total 24 applications, 11 were sanctioned with modifications, 9 were rejected and 4 were pending at the end of the year. The concessions granted consisted of (1) Acquisition of Land for Factories; (2) Exemption from Octroi on payment of a lump sum; (3) Water at concession rates; (4) Extension of the preliminary period for concessions and (5) Supply of wood and grass for match manufacture at concession rates.

Cities of Ahmedabad and Surat enjoy the facility of having a public Telephone Call Office directly connected with Bombay. The Director, Telegraph Engineering, Western Circle, was addressed with a view to have a Call Office opened at Baroda. He has at last agreed to do so, and this work has been provided for in his Budget for 1924-25.

15. There were two applications pending at the end of the previous year, while three more were received during the year under report for the acquisition of land for factories under the special Rules for Acquisition of Land for Factories. Of these, one was sanctioned, two were rejected and in two cases the parties concerned obtained land by private negotiations. There was no application pending at the end of the year under report. Land was acquired under the Land Acquisition Act for the Sayaji Mills Company Ltd. to erect a weaving shed, a dye-house and officers' and workmen's quarters.

16. Eight applications were received during the year under report for approval of Factory Sites. All of them were sanctioned by the Vahiwatdars concerned. None of them came within the powers of the permanent Committee for the Approval of Factory Sites.

INVESTIGATION OF INDUSTRIES.

17. One application under this Department's Notification, dated the 2nd. March 1920, was under the consideration of the Government. This was sanctioned during the year under report. No fresh application was received during the year.

18. TECHNICAL AND INDUSTRIAL INVESTIGATION:—As reported in the last annual report, natural Gas at Baroda was found to be suitable for domestic heating and power purposes. As the cores of the bores were not preserved and as it was necessary to know the cause of these gas seepages, Government orders were obtained to bore a new hole at a place between the Palace compound and the compound of Dewan Saheb's bungalow where gas

seepages were noticed. The boring was taken to a depth of 450 feet when the work was stopped on account of shortage of pipes, and Government orders for further work were solicited. The cores of this bore-hole were sent to the Director of Geological Survey, India, for identification. He was of opinion that there was a possibility of striking coal or gas in larger quantities and suggested to continue boring until the trap was struck. Gas was first noticed at a depth of 245 feet from the surface. It disappeared when the bore was cased, and appeared again at a depth of 305 feet. This disappeared after 36 hours though the portion of the bore was not lined. Government have recently sanctioned that the boring may be done by the Public works Department under their supervision, the cores being sent to this Department for analysis and further investigation. Notes on Natural Gas in Baroda City prepared by Mr. Dotivala are given in Appendix I.

19. The idea of sending Chamars to Calcutta for training in the improved processes of tanning had to be given up as it was against the policy of the Government Research Tannery to take students from outside the Bengal Presidency. The Department was negotiating with an Institute in U. P. failing which some arrangement will be made to train the Chamars in a local tannery.

20. Dr. Naik's scheme of a Research Laboratory was still under the consideration of Government. As arranged by Dr. Naik, Messrs. the Badische Aniline and Soda Fabrick undertook to train students in their works. The Kala-Bhavan Dye House Superintendent was selected as one of the students. He will study dyeing and bleaching.

21. Three applications for approval certificates were received in the year under report
Administration of the Mining Act. against one in the previous year.

These were all granted. One approval certificate was renewed during the year under report against two in the previous year. There was no application for a Prospecting License. There was one application for a Mining Lease, Ransipur China clay, which was granted.

22. The proposal of this Department pending before Government at the end of the last
Quarrying of Building Stones. year for extending the lease for quarrying marble at Motipura and granite at Bhulvan for further term of 15 years received from Mr. Bhudarbhai, the present Lessee whose lease was upto 1925 was sanctioned during the year under report.

23. Mr. S. R. Gupte's services were utilised for restocking the Oyster Beds at Gopi.
Okha Pearl Fishery. Hamusar and Beyt. He was on this duty for about three months and relaid about 3 lacs of oysters. This restocking is not quite enough and we may have to continue this work for at least two to three years to get any substantial results. Mr. Gupte's report on the restocking of oysters is given in Appendix II.

24. As a result of the fish canning experiments carried on by this Department at
Canning Industry at Velan. Velan, an application was received last year for co-operation with Government in the further investigation of the Industry and for taking it up if it was found successful. The matter was under consideration of the Government at the end of the last year. During the year under report, the proposals of the Department were sanctioned and order for a canning machine was put with an American
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Manufacturing firm. Further investigations and experiments were to be carried on in the next fishing season by Mr. Dotivala, but as he is now to be sent to Europe for advance training, the experiments will be made after his return.

25. **HAND LOOM DEMONSTRATIONS:**—The staff of this branch consisted of a Weaving Assistant, two Demonstrators and two Weaving teachers.

26. **Demonstration of the working of the improved fly-shuttle Pit as well as Framelooms was given at Baroda and Amreli throughout the year under report.**
The Fly-shuttle Pit-loom was demonstrated at Damnagar, Devli and Kodinar in the Amreli District. The classes at Amreli and Baroda were successful in introducing improved hand-loom both among bona-fide weavers and other people. The Baroda class was mostly used as a Training School for boys of the City. Many of these have either taken to hand weaving as an independent profession or have accepted employment in hand-loom factories.

The Weaving Assistant supervised the Demonstration classes, and advised and helped the factory owners. He was also entrusted with the inspection of the cotton excise under the Abkari Department.

27. **During the year under report, one Hand-loom factory was started as against 25 in the previous year.** Owing to scarcity and high wages of labour and other trade conditions more factories were not started and those already started were finding hard to work. Every sort of help and advice was given to the factories started last year.

28. **During the year under report, the Department introduced 33 Pit-loom, 4 Frame looms and 8 Automatic-loom.**
Looms and Warping Machines introduced.

Of the above number only 5 were introduced under hire purchase system, the rest were purchased on cash payment by the weavers.

Besides the above looms introduced through the Department, the Contractor who supplies looms and other weaving machines under the supervision of this Department sold direct to the subjects of this State 10 sleys and 20 Fly-shuttle Pit-looms, 20 Fly-shuttle Frame-looms and 9 Warping machines.

29. Experiments in woollen weaving were continued during the year under report. At Experiments in Wool weaving. in the Amreli class hand-spun yarn was tried for the first time and was found quite suitable for warp.

30. Instruction in hosiery work was continued at the Baroda class. The students trained in the class were desirous of purchasing the Knitting Machines on easy instalments, the machines being very costly. Government orders were obtained and now the machines will be supplied on easy instalments. One student has already applied for a Knitting Machine.

31. Some spinning wheels were obtained from the Khangri Department. These were Hand-spinning. sent by H. H. the Maharani Saheb from Germany. They were worked at both the classes at Baroda and Amreli and gave satisfactory results for spinning wool.

32. The Demonstrator of the Baroda class was sent several times to Shri Maharani Girls High School to show the working of the Salvation Army Hand-loom Help to other Institutions.

which they had purchased. Working of a model small loom ordered from America was also demonstrated to the girls of the Maharani School. Instructions in working the spinning wheels imported from Germany were given at the Female Training College.

33. To bring the art work turned out in the Baroda State, to public, a profusely illustrated pamphlet is being prepared and will be shortly published. This will help the small artists in pushing their products in the market and creating an increased demand for their artistic wares. These are also exhibited in the Museum Sales Depot and every attempt is made to popularise the articles. To facilitate the purchase and sale of the curios by this Department the Tasalmat given to the Museum for the purpose was increased to two thousand rupees and transferred to this Department. Articles worth Rs. 68-10-0 were sold during the year under report.

34. With a view to free the weavers of Amreli from the clutches of money lenders, the Weavers Society. weavers were persuaded to form a co-operative society which was registered by the co-operative Department during the year under report.

35. The Weaving Assistant was deputed to study the system of cotton excise inspection followed in the Bombay Presidency. After his return he was asked to inspect the Cotton Mills of the State under the supervision of the Excise Department. He inspected all the Mills and submitted useful suggestions which were forwarded to the Excise Department for favour of considering and taking the necessary action.

36. No meeting of the Industrial Advisory Committee was held in the year under report. It is to be held in the next year along with the meeting of the Prant Panchayats.

37. During the year under report no exhibition was held in the State proper. But there Exhibitions and Fairs. was held at Bechraji an Agricultural, Animals and Cattle Show in the month of April. In this Show, at the request of the President of the Kadi Prant Panchayat, hand-loom weaving demonstration was held to point out the importance of the hand-loom weaving industry as a side industry for agriculturists.

38. A large Industrial and Commercial Exhibition was held at Surat in May. .Owing to the short notice of the exhibition, no special exhibits were sent by the Industrial and Commercial Exhibition at Surat. Department but several artists and manufacturers did send exhibits. The exhibition was opened by H. E. Sir Mauubhai N. Mehta amidst a large gathering.

The British Empire Exhibition is to be held in the summer of 1924 and our Government have decided to participate in the exhibition and a space of 1,000 Sq. ft. has been sanctioned for us. Artistic articles and other useful products of the State have been collected by this Department and after inspection by H. H. the Maharaja Saheb will be sent to London.

III. BOILER AND FACTORY INSPECTION.

39. Mr. S. M. Dighe, the permanent Boiler and Factory Inspector, being granted an Personnel. additional year's leave without pay Mr. S. H. Thakar continued to act as the Boiler and Factory Inspector throughout the year under report.

40. BOILER INSPECTION:—The number of private factories using steam boilers was 193 Strength of Boilers and Factories worked by Steam Power. as against 221 in the preceding year. The apparent decrease is due to the cancellation of the names of many

factories, which though on the boiler register, were actually closed down and the boilers thereof were either scrapped or sold off.

A regular inquiry was instituted to determine the exact number of steam boilers in working order and it resulted in the removal of 35 boilers from the register, leaving a total of 214. To this there was an addition of 26 boilers in the year under report, raising the total to 240.

Of these 240 boilers, there were 190 in use as against 157 in the previous year. The increase in the number of boilers offered for inspection was due to an excellent cotton season.

The following table shows the total number of boilers on the register in the last two years:—

Year.	No. of Boilers on Register.	To be deducted.			Private Boilers.	Private boilers.			Remark.
		Government.	Removed or discontinued.	Total.		Working.	Idle.	Total.	
1	2	3	4	5	6	7	8	9	10
1921-22	352	11	82	103	249	157	92	249	
1922-23	378	10	128	138	240	190	50	240	

A comparative statement of private mills, factories, etc., worked by steam power is shown in the Appendix III.

41. The total income from inspection and transfer certificate fees etc. amounted to Rs. 6,790-6-7 as against Rs. 5,874-15-7 of the previous year. The total expenditure on the Boiler and Factory Inspection Establishment amounted to Rs. 5,777-5-9 as against Rs. 5,549-15-4 of the previous year.

42. No accidents to boilers have occurred during the year under report and there were no prosecutions under the Boiler Act.

43. The Baroda Boiler Act is too old and requires revision in the light of changes that have been introduced in the Indian Boilers Act of 1923. The work of revising the Act with due consideration of the local requirements shall have to be taken up in hand after the Bombay Government have framed rules in accordance with the provisions of the revised Boiler Act.

44. **FACTORY INSPECTION:**—During the year under report, the number of factories subject to control under the Act was 120 as against 111 in the previous year. There seems to be an apparent increase of 9 factories on the register but as a matter of fact 19 factories have been added on during the year 1922-23. This considerable increase was mainly due to good cotton crop that kept busy many ginning and pressing factories which remained closed during previous year. This increase added to last year's total will raise the strength to 130; but there was a reduction of 10 factories from last year's total, owing to a change in the method of counting the

number of factories. Of these 19 factories, 3 were entirely new as given below and 16 were old factories brought on to the register:—

Name of Factory.	Situation.
1. The Darbhanga Spinning and Weaving Mills Company Ltd.	Naosari.
2. The Maharani Woolen Mills Company Ltd.	Baroda.
3. The Gaekwar Baroda State Railway Workshops.	Baroda.

45. The total number of operatives employed in the registered factories was 14,346 as against 11,406 in the preceding year, and of those 12,107 were employed in cotton industry as against 9,728 in the previous year. The number of persons employed in factories other than those connected with cotton industry was 2,239.

There were 2,732 women and 1,449 children at work as against 2,641 and 775 in the last year. The figures given herein are not so exact, as the proprietors of seasonal factories do not give correct figures, and sometimes do not even return the forms forwarded to them for being duly filled up.

A statement of wages for skilled and unskilled labour in the Baroda City is given in Appendix IV.

46. All the perennial factories were inspected more than four times and the seasonal once or more. As the cotton season begins early in Kathiawar and lasts for about a month and a half it becomes nearly impossible to inspect the ginning factories there while at work, owing to a heavy pressure of work in the Baroda and Naosari Districts.

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Periodical stoppage of work and four holidays in a month according to section 22, were duly observed. Sanitary arrangements were tolerably well.

47. The total number of accidents amounted to 42, there being 22 minor, 15 serious, and 5 fatal. Of these 42 accidents during the whole year, 16 occurred in the Government Railway Workshops during a period of three months only. The rate of accidents in the Railway Workshops is rather high, but that may be due to construction and erection work going on there during the last year. Now the arrangements as regards guarding and fencing are nearly over, and it is hoped that the accidents will be minimised. Out of the 16 accidents reported by the Gaekwar's Baroda State Railways Workshops, 9 were serious and 7 minor. There was not a single fatal accident. The average number of operatives employed was 603.

43. During the year under report, there occurred an insignificant strike for two days in July 1923 in the frame and ring department of the Shri Sayaji Mills Company Limited, Baroda. The strike was brought to an end quickly and loss of production caused by the strike was about 7,000 lbs. of yarn costing about Rs. 6,000/-

The operatives of the Kalol Cotton Mills had attempted to strike work with a view to have an increase in the wages, more than once, but the demands of the labour being favourably met by the Agents, the strikes were averted.

However, the Darbhanga Mills of Naosari suffered badly in this respect. Their labourers were on strike for 10 days and afterwards a lock-out was declared which lasted for 27 days. Nearly 540 hands took part in the strike and loss in production amounted to 44,556 lbs. of yarn costing a' out Rs. 40,000/- and the loss in wages came to nearly Rs. 19,500.

49. There were no prosecutions for violation or infringement of the provisions of the Factory Act during the year under report.

Prosecutions:

50. It is pleasant to note that the employers of labour are really keen about the welfare of their labour. Though nothing substantial has yet been done to ameliorate the lot of poor labourers in a variety of ways. Signs are visible of the efforts being made by the employers to house their labourers in specious chawls built near their Mills and Factories. To promote habits of thrift and economy among its employees one Mill has already started a Savings Bank Department. Yearly dinners and outings are also getting common. It must be, however, admitted that the Industrialists will take a long time to realize that their interests would be well served by happy and thriving labouring classes.

Welfare work.

IV. ELECTRICITY ACT.

51. Mr. T. C. Mazumdar continued as the Electric Inspector till 4th. May 1923 when he went on four months leave. Nobody was appointed in his place. Mr. Mazumdar inspected the Sidhpur Electric Installation thrice during the year under report. The annual returns of the Installation as also of the Gaekwar Baroda State Railways Electric Works are given in Appendix V. Of the Kadi and Naosari licenses already given, the latter almost finished the construction of the power house and the laying of mains and distributing lines and will commence giving power to the public in the current year. The Kadi licensee did not make any progress. The Dabhoi Electric Licensee had made all arrangements for starting the laying of mains etc. and will supply energy in the next year.

Inspection of Electric Installations.

52. Two applications under Electricity Act were pending at the end of the previous year. On preliminary inquiry it was found that the applicants were not in a position to carry out the scheme and so the applications were rejected. No new application was received during the year under report.

53. A draft to revise the Electricity Act was prepared and sent to the Legal Remembrancer. When the Act is amended, Rules under the Act will be framed.

V. JOINT STOCK COMPANIES AND BENEVOLENT SOCIETIES.

54. In the beginning of the year under report, there were 94 Joint Stock Companies on the Register, while 9 new Companies were registered during the year under report, making a total of 103 Companies. Of these 11 Companies were cancelled, thus leaving 92 Companies on the Register at the end of the year (Appendix VI-A). Of these, 91 were public companies and the remaining one was a private company. Appendix VI-B gives a list of the companies cancelled during the year under report.

55. The new companies may be classified as under:-

Classification of new Companies.	I. Banking, Loan and Insurance.		
	(b). Insurance ... ..	...	2
	III. Trading and Manufacturing.		
	(b). Printing, publishing and stationery. ... ..	...	1
	(c). Chemical and allied trades. . . . .	...	1

(l). Agencies.	...	...	...	1
(s). Others.	...	...	...	1
IV. Mills and Presses.				
(a). Mills...	...	...	...	1
V. Tea and Planting Companies.				
(d). Others.	...	...	...	2
			Total...	9

Of the 92 companies on the register at the end of the year, 3 companies went into liquidation during the year under report. The total number of companies under liquidation was 14 as in the previous year. The list of the companies under liquidation is given in Appendix VI-C.

56: The following table gives a comparative statement of the authorised, subscribed and paid-up capital of the companies at the end of the previous year and the year under report:—

At the end of the year.	No. of Companies on the register.	Capital.		
		Authorised.	Subscribed.	Paid-up.
1	2	3	4	5
1921-22	93	10,42,84,814	4,33,77,269	2,22,76,574
1922-23	92	10,21,23,900	4,47,53,310	2,97,97,889
net increase (+) or decrease (-) during the year under report.	-1	-21 60,914	+13,76,041	+75,21,315

It will appear that though there is decrease in the number of companies and the authorised capital owing to the winding up of new and unsound companies, there is increase in both the subscribed and paid-up capital. The increase in the paid-up capital of more than seventy-five lacs of rupees is quite worthy of notice. Public confidence in sound concerns is increasing and established industries do not find it difficult to collect fresh calls.

A classified abstract of these 92 companies is given in Appendix VI-D.

The average authorised capital of the new companies was Rs. 6,78,055 as against Rs. 26,27,771 of the companies registered in the year 1921-22 or as against Rs. 11,21,342 of all companies registered upto the end of 1921-22.

The Dwarka Cement Company Limited and the Sayaji Jubilee Cotton and Jute Mills Company Limited increased their authorised capital by Rs. 10,00,000 and Rs. 1,70,000 respectively, while the Gaekwar Oil and Chemical Company Limited and the Premier Ink and Chemical Company Limited decreased their authorised capital by Rs. 50,00,000 and Rs. 90,000 respectively.

57. Four mortgages were registered under Section 118 of the Act.
Registration of Mortgages.

58. One foreign company was registered in the year under report thus making a total of 5 Foreign Companies. foreign companies which have their head offices outside Baroda State and have their established places of business in the Baroda State and file documents under Section 284 of the Act. These were (1) The Ahmedabad Advanced Mills Company Limited, (2) The Dwarka Cement Company Limited, (3) The Tata Construction Company Limited, (4) The Bombay Hume Pipe Company Limited and (5) The Virgin Mills Limited.

59. The total number of documents registered during the year under report was 223 as against 246 in the previous year. A list of these documents is given in Appendix VI-E.

Number of Documents registered.

60. The total receipts for the year from Joint Stock Companies amounted to Rs. 908-12-0 as against Rs. 1,341-0-0 in the previous year. Appendix VI-F gives the amounts received under different heads.

Receipts.

61. There were two prosecutions during the year under report under the Company's Act, for not filing the balance sheet in time. At the end of the year under report both cases were pending before the Court.

Prosecutions.

62. There were 24 societies registered under the Benevolent Societies Act at the end of the previous year. One new society was registered during the year under report, thus making a total of 25 societies. Appendix VI-G gives a list of these societies.

Benevolent Societies.

Of the 25 societies on the register, 16 were caste institutions regulating social customs, 1 society for the promotion of industry amongst women, 2 homes for the destitute, 4 societies for the encouragement of education and prevention of child marriage and for procuring land and estate for Christian Parsonages, Mission Premises, Medical Homes, etc.

63. The total number of documents registered during the year under report was 10 as against 8 in the previous year. A list is included in the Appendix VI-E.

Number of Documents registered.

64. The total receipts for the year from Benevolent Societies amounted to Rs. 10 as Receipts. against Rs. 20 in the previous year. The amount is shown in the Appendix VI-F.

VI. PRINTING AND STATIONERY.

65. Printing of all the Departments of the State was done as usual by the Printing Contractor. The bills sanctioned and Annual Expenditure. paid to the Contractor during the year under report amounted to Rs. 83,712, as against Rs. 1,04,065 in the previous year. The decrease of nearly Rs. 20,000 in expenditure was due to (1) the difference in the amount paid to the Contractor during the two years as an increase in contract price of paper. This accounts for nearly Rs. 8,000. (2) the economy in the use of forms practised by the various Departments at the suggestion of this Department. Almost all Departments curtailed their demand of forms by 15 per cent, (3) Payment of the bills for letter forms, envelopes etc., from the stationery grants of the various Departments and not from the printing grant of the State. The matter printed at outside presses by various Departments during the year under report amounted to a total number of 210 forms and the printing charges of the same came upto Rs. 3,137-7-3 while the same at the contract rates would have cost only Rs. 1,069-7-2.

The number of books and forms printed amounted to 92,01,245 as against 1,06,86,393 in the previous year.

66. On account of the high price of paper, the Contractor was given a lump sum of Rs. 5,000. In the previous year the Contractor was given an increase of 35% on contract price of paper. He was also given advances against bills presented. Facilities to the Printing Contractor.

67. A contract to supply stationery to all the Departments of the State was given to Messrs. Trivedi Brothers of Baroda.

68. During the year under report, the small Secretariat Press had evolved into a concern worthy of being called a press. There were only 10 men working therein at the commencement of the year while now there are 21 men (1 Supervisor, 15 Compositors, 1 Pressman, 2 Bawlers, 1 Clerk and 1 peon). Formerly main work done in the Press pertained to the Huzur Cutcherry, but subsequently it was ordered that the staff should be increased so as to be able to relieve the Contractor's Press of some of its most urgent and long pending work. The working expenses for the year under report show an increase of Rs. 2,318 consequent on the increase in the staff, over last year viz. Rs. 2,670-5-9 i. e. a total of Rs. 5,048-5-9.

Messrs. Kale and Bhatt returned from Europe and reported for duty on 23rd November and under Government orders they are working in this office as probationers on Rs. 200. In the meanwhile, however, Mr. Bhatt was transferred to the Electrical Department vice Mr. Mazumdar proceeding to Europe on leave. They both, however, were sent to Bombay to have a look round at the Government Central Press, Bombay. A sum of Rs. 2,901-11-3 has been spent for their pay and that of the peons sanctioned for them while the cost of their trip to Bombay came to Rs. 996-2-0.

69. The new Press is being organised directly under the supervision of the Head of the Department. Machines have been ordered out and Type Foundry has been started. It is hoped to start the new Government Press before the contract for printing expires.

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70. Both Messrs. Bhatt and Kale worked hard and intelligently and rendered themselves useful in organising the new Press and the Type Foundry.

Acknowledgment.

VII. STATISTICS.

71. The following work was done in this Branch:—

- Work done.
- (1). The Statistical Abstract of the State for the year 1920-21 was published and the same for the year 1921-22 was compiled and sent to the Press.
 - (2). An Industrial Survey of Amreli Town was completed and the report was sent to the Press.
 - (3). The Rail-borne Trade Statistics received from the various Railway Companies were compiled and kept in office for reference.
 - (4). A Standard Taluka Register was prepared and submitted to Government. The proposal of the Department was sanctioned by Government. The tables are printed and have been already sent to the Mahals.

72. Government sanctioned in the previous year the Department's proposal to start the Economic Inquiries. Savings Banks in two Talukas. The rules relating to them were prepared by the Accountant General and sent to this Department for submitting them to the Nyaya Mantri for approval. They have been approved by the Nyaya Mantri and sent to the Account Department for necessary action. The Committee consisting of the Accountant General, the Director of Commerce and Industry and Prof. L. S.

Vaidyanathan considered the Life Insurance Scheme and prepared rules and regulations, premium tables etc. The whole question was submitted to Government for orders and was under the consideration of the Government.

73. CONCLUSION :—The Office staff has worked hard and loyally. The usefulness of the ^{Good work of the staff.} work of the Department is increasing day by day and hence Government have been requested to make the temporary staff permanent. Mr. K. R. Dotivala as usual worked hard and intelligently, so also Messrs. Adalja and P. M. Vin, the Head Clerk. The Director most respectfully thanks H. E. Sir Manubhai and H. E. the Amatya Mr. C. N. Seddon, for the unfailing support and useful suggestions given by them from time to time in facilitating the work of this Department.

Baroda,
Date 18th October 1923.
K. R. D.

S. M. PAGAR.
Director of Commerce
and Industry.

Appendix. I.

NOTES ON NATURAL GAS IN BARODA CITY.

1. Baroda City lies on a large tract of alluvium and none but recent rocks are to be found in the neighbourhood. In the hopes of increasing the supply of water in Baroda City, four wells in the City, borings were made in the bottom of these and in three cases these pierced gas bearing strata from which considerable quantities of gas were emitted.

2. The bores which yield gas are situated one in the compound of the Dewan Saheb's bungalow and the other in the park of the Laxmi Villas Palace.

3. The well in the Dewan Saheb's bungalow compound, is brick lined and cylindrical in shape. Its diameter is about 10 ft. and its present depth 47 ft. 6 ins. of which 10 ft. is occupied by water. A boring has been put down through its centre to a depth of 98 ft. that is to say, to a total depth of 145 ft. 6 ins. This depth was reached on the 28th of September 1921.

4. To estimate the open flow volume of the gas, an orifice meter, prepared locally, from the description given on pages 11 and 12 of the Bulletin No. 151 of the Bureau of Mines, U. S. A. was used, and the table on page 19 of the Technical Paper 87 of the Bureau of Mines U. S. A. was consulted in ascertaining the rate of the flow of the gas. The rate of the flow of gas per 24 hours was 67,959 cu. ft. on 26th. October 1921 and 84,949 cu. ft. on 13th. December 1921. There is no appreciable differ-

ence in the flow of the gas since the last reading was taken.

5. The close pressure of the gas in the bore is of great importance since it expresses the driving force behind the gas and on it depends the length of pipe along which the gas will travel unaided. This was observed by closing the head of the bore hole, fixing a steam gauge to it and reading the pressure when the recording needle was steady. It was 26 lbs. per sq. in. But this figure is rather low as leakages were going on at the time. The close pressure was observed several times. No change was however noticed.

6. An analysis of samples of the gas from the well made by Dr. Christie in the laboratory of the Geological Survey of India is given below:—

Composition of the Gas.

“ Methane 94.1 per cent.

Oxygen 0.65 „ „

Nitrogen 5.15 „ „

The gas contains no carbon dioxide, no heavy hydrocarbons absorbable with fuming sulphuric acid and no carbon monoxide. No hydrogen was found by fractional combustion with copper oxide. The residue after combustion with oxygen has been reported as nitrogen; the absence of helium has not been shown.”

7. Experiments have been made to find out the uses to which this natural gas can be put. It has been found that the gas is quite suitable for lighting, domestic heating and for raising steam in boilers for power purposes. In absence of a proper engine it has not been tried for generating power in an internal combustion engine. But

from the composition of the Gas one can see that it can be so used also.

8. The gas seepages in the Palace wells occurred under very similar circumstances to that described in the Dewan Saheb's compound well. Two bore holes were put down in the bottom of a well 82 feet deep. One of these bores pierced 79 ft. below the well bottom and the other 53 ft. From both of these gas issues but in very much smaller volume than at the Dewan Saheb's well. A bore hole was also put down in another well and reached a total depth of 145 feet from the surface level when gas was noticed coming out. This gas is coming out with a gauge pressure of more than 22 lbs. per sq. in. As this bore was not cased upto its entire depth, it has been filled up by the clay falling in from its sides and the gas has stopped coming out. In another well in the palace compound boring was made to a depth of 138 feet from the surface. This has yielded no gas. The distance between the wells in the L. V. Palace and that in the compound of Dewan Saheb's Bungalow is roughly one mile and a half (7,350 feet).

9. All the above bores were drilled with percussion drills, and with the object of increasing the flow of water. Hence cores or samples of sludges were not preserved. Under the circumstances, it was not possible to know the cause of the occurrence of the gas. With the object of knowing the nature of the underground strata and thereby the probable source of the gas, a bore hole at a place between the L. V. Palace and the Dewan Saheb's Bungalow was made with a rotary drill. This bore has reached 450 feet below surface level. Gas was first noticed at a depth of 245 feet from the surface. The pressure and the flow were not observed. The gas disappeared when the bore was cased. Gas again showed itself

When the bore pierced 305 feet from the surface. This disappeared after 36 hours, though the portion of the bore was not lined.

10. Samples of the cores of this bore were sent to the Director of Geological Survey of India for identification and opinion. The result of the examination of the cores by him is given at the end of these notes. The Director is of opinion that there is a possibility of striking coal or gas and has therefore suggested continuance of the boring until it strikes trap.

Opinion of the Director of Geological Survey; possibility of striking coal. .

India for identification and opinion. The result of the examination of the cores by him is given at the end of these notes. The Director is of opi-

(Sd). K. R. DOTIVALA.
 Assjt. Director of Commerce
 and Industry.

Result of the examination of the cores of the bore
 "No. 5, Calyx Drill Bore" by the Director of
 Geological Survey, India.

Bore No.	Depth.	Nature of Strata.
1	2	3
1	1' to 30'	Brown Soil.
2	31' to 41'	Fine grained micaceous & siliceous sand.
3	42' to 54'	Brown sandy clay.
4	55' to 60'	Brown clay.
5	61' to 82'	Calcareous pebbly sand.
6	83' to 87'	Fine grained, slightly calcareous sand.
7	88' to 111'	Blue slightly calcareous clay.
8	112, to 146'	Blue and brown clay.
9	147' to 152'	Yellow brown impure gravelly looking lime stone.
10	153' to 166'	Brown clay.
11	167'	Coarse fragmental sandy and clayey rock.
12	168' to 170'	Hard calcareous sand-stone with well-rounded lamonite & quartz grains.
13	171' to 192'	Brown clay with calcareous fragments.
14	193' to 196'	Greenish-grey quartz sand.

15	197' to 207'	Brown clay fragments with some of calcite and a few of quartz.
16	208' to 233'	Sand with $\frac{1}{2}$ " fragments of dark green clay and some of calcite.
17	234'	Coarse grained sandy rock with minute specks of iron pyrites.
18	235' to 244'	Brown clay with 1" quartz pebbles.
19	245' to 247'	Green siliceous sand.
20	248' to 257'-6"	Clayey conglomerate.
21	257'-7" to 299'	Greenish sandy clay.
22	300' to 301'	Pale grey horizontally bedded calcareous sand-stone with a little iron pyrites & some blackish mineral.
23	302' to 307'	Blue clayey gravel which turns brownish on exposure.
24	308' to 327'	Dark clayey rock with fragments of chalcedony, quartz & ochre.
25	328' to 342'	Brown clay.
26	343' to 362'	Dark clayey rock full of quartz and chalcedony fragments.
27	363' to 402'-6"	Pale olive-green clay.
28	402'-7" to 406'	Fine grained angular sand compound of quartz and some black material probably carbonaceous.
29	407' to 441'	Similar to 28 but coarser and containing small quartz pebble and pieces of lignitic material.
30	442' to 448'	Blue clay with pieces of quartz, chalcedony, lignitic material & pyrite.

Appendix II.

Baroda, 2nd July 1923.

From,

S. R. Gupte,
Fishery Assistant,
Baroda.

To

The Director of Commerce & Industry,
Baroda State,
Baroda.

Sir,

I beg to submit the report of the work done in Okra-mandal in connection with W. P. Oyster Culture and recommendations thereon.

In the beginning I had various difficulties to contend with. It is now two years since the W. P. Oyster lease has been discontinued with the result that the fishers have lost sight of the populated beds of Mulvale. We had, therefore, to locate the thick beds whence to transport oysters to new farms and this occupied some time before the real work could be done. There was also the month of Ramzan when no Nakwas (नाकवास, mostly Mahomedans) would come to do our work. Then followed Purushottam month with streams of pilgrims providing handsome wages to the boatmen. Thus the Matchwas and sailors could not be engaged at a cheaper rate than otherwise would have been the case and this combined with thorough weather rendered the matters vexacious and troublesome. And although the due economy was observed the work done did not come to the expectation.

INSPECTION OF THE OLD FARMS:—Before the transplanting operations were started the old experimental farms were inspected and were found to have been depleted by over-fishing done by the old Izardar. The dead shells after the pearls being collected therefrom are seen thrown along the Balapur, Gopi and Kiu coasts. From the local inquiry it is evident that Gopi, Kiu and Balapur beds were fished for one and three months respectively. On the places formerly teeming with thousands of oysters, I am sorry to say, hardly a couple were found. The density which was about 3 oysters per sq. yard was reduced to less than 1 oyster per 50 sq. yard. Of course, the oysters in deeper water were not so thoroughly fished as those on the higher level with the result that a small portion of the lot has escaped the ravages of overfishing. A few old live and full-grown oysters were seen but the spat has not observed owing to the season being far advanced.

NEW CULTURE:—The oysters formerly relaid were within an easy reach and could be fished any time at low tide. They were put within a favourable range so as to eliminate employment of big Matchwas and could be picked up even by untrained labourers who would dare to work in mud. The work was much simplified that even the boys and the girls could work with ease and profit. But the very same advantages proved to be the cause of depletion owing to the ease with which the fishing could be done. To avoid this the oysters have been now relaid in deeper water, so as not to come within the sight of either strollers or fishers fishing for fish in Balapur Bay Gopi and Kiu. With a little watch on the part of local authorities, these new farms are now quite immune from the grasp of those intending to tread on the beds to pick up the oysters for pearls. They are now laid verging on the low tide mark of the spring tide so as to be in water during the ordinary tides. Only at the greatest ebb they are exposed but for a short time—an hour or so. The difference between the rise and fall is about 2 fms. which shows that ordinarily they are out of the reach of men.

The Balapur farm lies about 3 furlongs east of Visambharo Tapu with an area of 2 furlong. The Kiu farm lies south of the main current from Kiu point westward and is between Beyt Island and the main land and covers an area of 3 furlongs x 2 furlongs. Hamusar farm is just opposite to Hamusar village midway between Kiu hills and Padli with an area of 2 furlongs x 1 furlong.

The following table shows the number of oysters-reloid in three farms :—

Name of farm.	No. reloid.	Age.
Balapur.	35,000	4 to 9 months.
Kiu.	2,25,000	"
Hamusar.	50,000	"
Total.	3,10,000	

These farms are to be extended with a view ultimately to form a united whole from Kiu point right up to Boramuru near Aramra village by filling the intervening spaces during the subsequent years. After this the places between Kiu and Poshitra may be undertaken for culture. The total area of these places including that in Balapur Bay is as extensive as that of Mulvale coast. And if the intensive cultivation of them is undertaken the value of these artificial beds would in course of time be as great as those natural beds of Mulvale and Poshitra villages.

CULTURE ON EXTENSIVE SCALE :—I should like to bring to the notice of the Government that the relaying on a small scale has a little value. It should be undertaken on an extensive scale. I propose that the oysters should be

transplanted at a rate of 3 millions per year continuously for a period of three years. Thereafter even if no relaying is done the oyster population would increase of their own accord in geometrical progression. But if the oysters are transplanted on a small scale like the one at present the result would not be appreciable and would be delayed indefinitely. As for the expenses Rs. 3,000 per year would be sufficient if the work be started at a proper time.

I should also like to note in this connection that I had to work single-handed this year with none to help me. Various operations are to be performed in W. P. Oyster-culture simultaneously at different places several miles apart. To check them properly single-handed therefore becomes difficult almost impossible. I, therefore, request that if the Government are pleased to undertake the culture in future, I may be given one clerk from the Commerce Department to help me in my work but if this is not possible the Government should instruct the Revenue Department to spare Devji Karsan-a Talati in Okha, trained by me in Oyster culture when he was my clerk, to serve under me during my stay in Okha andal for fishery work.

RECOMMENDATIONS :—I advise the Director of Commerce to continue the culture on an extensive scale for a continuous period of next three years. For this purpose, a sum of Rs. 3,000 exclusive of travelling and Bhatha allowances should be set apart every year and if the proposal is sanctioned by the Government early operations should be undertaken so that the work may be finished before the south west monsoon has fairly advanced.

I beg to remain,

Sir,

Your most obedient servant,

Sd. S. R. GUPTE.

Fishery Assistant.

Appendix

Comparative Statement of Private Mills,

Serial No.	Description.	Number on Register in 1921-22.		Those started in 1922-23.	
		Facto-ries.	Boilers.	Facto-ries.	Boilers.
1	2	3	4	5	6
1	Cotton Spinning and Weaving Mills	10	17	2	9
2	Woollen Mill	1	1	0	3
3	Dyeing Factories	6	11	0	0
4	Sugar Factory	1	5	0	0
5	Rice Mills	4	4	1	1
6	Ginning Factories	127	130	0	5
7	Cotton Presses	25	25	2	2
8	Water Pumps	19	20	2	2
9	Oil Mills	7	7	1	1
10	Steam Launches	3	3	1	1
11	Stone Quarry	1	1	0	0
12	Motor Mills... ..	3	3	0	0
13	Tata Technical Institute ...	1	2	0	0
14	Steam Lorries	2	2	0	0
15	Chemical Works	2	3	0	0

III.

Factories, etc. worked by Steam Power.

Those discontinued in 1922-23.		Total existing in 1922-23.		Total numbers of Boilers in 1922-23.			Remarks.
Factories.	Boilers.	Factories.	Boilers.	Work-ing.	Not Work-ing.	Total.	
7	8	9	10	11	12	13	
..	..	12	26	26	...	26	
..	..	1	4	4	...	4	
..	..	6	10	8	2	10	
..	..	1	5	2	3	5	
..	..	5	5	1	4	5	
20	20	107	115	91	24	115	
..	..	27	27	25	2	27	
9	9	12	13	10	3	13	
4	4	4	4	2	2	4	
1	1	3	3	2	1	3	
..	..	1	1	...	1	1	
..	..	3	3	...	3	3	
..	1	1	1	1	...	1	
..	..	2	2	...	2	2	
..	..	2	3	3	...	3	

APPENDIX.

Serial No.	Description	Numbers on Register in 1921-22.		Those started in 1922-23	
		Facto-ries.	Boilers.	Facto-ries.	Boilers.
1	2	3	4	5	6
16	Hind Candle Works ...	1	3	...	...
17	Ice Factory... ..	1	2	...	...
18	Slate Pen Factory... ..	1	1	...	...
19	Iron Works... ..	1	1	...	...
20	Flour Mills... ..	1	1	...	...
21	Tile and Pottery Works... ..	2	2	...	...
22	Electrical Works	1	2	...	...
23	Cement Factory	1	4	...	...
24	Bone Mill ... ..	...	...	1	1
25	Bolts and Nuts Factory ... ..	...	...	1	1
	Total...	221	249	11	26

III.—Concluded.

Those discontinued in 1922-23.		Total existing in 1922-23.		Total number of Boilers in 1922-23.			Remarks.
Facto-ries.	Boilers.	Facto-ries.	Boilers.	Work-ing.	Not Work-ing.	Total.	
7	8	9	10	11	12	13	
..	...	1	3	2	1	3	
..	...	1	2	2	..	2	
..	...	1	1	1	..	1	
..	...	1	1	..	1	1	
..	...	1	1	..	1	1	
..	...	2	2	2	..	2	
..	...	1	2	2	..	2	
..	...	1	4	4	..	4	
..	...	1	1	1	..	1	
..	...	1	1	1	..	1	
34	35	198	240	190	50	240	

Appendix. IV.

Statement of Average Wages in Baroda City. 1922-23.

No.	Name.	Average in 1921-22	Average in 1922-23.	Remarks.
1	2	3	4	5
	MONTHLY.			
1	Manager ... ..	...	725- 0-0	
2	Weaving Master ...	750- 0-0	567- 0-0	
3	Spinning Master ...	662- 0-0	531- 0-0	
4	Engineer	348- 0-0	299- 0-0	
5	Foreman	75- 0-0	90- 0-0	
6	Fitter	65- 0-0	60- 0-0	
7	Turner	55- 0-0	51- 0-0	
8	Blacksmith	53- 0-0	52- 0-0	
9	Carpenter	57- 0-0	61- 0-0	
10	Mason	52- 0-0	54- 0-0	
11	Fireman	37- 0-0	35- 0-0	
12	Spinner	21- 0-0	23- 0-0	
13	Weaver	42- 0-0	46- 0-0	
14	Oilman	23- 0-0	23- 0-0	
15	Peon	17- 0-0	16- 0-0	
	DAILY.			
1	Man	0-13-0	0-11-6	
2	Woman	0-10-0	0- 9-3	
3	Child	0- 8-0	0- 6-9	

APPENDIX

A Statement of Electric Supply in the Baroda State,

No.	Name of Scheme	Name of town or District.	Source of Power.	System of generation and distribution.	Distance of transmissionline.
1	2	3	4	5	6
1	Gaekwar's Baroda State Railways Electric works.	Baroda.	Crude Oil.	A. C. system of Generation and distribution.	Within a radius of five miles.
2	The Sidhpur Electric Industrial Company, Ltd.	Sidhpur (Kadi Division.)	Oil Engines.	Direct current & overhead line 3 wire system.	About a mile.

V.

for the year ending 31st. July 1923.

Capacity of plant installed in Killowatts.	Total load connected and nature of same in Killowatts.	Maximum load recorded at Generating Station, Killowatts.	No. of Consumers.	Units sold per annum.	Rates charged.	Remarks.
7	8	9	10	11	12	13
1010 K. V. A.	1,615 K. W. (1) 416 K. W. lighting consumers' premises. (2) 110 K. W. fans. (3) 1,071 K. W. motors, transformers, etc. (4) 18 K. W. street lights.	380 K. W.	543	68,16,973.	0-4-0 for lighting, 0-2-0 for power.	
175 K. W.	160 K. W. 40 K. W. to power. 120 K. W. to light, fans, etc.	47 K. W.	277	65,613	As 6/per unit. As 3/per unit for power.	

APPENDIX

List of Joint Stock Companies

Serial No.	No. on the Register	Date of Registration	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
			I. BANKING, LOAN AND INSURANCE.	
			(a) Banking and Loan.	
			(1) Banking.	
1	20	20- 7-08	The Bank of Baroda Ltd.	Banking and money lending.
	16 B			
2	36	6- 1-17	The Pratapsinh Commercial Banking Company, Ltd.	Do.
	26 B			
			(b) Insurance.	
			(2) Others.	
3	113	3- 4-22	The Indian Marriage Society Company, Ltd.	Marriage Insurance.
	10 N.			

VII --(A).

on the Register on 31st July 1923

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
C. E. Randle Esq.	Baroda.	6000000	6000000	2998630	
Maganlal Sakhidas Patel, Esq.	Baroda.	1000000	518100	35220	Under liquida- tion.
	Total (a)	7000000	6518100	3033850	
Messrs. B. V. Salunke De- sai and Co.	Navsari.	25000	14200	710	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
4	120	30-11-22	The Bharat Marriage and Thread Beneficial Company, Ltd.	Marriages and Threads Insurance.
	12 N			
5	121	21- 1-23	The General Ceremony Beneficial and Life Insurance Company, Ltd.	Marriages & Life Insurance.
	13 N			
			II. TRANSIT AND TRANSPORT.	
			(c) Motor traction, dealing and manufacturing.	
6	82	10- 9-20	The Gujarat Transport Company Ltd.	Carrying passengers and luggage by running motor cars.
	32 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Desai Naik and Co.	Navsari.	50,000	...	...
Messrs. Mehta Patel and Co.	Do.	50,000	...	...
	Total (b).	1,25,000	14,200	710	
	Total (I).	71,25,000	65,32,300	30,34,560	
Messrs. Vadilal Nathabhai Shah and Co.	Dehegam.	1,25,000	53,940	11,330	
	Total (c).	1,25,000	53,940	11,330	
	Total (II).	1,25,002	53,940	11,330	

7 C. A. R.

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
7	60	19-1-20	III. TRADING AND MANUFACTURING.	General Business.
	18 K		(a) Mutual Trading Associations Messrs. Chakuram Lallooram and Company.	
8	67	22-3-20	(b) Printing, Publishing and Stationery.	Printing and Publishing.
	39 B		The Laxmi Electric printing Press Company, Ltd.	
9	115	21-7-22	The Hind Printing and Publishing Company, Ltd.	Do.
	11 N			
10	118	17- 8-22	The Bharat Swadeshi Pen and Paper Manufacturing Company, Ltd.	Manufacturing slates pen and paper.
	61 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Ramshankar Chakulal and Co.	Dehegam.	25,000	...	...
	Total (a).	25,000	...	...
Chhotalal Lalbhai Pa- tel, Esq.	Baroda.	1,00,000	78,600	78,600	
Messrs. Desai Raval and Co.	Navsari.	25,000	...	...
Messrs. Chha- ganlal Gok- aldas Gan- dhi and Co.	Petlad.	2,50,000	...	...
	Total (b)	3,75,000	78,600	78,600	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
			(c) CHEMICAL ALLIED TRADES.	
11	21	11- 9-08	The Naosari Chemical Works Company, Ltd.	Preparing chemicals.
	I N			
12	28	24- 6-13	The Alembic Chemical Works, Company Ltd.	Do.
	20 B			
13	47	10-10-19	The Gaekwar Oil and Chemical Company, Ltd.	Manufacturing chemicals and extracting oil.
	30 B			
14	84	23- 9-20	The Premier Ink and Chemical Company, Ltd.	Preparing inks and chemicals.
	48 B			
15	105	23- 4-21	The Modern Chemical Company, Ltd	Preparing acids and chemicals.
	55 B			
16	123	20- 3-23	Shree Ghanshyam Pharmacy, Ltd.	Preparing medicines.
	63 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid up.	
6	7	8	9	10	11
M. K. Dixit, Esq.	Naosari.	2,00,000	43,800	25,326	Under Voluntary liquidation.
Messrs. Kotibhasker Amin and Co.	Baroda.	5,00,000	4,65,300	4,65,300	
Messrs. N. Purshottam and Co.	Do.	50,00,000	44,21,200	11,02,825	
Messrs. Desai Patel and Co.	Do.	35,000	21,000	5,572	
Messrs. Kao and Co.	Baroda.	8,00,000	1,53,600	74,810	
Messrs. Ramnarayan Vaidya and Co.	Do.	5,00,000	...	...
Total(c).		70,35,000	51,04,900	16,73,833	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
17	116	27- 7-22	(e) ENGINEERING. The Tata Construction Company, Ltd.	Construction of all kinds
	59 B			
18	117	27- 7-22	The Bombay Hume Pipe Company, Ltd.	Manufacturing cement pipes, etc.
	60 B			
19	22	30- 9-08	(f) TANNERIES AND LEATHER TRADE. The Swadeshi Modern Leather Manufacturing Company, Ltd.	Manufacturing leather.
	17 B			
20	58	24- 1-20	The National Tannery Company, Ltd.	Refining leather.
	16 K			

VI (A)—Continued

Name of the Manager or Agent.	Situation of the Office.	Capital			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Tata Sons, Ltd.	Bombay	2,00,00,000	...	...
Do	Do.	20,00,000	...	...
	Total (e)	2,20,00,000	...	...
G. R. Nimbalkar Esq.	Baroda.	1,00,000	1,00,000	95,375	Under liquida- tion.
Messrs. Ganesh Desai and Co.	Kalol	2,60,000	1,92,645	11,118	Under Judi- cial liqui- dation
	Total (f)	3,60,000	2,92,645	1,04,493	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
21	73	6- 8-20	(h) Public Service Companies.	Supplying electricity.
	27 K		The Sidhpur Electric Industrial Company, Ltd.	
22	110	17-11-21	The Naosari Electric Supply Company, Ltd.	Do.
	9 N			
23	33	8- 5-15	(i) Clay Stones, Cement. etc.	Preparing bricks and tiles.
	25 B				The Baroda Tiles and Bricks Pottery Company, Ltd.
24	38	24- 9-17	The Tiles and Pottery Works Company, Ltd.	Preparing tiles and potteries.
	28 B			
25	63	13- 3-20	The China Clay Works of India, Ltd.	Manufacturing articles of clay.
	21 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Ahmedmiya Prahadji and Co.	Sidhpur	7,00,000	5,98,100	5,77,360	
Messrs. Ardeshir Modi and Co.	Naosari	5,00,000	...	...
	Total (h)	12,00,000	5,98,100	5,77,360	
Hiralal Man- sukhbhai Esq.	Baroda	60,000	11,120	2,836	
Messrs. P. B. Ganpule and Co.	Do	2,00,000	1,29,500	1,29,050	
Messrs. Vadi- lal Popatlal and Co.	Vijapur	5,00,000	5,00,000	1,50,000	Under Judicial liquida- tion.

S C A R.

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
26	91	4-11-20	The Fern Pottery and Colour Works, Ltd.	Manufacturing articles of clay.
	35 K			
27	102	21-3-21	The Dwarka Cement Company.	Manufacturing cement.
	2 A			
28	24	29-10-10	(j) GLASS. The Baroda Glass Works Company. Ltd.	Manufacturing glass articles.
	18 B			
29	52	18-10-19	The Gujarat Glass Works Company Ltd.	Do.
	33 B			
30	79	22-7-20	(l) AGENCIES. Messrs. Narharilal Kalidas Kevaldas and Company Ltd.	Agency.
	30 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Fern Dwivedi and Co.	Dehegam	10,00,000	79,200	29,570	
Messrs Purshottamdas Vithaldas and Co.	Bombay. Branch office Dwarka.	50,00,000	50,00,000	49,58,900	
	Total (i)	67,60,000	57,19,820	52,70,356	
Messrs. Dandavate and Co.	Baroda.	1,00,000	27,050	26,550	Under Judicial liquidation.
Messrs. Amin Bros. and Co.	Do.	5,00,000	4,34,900	72,040	
	Total (j)	6,00,000	4,61,950	98,590	
Baldevdas Kalidas Esq.	Kadi.	6,400	6,400	640	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
31	P 1	2-12-22	Messrs. Mehta Patel, and Company Ltd.	Agency.
	1 K			
32	89	25-10-20	The Hind Oil Products, Ltd.	Manufacturing candles, glycerine, etc.
	5 N			
33	8	20-10-06	The Indian Metal Sheets Factory, Ltd.	Manufacturing articles of metal.
	3 B			
34	9	15-11-06	The National Metal Works Company, Ltd.	Do.
	7 B			
35	16	23- 1-08	The Baroda Union Dyeing, Bleaching and Calico Printing Factory, Ltd.	Dyeing and bleaching.
	13 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Mehta and Patel Co.	Kalol.	2,500	2,500	...	
	Total (l)	8,900	8,900	640	
Messrs. Mo- homedally Sardesai and Co.	Billimora.	50,00,000	...	...
	Total (o).	50,00,000	...	...
Chhotalal Hargovind- das Esq.	Baroda.	1,00,000	6,900	6,900	
Balkrishna Balaji Esq.	Do.	35,000	30,500	29,400	
Messrs. Hira- bhai Trikam- lal and Co.	Do.	1,55,000	1,20,200	1,11,800	Under Judi- cial li- quida- tion.

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
36	25	1- 4-11	The Baroda Brush Factory, Ltd.	Preparing brushes etc.
	19 B			
37	44	15- 3-20	Shri Nandol Shikshana Sahitya Karyalaya Company Ltd.	Manufacturing Kinder Garten articles.
	10 K			
38	59	8- 5-20	The Indian Sewing Thread and Ribbon Manufacturing Company, Ltd.	Preparing thread and ribbons.
	17 K			
39	68	1- 4-20	The Cotton and Silk Weaving Works, Ltd.	Weaving Cotton and silk cloth on hand-looms.
	24 K			
40	71	18- 5-20	The Vishnu Machinery Manufacturing and Iron Foundry, Ltd.	Manufacturing machinery of brass, iron, etc.
	41 B			
41	81	30- 8-20	The Baroda Stove and Metal Works Company, Ltd.	Manufacturing stoves and articles of metal, etc
	46 B			
42	87	16-10-20	The Swadeshi Udyog Bhandar. Ltd.	Weaving by hand looms.
	49 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. B. P. Master and Co.	Baroda	50,000	9,080	4,540	
Kashibhai Chhagan- bhai Patel Esq.	Nandol- (Dehgam.)	1,00,000	74,075	36,825	
Messrs Rasik- chandra Vadilal and Co.	Kalol	2,50,000	1,31,850	32,740	
Messrs. Ni- malaldas and Co.	Dehgam.	2,50,000	1,37,980	60,779	Under Judicial li- quida- tion.
Messrs Bho- gihal Gor- dhandas and Co.	Baroda.	5,00,000	79,050	29,055	Under volun- tary li- quida- tion.
Messrs Ram- narayan Chunilal and Co.	Do.	2,50,000	30,250	8,720	Do.
Messrs Chho- talal Narot- tandas and Co.	Padra.	1,00,000	17,460	17,075	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
43	90	27-10-20	The Gujarat Vanat Mandal, Ltd.	Weaving by hand-loom.
	50 B			
44	92	6-11-20	The Sidhpur Swadeshi Bhandar Company, Ltd.	Do
	36 K			
45	103	31- 3-21	The Indian Industrial Development Manufacturing Company, Ltd.	Preparing hemp-shoes etc.
	54 B			
46	104	31- 1-21	Shri Bharat Udyogic Mandli, Ltd.	Preparing chocolates, etc.
	41 K			
47	111	20-12-21	Shri Krishna National Weaving and Manufacturing Company Ltd.	Weaving by hand-loom.
	42 K			
48	112	14- 2-22	The Pattan Hand-Looms Weaving Company, Ltd.	Do
	43 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
M e s s r s. Chaugakar and Co.	Changa (Petlad)	50,000	6,230	2,470	
Messrs. Gopallal Desai and Co.	Sidhpur	1,00,000	10,400	4,455	
Mr. Magan- lal Ishwar- lal.	Sojitra.	2,50,000	11,000	2,650	
M e s s r s. Pandit Tri- vedi and Co.	Dehegam	1,00,000	10,775	3,775	
Messrs. Pandit Vyas and Co.	Do	5,00,000	...	...
Messrs Tr:- bhovandas Dashrathlal and Co.	Pattan	1,00,000	30,250	9,618	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
49	122	20-2-23	Shri Ramkrishna Knitting and weaving Company. Ltd.	Knitting and weaving.
	62 B			
IV. MILLS AND PRESSES.				
(a). COTTON MILLS.				
50	1	14-2-05	The Baroda Spinning and weaving Company Ltd.	Spinning and weaving.
	1 B			
51	2	7-9-05	Shri Sayaji Mills Company, Ltd.	Do.
	2 B			
52	7	15-9-06	The Maharaja Mills Company, Ltd.	Do.
	5 B			
53	14	2-9-07	Shri Sayaji Jubilee Cotton and Jute Mills Company, Ltd.	Do.
	3 K			

VI (A)—Continued

Name of the Manager or Agent.	Situation of the Office.	Capital			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. K. J. Javeri and Co.	Baroda.	50,000	...	...
	Total (s).	29,40,000	7,06,000	3,60,402	
	Total III.	4,63,03,900	12,97,09,158	1,64,27,4	
Messrs. Zaverchand Laxmichand & Co.	Baroda.	6,00,000	5,50,800	5,50,700	
Messrs. Samal Bee- har and Co.	Do.	8,25,000	6,09,600	6,09,600	
Messrs. Hargovind- das Dwarka- das and Co.	Do.	6,00,000	4,97,000	4,95,200	
Messrs. Pra- bladji Seva- ram and Co.	Sidhapur	6,70,000	5,21,100	5,21,100	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
54	35	18-6-16	The Ahmedabad Advance Mills, Ltd.	Spinning and weaving.
	3 N			
55	40	17-10-19	The Kalol Kapadia Spinning and weaving Mills Company Ltd.	Do.
	6 K			
56	41	20-1-20	The Pattan Spinning and weaving Mills Company, Ltd.	Do.
	7 K			
57	42	18-10-19	The Kalol spinning and weaving Mills Company, Ltd.	Do.
	8 K			
58	43	12-11-19	The Kalol Cotton Mill Company, Ltd.	Do.
	9 K			
59	50	8-4-20	The Dadabhai Navroji Mills Company, Ltd.	Do.
	13 K			
60	53	18-10-19	The Raj Ratna Naranbhai Mills Company, Ltd.	Do.
	34 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid up.	
6	7	8	9	10	11
Sorabji Na- roji Tam- boli Esq.	Naosari.	10,00,000	10,00,000	10,00,000	
Messrs. C. Nanalal Maganlal and Co.	Kalol.	9,25,000	9,25,000	2,85,939	
Messrs. Bhagubhai Shambhu- nath and Co.	Pattan.	10,00,000	2,62,400	32,220	Under volun- tary liqui- dation
Messrs. Pra- tapsinh Mo- holalbai and Co.	Kalol.	12,00,000	12,00,000	3,65,925	
Messrs. Mohanal Amratlal Mehta and Brothers.	Do.	12,00,000	11,69,300	10,75,960	
Messrs. Pan- dit Parekh and Co.	Dehegam.	12,00,000	2,52,000	46,820	
Messrs. Ra- manlal Kes- havlal and Co.	Petlad	20,00,000	15,00,000	14,16,125	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
61	56	9-12-19	The Gackwar Industrials, Ltd.	Spinning, weaving, dyeing, ginning &c.
	36 B			
62	57	24-11-19	The Petlad Bulakhidas Mills Company Ltd.	Spinning and weaving.
	37 B			
63	75	14-6-20	The New Baroda Mills Company, Ltd.	Do.
	43 B			
64	78	22-7-20	The Kadi Laxmi Cotton Mills, Company Ltd.	Do.
	29 K			
65	88	25-10-20	The Sidhpur Mills, Ltd.	Do.
	34 K			
66	99	18-1-21	The Kalol Swadeshi Mills Company, Ltd.	Do.
	40 K			
67	100	21-2-21	The Darbhanga Spinning and weaving Mills Company, Ltd.	Do.
	6 N			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Tricumdas Gordhandas Khattau and Co.	Baroda	1,00,00,000	50,00,000	32,49,645	
Messrs. Motilal Kashandas and Co.	Petlad.	15,00,000	10,00,000	9,23,900	
Messrs. Zaverchand Laxmichand Brothers and Co.	Baroda	25,00,000	12,50,000	9,01,400	
Messrs. Narharilal Kalidas & Co.	Kadi.	15,00,000	12,00,000	4,74,610	
Messrs. Maganlal Parbhudas and Co.	Sidhpur.	25,00,000	5,00,000	2,49,767	
Messrs. Shah Maneklal Premchandbhai and Co.	Kalol.	5,00,000	1,85,900	1,74,150	
The New Textile Company.	Naosari.	50,00,000	40,00,000	35,52,350	

APPENDIX

Serial No.	No. on the Register	Date of Registration	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
68	124	16-6-23	The Virgin Mills, Ltd.	Spinning and weaving.
	64 B			
69	29	12-8-13	The Bhilpur Ginning and Pressing Company, Ltd.	Ginning and pressing.
	21 B			
70	32	8-12-14	The Karoli Ginning and Pressing Company Ltd.	Do.
	24 B			
71	37	24-9-17	The Mahendra Cotton Gin Press Company, Ltd.	Do.
	27 B			
72	51	18-11-19	The Kadi Industrial Company, Ltd.	Do.
	14 K			
73	76	28-6-20	The Randheja Aryodaya Ginning and Manufacturing Company Ltd.	Do.
	28 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Baptist & Co.	Bombay. Branch Office Baroda.	50,00,000	7,68,700	3,72,830	
	Total (a).	3,97,20,000	22,37,18,000	16,27,82,444	
Messrs. Mul- ji Jetha and Co.	Bhilupur (Dabhoi)	50,000	48,900	48,900	Under volun- tary liqui- dation.
Messrs. Nar- andas Raja- ram and Co.	Dabhoi	1,00,000	75,500	75,500	
Messrs. Hira- lal Sampat- ram and Co.	Baroda	1,50,000	1,31,250	1,31,000	Under volun- tary li- quida- tion.
Messrs. C. M. Samal Bech- ar and Co.	Kadi.	2,50,000	2,00,000	1,95,400	
Messrs. Kes- havlal Mor- ardas Patel and Co.	Raudheja (Kalol)	1,00,000	48,000	46,225	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
74	80	17-8-20	The Kadi New Industrial and Electrical Company, Ltd.	Ginning and pressing.
	45 B			
75	83	11-9-20	Shri Hanuman Vijay Ginning and Pressing Factory, Ltd.	Do.
	47 B			
76	95	30-11-20	The Laxmi Vijay Ginning and Iron Manufacturing Company, Ltd.	Do.
	37 K			
77	101	1-3-21	The Gaico Automatic Ginning and Pressing Company, Ltd.	Do.
	7 N			
78	109	22-10-21	The Brilliant Cotton Ginning and Pressing Factory, Ltd.	Do.
	58 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. M. S. Gandhi and Co.	Baroda.	2,50,000	2,16,400	1,86,805	
Messrs. Na- ndlal Lax- michand and Co.	Baroda.	2,50,000	1,20,000	1,17,840	
Messrs. C. M. Contra- ctor and Co.	Bhandu (Visnagar)	2,00,000	...	...
Messrs. Desai Sons and Co.	Kosamba (Mangrol)	2,00,000	51,400	45,880	
Messrs. Vrajlal Ful- chand and Co.	Baroda.	3,00,000	...	...
	Total (b).	18,50,000	8,91,450	8,47,550	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
79	55	20-12-19	(c) MILLS FOR WOOL SILK AND HEMP.	Spinning and weaving.
	35 B		The Maharani woollen Mills Company, Ltd.	
80	86	13-10-20	(i) SAW AND TIMBER MILL.	Manufacturing sizes of wood by sawing.
	4 N		The Naosari Wood Sawing and Manufacturing Company, Ltd.	
81	23	3-2-20	(j) OIL MILLS	Extracting oil from seeds of all kinds.
	4 K		The Kadi Ginning, Pressing and Oil Mills Company, Ltd.	
82	54	17-1-20		Do.
	15 K		The Asian Oil and Margarine Manufacturing Company, Ltd.	

VI (A)—Continued

Name of the Manager or Agent.	Situation of the Office.	Capital			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Matubhai Kantavala and Co.	Baroda.	15,00,000	11,00,000	10,69,160	
	Total (e).	15,00,000	11,00,000	10,69,160	
Messrs. Tam- boli and Sons.	Naosari.	2,00,000	31,500	31,500	
	Total (i)	2,00,000	31,500	31,500	
Messrs. Narundas Purshottam- das and sons.	Kadi.	1,50,000	1,50,000	1,50,000	
Messrs. Parekh and Co.	Kheralu.	2,50,000	88,080	41,520	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
83	65	28-2-20	The United Oil and Manufacturing Company, Ltd.	Extracting oil from seeds of all kinds.
	38 B			
84	66	1-3-20	The Gopal Oil and Manufacturing Company, Ltd.	Do.
	23 K			
			V. TEA AND OTHER PLANTING COMPANIES.	
			(d) OTHERS.	
85	119	30-10-22	The Gaekwar Dairy Farm and Cotton Plantations, Ltd.	Dairy.
	45 K			
86	125	21-6-23	The Kadi Industrial and Agricultural Company, Ltd.	Agriculture.
	46 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. M. Chhotalal and Co.	Baroda.	10,00,000	2,61,950	54,475	
Messrs. Hira- lal Ghamij- wala and Co.	Debegam.	5,00,000	1,35,750	39,909	
	Total. (j)	19,00,000	6,35,780	2,85,904	
	Total. IV	4,51,70,000	25030530	18512358	
Messrs. Mehta Patel and Co.	Kalol.	10,00,000	...	...
Messrs. B. Sen Ksha- triya and Co.	Kadi.	1,00,000	...	...
	Total. (V)	11,00,000	...	...

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
87	30	3-10-13	X. HOTELS, THEATRES AND ENTERTAINMENTS. Shri Deshi Natak Company, Ltd.	Theatrical performances.
	22 B			
88	77	21-7-20	XI. OTHERS. The National Cattle-breeding and Farming Company, Ltd.	Cattle-breeding.
	*44 B			
89	85	9-10-20	The Mahalaxmi Agricultural and Industrial Company, Ltd.	Agriculture.
	33 K			
90	94	6-11-20	The Kamdhenu Dudhalaya Company, Ltd.	Do. and milk-supplying.
	52 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscri- bed.	Paid-up.	
6	7	8	9	10	11
Messrs. Ghe- labhai Do- ltram and Co.	Baroda.	50,000	15,000	15,000	Under volun- tary li- quida- tion.
	Total. X	50,000	15,000	15,000	
Messrs. Nag- indas and Co.	Baroda.	10,00,000	...	...
Messrs. Trivedi and Co.	Mehesana.	3,00,000	30,425	13,295	
Messrs. Bhikhabhai and Co.	Baroda.	5,00,000	45,000	12,447	

APPENDIX

Serial No.	No. on the Register	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
91	98	6-1-21	The Uttar Gujarat Gopalan Company, Ltd.	Cattle-breeding and farming.
	39 K			
92	114	14-4-22	Shri Babalpur Krishi Company Ltd.	Agriculture.
	44 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Vishnu Vinod Trivedi and Co.	Pattan.	2,50,000	75,200	34,625	
Messrs. Balgovind Harinarayan and Co.	Babalpur. (Dehegam)	2,00,000	...	...
	Total XI.	22,50,000	1,50,625	60,367	
	Grand Total of all Companies	102123900	44753310	29797889	

Appendix

Joint Stock Companies cancelled

Serial No.	Number on the Register.	Date of Registration.	Name of the Company.
1	2	3	4
			II. TRANSIT AND TRANSPORT.
			(b) Railways and Tramways.
1	18	30- 3-08	The Baroda Tramway Company, Ltd.
	15 B		
			(c) Motor Traction Dealing and Manufacturing.
2	74	12- 6-20	The Baroda Motor Transport Company, Ltd.
	42 B		
			Total II...
			III TRADING AND MANUFACTURING.
			(a) Mutual Trading Associations.
3	48	15-10-19	The Indo Foreign Stores Company, Ltd
	21 B		
			(b) Printing, Publishing and Stationery.

VI (B).

during the year 1922-23.

Capital.			Date of going into liquidation.	Date of final dissolution.
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
5,00,000	3,50,000	3,47,000	10- 5-20	23- 7-23
1,00,000	...	...	...	1-11-22 (Struck off the list)
6,00,000	3,50,000	3,47,000		
1,00,000	...	...	...	1-11-22 (Struck off the list.)

APPENDIX

Serial No.	Number on the Register.	Date of registration.	Name of the Company.
1	2	3	4
4	39	15- 6-18	The Laxmi Villas Press Company, Ltd. (s) Others.
	29 B		
5	34	9-10-15	Shri Krishi Yantra Prasarak Company, Ltd.
	5 K		
6	69	10- 5-20	The Baroda Wood and Art Works Company, Ltd.
	40 B		
7	97	28-11-20	The Swadeshi Slate and Pen Manufacturing Company, Ltd. ... Total (s)... Total III...
	53 B		
			IV MILLS AND PRESSES.
			(a) Cotton Mills.
8	72	26- 5-20	The Krishna Mills Company, Ltd...
	26 K		

VI. (B).—Continued.

Capital.			Date of going into liquidation.	Date of final dissolution.
Authorised.	Subscribed.	Paid-up		
5	6	7	8	9
8,414	8,414	8,414	...	11-11-22 (Struck off the list)
10,000	5,300	2,600	15- 5-18	30- 7-23
2,50,000	...	...	...	28- 7-23 (Struck off the list)
1,00,000	...	...	...	Do.
3,60,000	5,300	2,600	.	.
4,68,414	13,714	11,014	.	.
25,00,000	...	...	...	28- 7-23 (Struck off the list)

APPENDIX

Serial No.	Number on the Register	Date of registration.	Name of the Company.
1	2	3	4
9	106	11- 5-21	The Kaisre Hind Dyeing and Waste Mills Company, Ltd. ...
	56 B		
			Total (a)...
			(j) Oil Mills.
10	70	5-10-20	The Kalol Castor Oil and Industrial Works, Ltd.
	25 K		
			Total IV...
			X HOTELS, THEATRES AND ENTERTAINMENTS.
11	108	13- 7-21	Shri Anrat Vijaya Natak Samaj, Ltd.
	57 B		
			Grand Total...

VI (B)-Concluded.

Capital.			Date of going into liquidation	Date of final dis- solution.
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
11,00,000	28-7-23 (Struck off the list.)
36,00,000		
5,00,000	1-11-22 (Struck off the list.)
41,00,000		
1,25,000	Do.
52,83,414	3,63,714	3,58,014		

Appendix

List of Joint Stock Companies, that having ceased to

Serial No.	Number on the Register	Date of registration.	Classification and name of the Company.
1	2	3	4
1	36	6- 1-17	The Pratapsinh Commercial Banking Company, Ltd.
	26 B		
2	21	11- 9-08	The Naosari Chemical Company, Ltd.
	1 N		
3	22	30- 9-08	The Swadeshi Modern Leather Manufacturing Company, Ltd. ...
	17 B		
4	58	24- 1-20	The National Tannery Company, Ltd.
	16K		

VI.--(C).

work, have gone into liquidation upto the end of 31st July 1923,

Capital.			Date of going into liquidation	Date of final dis-solution.
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
10,00,000	5,19,100	35,220	11- 3-20	
2,00,000	43,800	25,326	6- 4-18	
1,00,000	1,00,000	93,375	10- 3-19	
2,60,000	1,92,645	11,118	7- 11-21	

APPENDIX

Serial No.	Number on the Register	Date of re-registration.	Classification and name of the Company.
1	2	3	4
5	63	13- 2-20	(i) Clay, Stones, Cement, &c. The China Clay Works of India, Ltd.
	21 K		
6	24	29-10-10	(j) Glass. The Baroda Glass Works Company, Ltd.
	18 B		
7	16	23- 1-08	(s) Others. The Baroda Union Dyeing, Bleaching and Calico Printing Factory, Ltd.
	13 B		
8	68	1- 4-20	The Cotton and Silk Weaving Works, Ltd.
	24 K		
9	71	18- 5-20	The Vishnu Machinery Manufacturing and Iron Foundry, Ltd.
	41 B		
10	81	30- 8-20	The Baroda Stove and Metal Works Company, Ltd.
	46 B		
			IV. MILLS AND PRESSES.
			(a) Cotton Mills.
11	41	20- 1-20	The Pattan Spinning and Weaving Mills Company, Ltd.
	7 K		

VJ (C)—Continued.

Capital.			Date of going into liquidation	Date of final dis- solution.
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
5,00,000	5,00,000	1,50,000	9- 1-22	
1,00,000	27,050	26,550	21-12-15	
1,55,000	1,20,200	1,11,800	21-12-21	
2,50,000	1,37,980	60,779	25- 4-23	
5,00,000	79,050	29,055	3-12-22	
2,50,000	30,250	8,720	13- 5-23	
10,00,000	2,62,400	32,220	19- 4-22	

APPENDIX

Serial No.	Number on the Register	Date of registration.	Classification and name of the Company.	
1	2	3	4	
12	29	12- 8-13	(b) Cotton Gins and Presses. The Bhilupur Ginning and Pressing Company, Ltd.	
	21 B			
	13	37	24- 9-17	The Mahendra Cotton Gin Press Company, Ltd.
		27 B		
	14	30	3-10-13	X. HOTELS, THEATRES AND ENTERTAINMENTS. Shri Deshi Natak Company, Ltd....
		22 B		Total...

VI (C).—Concluded.

Capital.			Date of going into liquidation	Date of final dissolution
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
50,000	48,900	48,900	25-3-22	
1,50,000	1,31,250	1,31,000	26-12-21	
50,000	15,000	15,000	8-9-16	
45,65,000	22,07,625	7,79,063		

Appendix VI (D)

Abstract Statement of Joint Stock Companies in the
Baroda State with their capital at the end
of 31st July 1923.

Classification of Companies.	No. of Cos.	Capital.		
		Authori- sed.	Sub- scribed.	Paid- up
1	2	3	4	5
I. BANKING, LOAN AND INSURANCE.				
(a) Banking and Loan.				
(1) Banking.	2	70,00,000	65,18,100	30,33,850
(b) Insurance.				
(2) Others.	3	1,25,000	14,200	710
Total-I...	5	71,25,000	65,32,300	30,34,560
II. TRANSIT AND TRANSPORT.				
(c) Motor Traction, Dealing and Manu- facturing.	1	1,25,000	53,940	11,330
III. TRADING AND MANUFACTURING.				
(a) Mutual Trading Associations.	1	25,000	...	...

APPENDIX VI-D—Continued.

Classification of Companies.	No. of Cos.	Capital.		
		Authorised.	Subscribed.	Paid-up.
1	2	3	4	5
(b) Printing, Publishing and Stationery.	3	3,75,000	78,600	78,600
(c) Chemicals and Allied Trades.	6	70,35,000	51,04,900	16,73,833
(e) Engineering.	2	22000000	...	...
(f) Tanneries and Leather Trades.	2	3,60,000	2,92,645	1,04,493
(h) Public Service Companies.	2	12,00,000	5,98,100	5,77,360
(i) Clay, Stones, Cement &c.	5	67,60,000	57,19,820	52,70,356
(j) Glass.	2	6,00,000	4,61,950	98,590
(l) Agencies.	2	8,900	8,900	640
(o) Soap, Candles, &c.	1	50,00,000	...	...
(s) Others.	17	29,40,000	7,06,000	3,60,402
Total III...	43	46303900	12970915	81,64,274
IV. MILLS AND PRESSES.				
(a) Cotton Mills.	19	39720000	21371800	16278244

APPENDIX VI—D—Concluded.

Classification of Companies.	No. of Cos.	Capital.		
		Authorised.	Subscribed.	Paid-up.
1	2	3	4	5
(b) Cotton Gins and Presses.	10	18,50,000	8,91,450	8,47,550
(c) Mills for Wool, Silk and Hemp.	1	15,00,000	11,00,000	10,69,160
(i) Saw and Timber Mills.	1	2,00,000	31,500	31,500
(f) Oil Mills.	4	19,00,000	6,57,550	2,85,904
Total IV...	35	45170000	25030530	18512358
V. TEA AND OTHER PLANTING COMPANIES.				
(d) Others.	2	11,00,000	...	...
X. HOTELS AND THEATRES AND ENTERTAINMENTS.	1	50,000	15,000	15,000
XI. OTHERS.	5	22,50,000	1,50,625	60,367
Grand Total ...	92	102123900	44753310	29797889

Appendix VI.--(E)

Comparative Statement showing the number of documents classified under different heads in the year 1922-23.

No.	Nature of documents.	1921-22.	1922-23
	(a) Baroda State Companies.		
1	Memorandum of Association...	9	8
2	Notices of addresses	17	14
3	Balance Sheets	39	47
4	Annual Returns	37	39
5	Special resolutions	14	15
6	List of Directors and Managers	24	8
7	Returns of Allotments	25	19
8	Mortgages	2	4
9	Copies of Courts orders ... ..	...	5
10	Other deeds	56	55
11	Declaration under Section 110.	21	4
	(b) Foreign Companies.		
12	Balance Sheets	2	2
13	Other deeds ... ..	...	3
	(c) Benevolent Societies Act of Sanivat 1963-Nibandh II.		
14	Memoranda	2	1
15	Returns under the Act	6	9
	Total...	254	233

Appendix VI.--(F)

Comparative Statement showing the amount of receipts.
classified under different heads in the year 1922-23.

No.	Head.	1921-22.	1922-23.
	(a) Baroda State Companies.		
1	New Companies	323-12- 0	413-12- 0
2	Declarations	26- 4- 0	15- 0- 0
3	Resolutions	17- 8- 0	18-12- 0
4	Returns of Allotments	31- 4- 0	23-12- 0
5	Balance Sheets	48-12- 0	46- 4- 0
6	Annual Returns	46- 4- 0	48-12- 0
7	Orders of Courts ... ..	...	6- 4- 0
8	Mortgages	20- 0- 0	40- 0- 0
9	Notices of addresses	28-12- 0	17- 8- 0
10	List of Directors and Managers.	37- 8- 0	10- 0- 0
11	Other deeds	93-12- 0	68-12- 0
12	Auditors fees	500- 0- 0	50- 0- 0
	(b) General.		
13	Copies	157- 4- 0	125- 0- 0
	(c) Foreign Companies.		
14	Balance Sheets	10- 0- 0	10- 0- 0
15	Other deeds ... ..	...	15- 0- 0
	(d) Benevolent Societies.		
16	Memoranda	20- 0- 0	10- 0- 0
	Total...	1,361- 0- 0	918-12- 0

Appendix. VI.--(G).

List of Benevolent Societies at the end of the year 1922-23.

Serial No.	Registered No.	Date of Registration.	Name of Society.	Object of the Society.	Situation of the Registered Office.	Remarks.
1	2	3	4	5	6	
1	1	21- 8-09	Shri Maratha Shikshanottjak Mandal.	For encouraging education among the Maratha students.	Baroda.	
	1 B					
2	2	20-11-09	Shri Navagam Visuagara Brahmin Mandal.	For improving the constitution of the Caste and introducing social reforms.	Nardipur.	
	2 K					
3	3	11- 8-10	Shri Vakal Lenva Patel Mandal.	Do.	Bhaili.	
	2 B					
4	4	18- 2-11	Auditch Sahastra Caste Association of Seventy-six villages of Shri Dandhavya.	Do.	Gojaria.	
	2 K					

APPENDIX VI G —Continued.

Serial No.	Registered No.	Date of Registration.	Name of Society.	Object of the Society.	Situation of the Registered Office.	Remarks.
1	2	3	4	5	6	7
5	5 3 B	13- 3-11	Shri Modh Hit Vardhak Eka- dia Gnati Mandal.	For improving the consti- tution of the caste and in- troducing social reforms.	Baroda.	
6	16 3 K	3- 7-11	Auditch Sahastra Brahmin Ziuni Caste Association of Seventy--six villages of Shri Dandhavya.	Do.	Manekpur.	
7	7 4 B	7-10-11	Shri Niradhar Stri Humnar Uttejak Mandal.	For encouraging industries amongst helpless women.	Baroda.	
8	8 4 K	15- 2-13	Shri Daskroshi Travadi Mevada Brahmin Gnati Mandal.	For improving the consti- tution of the caste and introducing social re- forms.	Esand.	
9	9 5 K	20- 5-14	Krishnuarpan Kanya Apnara Audich--Sahastra Brahmin Gnati Mandal of Dandhavya.	Do.	Kolvada.	

10	10	21- 9-14	Shri Jaleshwar Anath Balkashram.	For helping and educating young boys and girls.	Baroda.
	5 B				
11	11	22- 2-15	Auditch Sahastra Gnati Mandal of Kadi.	For improving the consti- tution of the caste and introducing social re- forms.	Kadi.
	6 K				
12	12	12- 4-15	Shri Sidhpur High School Board Association.	For the efficient manage- ment of Sidhpur High School.	Sidhpur.
	7 K				
13	13	19- 4-16	Shri Kanam Leuva Patel Mandal.	For improving the consti- tution of the caste and introducing social re- forms.	Sarar.
	6 B				
14	14	15- 6-16	The Charotar Education Society.	For encouraging education amongst their caste.	Petlad.
	7 B				
15	15	15- 9-17	The Property Board of the Methodist Episcopal Church in the Baroda State.	For procuring land and estate for the Christian parsonages, mission pre- mises, Medical houses, etc.	Baroda Camp.
	8 B				

APPENDIX VI G.--Concluded.

Serial No.	Registered No.	Date of Registration.	Name of Society.	Object of the Society.	Situation of the Registered Office.	Remarks.
1	2	3	4	5	6	7
16	16	22- 5-18	Shri Bal Lagna Nishedhak Mandal.	For the prevention of child-marriages.	Baroda.	
	9 B					
17	17	16-11-18	Vaso Kelvani Mandal.	For encouraging physical and school education amongst Vaso youths.	Vaso.	
	10 B					
18	18	2- 1-19	Shri Sidhpur Gopal Krishna Sanatan Brahma--Charya-Ashram.	For encouraging celibacy and helping poor students in education.	Sidhpur.	
	8 K					
19	19	16- 6-19	Kadi Disha Vanik Gnati Mandal.	For pioneering the social reforms and encouraging education in the caste.	Kadi.	
	9 K					
20	20	12- 5-20	The Sanatan Auditch Sabastra Sampradayak Gnati Mandal.	For improving the constitution of the caste and introducing social re-	Rupal.	
	10 K					

T A C A P	21	21	31- 3-21	The Property Board of the Women's Foreign Missionary Society of the Methodist Episcopal Church.	For procuring land, and estate for the Christian Women, etc.	Baroda Camp.
		11 B				
	22	22	8- 7-21	The Delgam Dasha Shrimali Shrawak Vania Gnatina Mandal.	For improving the constitution of the caste and introducing reforms.	Dehgam.
		11 K				
	23	23	24- 6-22	Shri Mahi Reva Vacheheni Auditch Brahman Betalish Gnati Mandal.	Do.	Dabhasa.
	12 B					
	24	24	5- 7-22	Shri Tapodhan Brahman Parishad Sthayi Fund Sabba.	Do.	Sidhpur.
		12 K				
	25	25	19- 3-23	Shri Dandhav adn Charotar Jayaga Brahma Bhatt Samelan.	Do.	Kalol.
		13 K				

H. C. Commerce Dept. Dewan Order No. 47
25

REVIEW

OF THE

ANNUAL REPORT OF THE DEPARTMENT OF COMMERCE AND INDUSTRIES FOR THE YEAR 1922-23.

The Annual Report of the Department of Commerce and Industries for the year 1922-23 is interesting and instructive.

2. The Department continued under the control of Mr. Manilal Nanavati and after he proceeded to England to act as Secretary to His Highness, Dr. Pagar continued the direction of the Department.

3. As a result of depression in trade and industrial slump, no new industries or trading activities could be started during the year under report, though the Department was not slow in lending its helping hand by way of concessions, expert advice and other necessary facilities.

4. It is a gratifying feature to note that all the well established industries did satisfactory work. Many of the recently started industries have materialised and are on a fair way to progress. The out-turn of Cement by Dwarka Cement Factory during the first year of its inception was promising.

5. In spite of adverse financial circumstances, many new industrial concerns materialised under the fostering care of His Highness' Government.

6. With a view to attract new industries in the State and promote existing ones. His Highness' Government offered concessions in the form of (1) loans either directly from the State or through the Bank of Baroda, (2) acquisition of land, (3) exemption from octroi on payment of lump sum and (4) water at concession rates, etc. Correspondence is going on with the Residency for the purpose of a public Telephone Call Office being opened at Baroda as at Surat and Ahmedabad.

7. The appearance of Natural Gas in the well situated in the compound of the Dewan's Bungalow, gave promises of great industrial development and as the composition of the Gas was found to be suitable for lighting and domestic purposes, further experiments were decided upon to increase the flow of the supply so that the Gas may be distributed to the Mills also. On the strength of expert advice received from the Director of Geological Survey, India, further borings were effected. But on the contrary, the Gas entirely ceased to appear. The experiment, however, has not been given up and the investigation is being continued through the P. W. Department.

8. Owing to high prices and scarcity of labour, only one hand-loom factory could be started. Demonstration of fly shuttle pit-loom and frame-loom was given at Baroda and Amreli.

The Weaving Branch has made useful experiments in wool weaving. With a view to facilitate the purchase of costly knitting machines arrangements have been made by the Department to supply them on easy instalment system.

9. The registration of the Weavers Co-operative Society at Amrali is an important step towards the amelioration of the financial status of this backward class of people.

10. It is hoped the suggestions made by the Weaving Assistant regarding the inspection of Cotton Mills for the recovery of Cotton Excise Duty will be carefully considered by the Excise Department. The suggestions are likely to result in increased revenue to Government.

11. The Department has been busy in collecting the best artistic manufactures and other useful products for the British Empire Exhibition. It is hoped the Department will succeed in making the State Stall worthy of the dignity and prestige of Parola.

12. The increased income from the proceeds of factory inspection and transfer certificates during the year under report is satisfactory.

13. The Department should take up work of the revision of the Boiler Act as soon as the Bombay Government Boiler Act is revised and brought into force.

14. The increase in the number of factories subject to control under the Factory Act and also the increase in the number of operatives employed in the registered factories are indications of the flourishing condition of the industries in the State.

15. There were three occasions of Strike during the year under report against none in the previous year on the part of the labouring classes.

16. The Electric licenses at Naosari and Dabhoi made appreciable progress in the installation of Electric Works.

17. The revision of the Electricity Act has been taken on hand by the Department.

Revision of the Electricity Act.

18. There was an increase of 9 Joint Stock Companies, thus making a total of 103 companies on the register. 11 companies, had to be cancelled and 3 went into liquidation.

Joint Stock Companies.

19. Looking to the statement of capital of the companies, one can notice a marked decrease in the authorised capital of the companies. The subscribed and the paid-up capital, however, increased in appreciable proportion which indicates increased public confidence in old and established concerns.

Capital of the Companies.

20. It is satisfactory to note that due to strict economy practised by the Department, the printing work was substantially curtailed and the printing charges could be decreased by nearly 20,000 rupees.

Decrease in printing expenses.

21. Preparations for the organization of the new Government Press are in full swing and it is hoped the new press will commence working before the termination of the present contract.

New Government Press.

22. On the whole, the working of the Department was satisfactory and thanks of His Highness' Government are due to Dr. Pagar for the skill with which he efficiently controlled the various branches under him.

Thanks of Government.

Baroda,
29th March 1924.
S. D. P. S. Sec. 71.
(Sd.) G. A. L.

(Sd.) MANUBHAI N,
Dewan.

6700

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R. No. 119 ¹⁴⁷
82.

Office of the Department of Agriculture
Baroda State. Baroda Dated 30th March
1926.

Forwarded with best compliments to the
Manager Sahib, The Servants of India. Soci-
ety, Shewar Peth. Poona City. for information.

CCShah

CCShah
director to the
Director of Agriculture

ANNUAL REPORT
OF THE
Department of Agriculture
BARODA STATE.

For the Year 1923-24.

J.23182r

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1926

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ANNUAL REPORT

OF THE

Department of Agriculture

FOR THE YEAR 1923-24.

The Department continued to be in charge of Mr. C. V. Sane B.Ag. (Bombay), B.Sc. (Kansas) M.Sc. (Wisconsin).

Two important changes are to be noted in connection with the staff. One is the abolition of the post of the Deputy Director of Agriculture and the consequent retirement of the incumbent Mr. C. U. Patel, and the other is the creation of a new post of Veterinary Inspector and Mr. S. M. Vasawada's appointment to the same.

The post of the Cotton officer considered temporary so far has been permanently added to the cadre of the Department and the appointment of Mr. Induvadani Desai lately deceased confirmed. There have been few other changes of any importance in the Departmental staff. Appendix I will show the important posts in the Departmental cadre and the names of incumbents against each.

2. The Department received full and sympathetic consideration of the Government with regard to the long standing grievance of improvement in pay and prospects, in nearly all the essential sections, thus along with the improvement of prospects of the graduate staff

Reorganization along with improvement of pay and prospects.

of the Department, the office establishment also underwent a revision and received encouragement by more attractive grades; the Boring branch of the Agricultural Engineering section was made permanent and grades of the Veterinary Surgeons readjusted. We have not, however, yet seen the last of the matter regarding Veterinary Surgeons' standing and circumstances may require fresh consideration of their position.

In other matters also Government have seen the necessity of a sympathetic consideration of the difficulties under which the Department has to labour. They have undoubtedly done the best they can under the circumstances and this graciousness is bound to be responded in the impetus it will create for more zeal and better discharge of the duties.

3. Unlike last year, during the year under report, there were several meetings and conferences in which the Department was concerned and the Director took part. The Provincial Board of Agriculture meeting held at Poona in September 1923, and the Imperial Board of Agriculture meeting held at Bangalore in January 1924, may be specially mentioned. A Cattle conference was held at Bangalore along with the Imperial Board meeting and the Director represented the Baroda Government in this conference.

The Director was appointed by Government as Joint Secretary of the Agri-Industrial Exhibition held at Baroda in January 1924, and worked on other committees in that connection. He also worked on the Arboretum committee and was asked to attend the special budget session of the Dhara-sabha.

4. In the notable undertakings of the year, first place must be given to the framing of the Cotton Transport Act for the Baroda State territories in conformity with a similar Act of the Government of Bombay. It was by no

means an easy or small undertaking but harmonious working with the Government of Bombay in the spirit of real cooperation for the general good had considerably smoothed its way.

The opening of the Dabhoi Wadhawana Farm in connection with a more profitable use of the Wadhawana Tank water is another undertaking whose results will be watched with great interest.

Preparation of the agricultural exhibits of the Baroda Court in the Empire Exhibition, supply of material to the economic court of the Baroda Museum and arranging the Departmental stall in the Baroda Exhibition were other undertakings of note.

The tractor and oil-engine class was again organized and seemed to meet a real need of the farmers.

5. The expansion of tractor operations was easily the out-standing feature of the year's work. Six new tractors were purchased by private initiative and operated in the Baroda territories under the advice of this Department, resulting in the breaking up of more than 1,500 acres.

The other out-standing feature was the spotting of an artesian flow in parts of Kadi District at a depth of from 200 to 250 feet. If this is borne out by further tests now under way it opens up possibilities of irrigation farming in this part, the importance of which can hardly be exaggerated.

The arrangements of a Departmental stall exhibiting its various activities in crop production, Veterinary aid and Agricultural Engineering formed a note-worthy feature of the year's work and it is hoped to keep it up in a small agricultural museum on the Baroda Farm.

6. Ten applications mainly for installation of oil-engine and pump were received during the year and six have been recommended for advances aggregating to Rs. 35,611. Appendix II shows the details regarding these.

7. The total expenditure and receipts of the Department amounted to Rs. 1,52,225-12-6 and Rs. 50,640-9-5 respectively. The same figures for the previous year stood at Rs. 1,26,525-9-8 and Rs. 39,639-5-10 respectively.

The expenditure includes a further payment of Rs. 11,791-5-4 on account of the land acquired for the Dairy Farm at Makerpura according to the award of the judicial court. This amount has been paid from the head office and is not included in the financial statement of the Dairy.

The following table gives the figures under each head separately. Details are given in Appendix III.

No.	Item.	Expenditure.	Receipts or contributions.
1	2	3	4
1	Head office	29,556-9- 5	568- 0-10
2	Agricultural Engineering including Boring	29,856-1- 2	1,864- 8- 6
3	Agricultural Farms	18,935-1-11	14,626-13- 9
4	Dairy Farm	36,052-0-10	15,697- 4- 8
5	Propaganda	9,498-6- 0	...
6	Veterinary Dispensaries	28,327-9- 2	17,883-13- 8
	TOTAL	1,52,225-12-6	50,640-9-5

A glance at the table will show that one single institution of the Dairy is absorbing a sum of over 36,000 rupees with a return of Rs. 15,000 against the Agricultural Farms spending Rs. 19,000 and bringing the receipts amounting to Rs. 14,600. The difference in the expenditure and income for the two kinds of institutions roughly stand at Rs. 20,355 and Rs. 4,309 respectively.

A farm in Amreli is very badly needed and funds must some-how be found for the same, by departmental adjustments if otherwise impossible.

8. The seasonal conditions of the year have been distinctly unsatisfactory. The monsoon commenced late by three weeks nearly every-where. The note-worthy feature in this connection is the fact that it did so even in Navsari District where such an occurrence is very rare. The total precipitation in the Navsari District was later made up in most Talukas but Mangrol and Kamrej never fully recovered from the shortage. In the Baroda District the rainfall averaged only fifty percent of the average until a brisk storm towards the third week of September took it past beyond this limit. This storm, although it did considerable damage to crops already mature, is responsible for the decent harvest of the later maturing crops that was eventually gathered. In the Kadi District the condition was still worse, rainfall amounting to less than half the normal being received in many Talukas. Even the rains that were received were spasmodic in precipitation and the distribution was very un-even and un-uniform. As an instance may be given the record of precipitations at Mehsana and Jagudan. These are about 7 miles apart, but the rainfall records at each place was 10.04 and 5.79 inches respectively. It was the facility of well irrigation and high cotton prices that made the situation in Kadi bearable. In the Amreli District the gamble of the distribution of rain reached its height of vagary, adjacent villages having different crop conditions. Rainfall records by Talukas are given in Appendix IV.

The dominating feature of the season, however, was the shortage of water supply in wells and tanks even for drinking purposes. This spurred the Local Board to adopt effective measure for meeting the situation and the Department rendered valuable help by setting apart several hand and power boring sets for their use and guaranteeing effective supervision. There was a stiffening of grass prices every where and parts of Kadi and Amreli had to be supplied with grass by transport from elsewhere. At one time there appeared to be a general scare on account of anticipated difficulty of feeding the stock in affected areas and preliminary arrangements were being made for opening a cattle camp at Kalum-kui in Vyara but no such step was found necessary as the season advanced.

No insect pest or crop disease was reported as requiring special notice, but there is every indication of the Katras among the insect pests and cotton-wilt among diseases forcing themselves into notice.

9. The working of the Department may conveniently be divided into three main sections.

Working of the
Department.

- (A) Agricultural.
- (B) Agricultural Engineering.
- (C) Veterinary.
- (A) AGRICULTURAL.

10. In the Agricultural Section are included the following activities:-

Activities of the
Agricultural Section.

- (a) Agricultural Farms.
- (b) Cattle Breeding and Dairy.
- (c) Propaganda.

(a) FARMS.

11. The Department had under its control two principal farms—one at Baroda and the other at Jagudan in the Kadi District. A special farm near Dabhoi has been recently opened for popularization of the use of the Wadhawana Tank water.

(1) Baroda Farm.

12. The Farm is situated about a mile from the Baroda Railway Station on the Alembic Factory Road and represents more or less the Goradu soil tract of the Baroda District. It is of but little use for cotton work owing to the bulk of the cotton crop in the District being grown on black soils. The gross area of the farm is 84 acres, of which nearly 66 were cropped during the year. The principal crops grown were Bajri, Cotton, cotton mixtures, castor, tur, jowar, sundhia, ground-nut, tobacco, lucerne, wheat, onion, chillies and vegetables. About four and half acres are under fruit-trees mainly guavas. Details of crops and yields will be found in Appendix V.

13. The monsoon was late by about three weeks as well as weak in character. The total rainfall measured on the farm amount to 16.27 inches against an average of 30 inches. The number of rainy days was 43. An analysis of the rainfall shows that out of 43 records only one measured 2.95 inches, five were between 1 and 2, four less than an inch and over 50 cents, fifteen between 10 and 15 cents, and eighteen less than 10 cents. Rainfall amounting to nearly 5 inches was received in the second fortnight of September and although it did some damage to crops already matured, a successful harvest of the later maturing crops is in a great measure due to the same precipitation. The rainfall was scanty on the whole, but careful cultivation had made good

crops possible. Except as a consequence of the general dryness of the year, almost all the crops recovered in the latter part of the season and some extremely good yields for the kind of season just described were realized.

14. The usual toll by diseases and pests was taken.

Katras appeared in fairly large numbers in the beginning of the season though in lesser numbers than neighbouring fields. Picking and trenching were the principal means employed as check measures and were effective to a certain extent. Boll-worm in cotton made early appearance but made limited damage. Wilt was the most noticeable disease in cotton and it threatens to be the limiting factor in extension of the cotton cultivation at any rate on the farm. Smut in Bajri is of common occurrence and tests to see if it was amenable to any treatment have given results of a negative character.

15. The Principal crop work is in connection with

manurial treatment of cotton, chillies, tobacco, onions and Bajri; spacing trials of Bajri and cotton; starting of cotton with irrigation in May; trial of new crops like wheat, sudan-grass and gram on a field scale and miscellaneous tests of Bajri, groundnut and smut prevention in Bajri.

16. The manurial trial of cotton consists in the application of Bone meal at the rate of 150 lbs.

per acre in addition to the Farm yard manure at 12 cartloads. It appears from the results obtained during the year under report that the crop makes a good response at certain times. In 1919-20 a difference of over 544 lbs. per acre was obtained in favour of Bone meal. This year this difference comes to 324 lbs. per acre. In the year 1920-21 and 1922-23 there is actually a little less yield in Bone meal manured plot.

With regard to tobacco manuring, the results tend to show that a combination of a quick acting manure like Sodium nitrate or Pot. nitrate with cotton seed meal has a depressing effect. Used alone they were found to draw a decided response from the crop. The tests will be continued further

Best results of manuring were obtained in the case of onions. A crop of 25,400 lbs. of onions per acre was obtained by the use of 285 Lbs. of Sodium-nitrate and 112 Lbs. of Super-phosphate per acre in addition to 20 cartloads of poudrette. The biggest increase is by the addition of nitrogenous manures particularly Sodium-nitrate. Pot-sulphate seems to have little effect by itself and not a pronounced one even in combination.

Special manurial treatment of Bajri was more of a side issue than the main object. In treating the plot for smut prevention, it was suggested that a lack of available phosphate may be the reason of smut trouble. Three plots were set apart for the test. One received 40 lbs. of Super phosphate per acre, another received 40 lbs. of Ammonium-sulphate and one received both of these. Plots receiving single manure treatment gave good results, while the one receiving both actually yielded less. The treatment had little effect on smut incidence and it appears that plant nutrition has nothing to do with the incidence of the attack at least in a direct manner.

17. This year's results of cotton and Bajri spacing are in coroboration of the summarized results of the last three years, the four and five feet spacing showing the best results on an average. The appearance of wilt in the crop has become a disturbing factor in gauging the real yield of the plots. It is intended to overcome this difficulty next year by changing the arrangement of the tests in this area

Results of Bajri spacing are in the same general relation as the results of the last three years. The two feet spacing seems to be distinctly unsuitable. The margin of difference

between one foot and 1½ feet spacing is hardly striking. The yields per acre this year for the spacing of 1, 1½ and 2 feet spacing are 1079, 1016 and 858 lbs. of Bajri per acre respectively.

18. Wheat has now been grown on the farm for the last two years and although satisfactory other field crops and yields are obtained, the cost of miscellaneous trials. production chiefly irrigation more than offsets the value of out-turn.

Gram as a field crop did not fare any better. A patch of sudan grass is cultivated and gives a thinner stalk than sundhia. Pusa Bajri with the long thin cylindrical head was tried along with the local. The yields received were respectively 816 and 732 lbs. per acre. Further tests will be kept up.

The season was not a suitable one for groundnuts owing to late rains. Yields varying from lbs. 1,121 from Virginia to 1,646 Big Japan were obtained per acre, but the cost of harvesting is very high in proportion, coming to Rs. 2-7-0. per 100 Lbs.

The various treatments suggested for smut prevention in Bajri have not shown any indication in that direction.

A recent tendency has been observed to sow Bajri as an early crop which sustains considerable damage when there are September rains. This has happened so often lately that some tests in the date of sowing of this crop have been found necessary. The following table gives the results of two seasons of trials of this test:—

Date of sowing.	Yield per acre.		Remarks.
	1922-23.	1923-24.	
Middle of July.	Lbs. 936	Lbs. 845	Very bad smut. Heavy rain spoiled Bajri.
Early August.	957	1,211	Grain brighter in colour, thinner stalks of fodder, less height of ears not as good sized as in early sown.

May sowing of cotton by irrigation has again been found a useful innovation. The cotton was sown on 23rd May and had to be given eight irrigations owing to late monsoon, the total cost of these waterings coming to Rs. 36; the yield of cotton comes to Lbs. 968 against the average yield of lbs. 668 per acre for the year, giving a lead of over 300 lbs. A third of the crop was gathered by 10th January when the general picking of other cottons was being taken up.

A practice which in effect is comparable to this early sowing of cotton without the additional cost of irrigation is ratooning of cotton. The ratoon crop yielded during the year under report 584 lbs. per acre against 314 lbs. per acre from an adjacent plot of fresh sowing. The margin is about 270 lbs. and the practice is worthy of more serious investigation.

19. The season's rainfall was hardly more than fifty per cent. of the normal. Still some of the outturns of crops show what conservation of moisture by proper tillage can achieve. Thus round about the farm the Bajri yield was not more than 10 or 12 Mds. and cotton averaged only 5 or 6 Mds. per acre; the following yields were obtained on the farm:—

No.	Crop.	Area in A. G.	Average yield per acre Lbs.	Maximum yield of the year in Lbs.
1	Bajri	12 — 20	1,199	2,168
2	Cotton	7 — 0	668	1,292
3	Castor	6 — 6	562	1,064

Details of treatments and yields will be found in Appendices VI to X.

20. No new implement was tried during the year under report. The tractor and dauntless cultivators were usefully used. The spring tooth harrow continues to render excellent service both as a preparatory and interculture implement.

Other notable points of the year's work,

The silo was filled as usual between 14th and 25th of September 1923. Total amount of fodder put in came to lbs. 34495 and was made up of 17,958 lbs. of sundhia and 16,537 lbs. of maize. Silo was opened on 1st March 1924 and the quantity of useful silage came to 21,440 lbs. which means a loss of 38 per cent. The cost of filling the silo came to Rs. 1-1-7. per 1,000 exclusive of the cost of fodder put in.

In the section of fruit culture the guava plantation keeps on bearing good crops. A thorough cleaning was given to this area during the year under report. The fruit culture scheme is pending discussion with the Bombay specialist. Figs bore a small crop and the fruit was found to ripen properly and attain decent size. The quality was good and those sent to the Palace were very much appreciated by His Highness. The grape vines have not been making satisfactory progress largely due to technique in pruning in the skilfulness and timeliness of which lies the key to success.

Three demonstrations were arranged during the year under report for the Dharasabha members, Co-operative Training class students and visitors to the Agricultural Industrial Exhibition at Baroda.

Among the distinguished visitors may be mentioned H. H. the Sar-Desai of Sawantwadi and Nck Namdar Amatya Sahab Mr. Seddon.

21. The total expenditure of the Farm including establishment came to Rs. 12,765-14-2 and an income of Rs. 12,106-7-7. The total of farm contingencies alone was Rs. 9,522-8-3.

Finances.

Statement showing prices of farm produce, manures and labour charges are given as Appendices XI and XII.

(2) Jagudan Farm.

22. This Farm is situated near the railway station of Jagudan about seven miles from Mehsana and represents the light sandy soil section of the Kadi District. The area of the Farm is about 25 bighas.

23. The monsoon was late, weak and sporadic. The total rainfall amounted to only 5.79 inches i.e., just about a quarter of the average annual. Whatever rain was received was in July and August and that too on only 18 days. The highest rainfall of a day came to 7.1 cents, on 13th of July. It is hardly necessary to refer in any detail to crop prospects after this description of the season. The Khariph crops failed to set grain entirely and the Rabi and semi-rabi crops did not show the usual vigour of growth. Luckily, there was no serious disease or crop-pest of any kind or the situation would have become intolerable. As it was, the irrigation facility enabled the farmers to tide over the awkward period and the situation fared better as the season advanced.

24. The principal crops grown on the farm are wheat, chillies, tobacco, cotton, lucerne, sundhia, bajri and a patch of oranges and lemons. Details of crops and yield are given in

Appendix XIII.

The principal work on the farm pertains to the seed supply and extension of Pusa wheat which has been found to give very good results. Its special value lies in its not being liable to suffer from rust which when it attacks the local type, very seriously, reduces its yield. Fortunately for the farmers this year there was no damage from this source to the wheat

crop or else it would have aggravated the effects of the already thin season. The average out-turn of Pusa wheat came to 1,034 lbs. per bigha, the best being 1,430 lbs. Pusa fetches a better price as will be seen from the quotations of Rs. 2-6-0 per Md. of 40 lbs. per Wajia and Rs. 2-11-0 per Md. of Pusa on the same day.

Tobacco and chillies are the principal cash crops and although the yield was quite a fair one, the business side was not equally successful.

Cultivation of lucerne as a useful crop affording several cuttings in a year was well demonstrated. The health of the stock on the farm is not a little indebted to this nutritious fodder.

There is only a small patch of santra trees on the farm but this little bit yielded some unusually good results. The number of plants of the santra type are only 23 but this yielded 7,815 fruit and fetched an income of Rs. 197-14-0

Some of this fruit was sent to the Palace and was well appreciated there.

25. There are already two wells in the Farm area but the water supply being deficient and the season one of shortage of rain, a new well was constructed at a cost of Rs. 1,632-0-0.

Other note-worthy points.

Owing to deficient water supply in the wells, the Kos alone has to be used for lifting water, the engine pump sucking up the supply too quickly. This necessitates the maintenance of at least three pairs of bullocks the feeding of which becomes a real problem, in lean years. It is thought best to meet this difficulty by taking suitable adjoining land for working on a fair share basis. How this system works, will be watched in the coming year.

26. The total expenditure of the Farm came to Rs. 5,338-7-4, including an item of Expenditure and income. Rs. 1,632-0-0. for the new well. The income came to Rs. 2,596-12-6.

(3) Dabhoi-Wadhawana Farm.

27. This Farm is situated about two miles from the Dabhoi Railway station on the Waghodia Railway Line. The object of the Farm is to demonstrate and popularize the use of irrigation for cotton. A large tank of about 500 millions cubic-feet capacity is within easy reach of large areas of similar nature; but there is considerable prejudice regarding the utility of this water, both on account of the water and soil. That there is little ground for complaint, can be seen from the following analysis of the Tank water by the Agricultural Chemist with the Government of Bombay, who gives as his opinion that the water is quite good for irrigation.

Analysis of Wadhawana Tank water.

No.	Item.	Parts, per 100,000.
1	2	3
	Total soluble salts containing	38.00
1	Cal. carbonate	12.00
2	Mag. carbonate	4.96
3	Mag. chloride	11.76
4	Sod. chloride	1.72

There seems to be some tendency to accumulation salt if large quantities of water are used, specially where the lie of the land makes drainage difficult. The Gorat lands are entirely free from this defect and it is expected for the amount of watering needed for cotton, there should be little fear of salt accumulation.

The Farm is only temporarily sanctioned and land was acquired by nearly the end of the year. A cropping scheme has been prepared with the object of testing the economic use of this water for cotton and for also finding out other suitable crops possible under the soil conditions obtained there. The area of the Farm is about 10 bighas.

(b) CATTLE-BREEDING FARM AND DAIRY.

28. This institution is located in the suburb of Baroda at Makerpura about 4 miles from the City. Its object is to build up a pedigree herd of the Kathiwar breed of Gir cows and Jafferabadi buffaloes. A farm of about 48 bighas is attached to the institution for purposes of fodder supply. A further sum of Rs. 11,791-5-4, has been paid as compensation by award of the Judicial Court in addition to the sum paid last year. This sum has not, however, been paid from the Dairy grant and is not included in the expenditure shown on its account.

29. The strength of live-stock on hand at the end of the year is reported at 160 animals; out of these, the milking stock comprises of 40 cows and 30 buffaloes.

Strength of the herd and health of stock.

Although lack of pasturage had affected the condition of the live-stock to a certain extent there were no out-breaks of any serious epidemic during the year. A slight attack of 'foot and mouth' disease was observed in February and March. The total deaths during the year were 13.

Considerable discarding of unsuitable animals had to be done, the number reaching a total of 68. Twenty-four calves were supplied to the Muktesar Laboratory for experiment regarding tuberculosis at half price as desired by Government. Fresh purchases were in the shape of a buffalo for Rs. 125 and a bullock for Rs. 212-8-0.

Details olive-stock will be found in Appendix XIV.

30. The total milk produced during the year came to 1,05,944 lbs 54,652 Lbs. from cows and 51,292 from buffaloes. From this, Milk produced and supplied. 67,786½ lbs. were supplied to the General Hospital, 16,990½ lbs. separated for other Dairy products like cream, butter, ghee and the rest sold to Royal Households and other customers.

The demand from the Hospital was more than could be supplied from the Dairy and the difference was made up by purchasing 51,280½ lbs. of milk from the market.

Some of the best lactation records are given in Appendix XV. Percentage of fat is shown in Appendix XVI.

31. A total of 6,72,373. Lbs. of fodder was fed to the live-stock. Of this 1,41,473 lbs, i.e. a little over twenty percent was produced on the farm as detailed in Appendix XVII. Concentrates fed and fodder consumed. The rest i.e. 5,30,900, was purchased from the grass contractor at the rate of Rs. 13-4-0, for 1000 lbs. This grass is collected from a beed of about a thousand bighas at Karamsia.

The production of 1,41,473 lbs. of green fodder cost Rs. 1,772-4-0, which works out at the rate of 80 lbs. of green fodder per rupee. The area under cultivation is about 48 bighas. The fodder outturn, therefore, comes to about 3000 lbs. per bigha.

The total quantities of concentrates fed came to 1,68,759½ lbs. in the form of cotton seed, oil-cake, Kormu, Gawar, Math, Bran, etc. The details of quantities consumed with rate, etc., as also of the fodder are given in Appendix XVIII.

The cost of feeding of concentrates came to Rs. 9,720-10-9 for fodder from contractor to Rs. 7858-5-4. and for production of fodder Rs. 1,772-4-0. totalling Rs. 19,351-4-1. This works out at slightly less than 3 annas per lb. of milk for feeding alone.

32. During the year under report two siloes of the size of $8 \times 6 \times 6$ were filled with Bajri and Sundhia. The quantity put in was 10,700 lbs. and 12,630 lbs. respectively. What was taken out came to 9,400 and 10,900 lbs. and represents 12 and 13 percent loss respectively. The siloes were filled on 21-9-23 and 31-10-23 and opened on 30-1-24 and 24-2-24.

The results of these tests have been so much appreciated that an intensive and extensive propaganda for advertising the same is being pushed on with the able assistance of the Registrar of Co-operative Societies which have been desired by Government to take a lead in the matter and this is being done.

33. The Dairy and Cattle Breeding Farm had formed a centre of attraction during the year under report and included amongst its visitors such distinguished personages as H. H. the Maharaja Saheb and H. H. the Sardesai of Sawantwadi.

Nek Namdar Dewan Saheb and Amatya Saheb by their keen interest in it focussed public attention on the doings of the institution and to it is due, in a large measure, the distinctive reputation it has earned.

The Dharasabha members paid two visits to the Farm, the Registrar of Co-operative Society has been a constant visitor with his Co-operative Training classes, auditors or honorary organizers and the success of the silo became a settled fact.

Among the visitors of note may be mentioned the names of Hon. C. V. Mehata, Mr. Wm. Smith, Imperial Dairy Expert and Mr. B. S. Patel, Deputy Director for Animal Breeding, Bombay Presidency.

34. The total expenditure on the institution came to Rs. 36,052-0-10 and the income to Rs. 15,69/-4-8.

Total expenditure and receipts and distributions of expenditure.

The statement below shows the further distribution of the expenditure incurred and the share in the total cost of milk production of the various factors.

No.	Item.	Amount		Cost per 40 lbs milk produced.	Percentage of total expenditure.
		Rs.	As. P.		
1	2	3		4	5
1	Feeds and fodder	19,622-	4- 6	7- 5-0	54
2	Attendance	2,123-	2- 9	0-13-0	6
3	Transport	6,582-	5- 0	2- 7-0	18
4	Supervision	3,859-	10- 8	1- 8-0	11
5	Miscellaneous	3,864-	9-11	1- 8-0	11
	Total expenditure...	36,052-	0-10	13- 9-0	

The increase in cost of production is in a measure due to the higher rate of the grass contract which was Rs 10-8-0 per 1,000 lbs. last year and Rs. 13-4-0 during the year under report.

(c) PROPAGANDA.

35. The propaganda work is carried on by three agencies
(1) Work by District staff (2) Demonstration and shows
(3) Publication.

(1) Work by District Staff

36. The principal propaganda work in cotton is in the Navsari District where the Cotton Transport Act became operative for the first time. There was complete prohibition of Railway Transport which is responsible for the greatest mischief, but the inter-zone transport was not so exactly operative. Reference has already been made to the passing

Work of the Cotton
Officer.

of a Cotton Transport Act for Baroda on the same lines as Bombay and an elaborate system of check stations at various frontiers completed. The most important of these are those guarding the entry of Khandesh cotton in Navsari Section via Songhad and this was prevented by opening of a couple of stations to prevent ingress.

37. Forty-two villages were visited in the extension tour in the various parts of Navsari District to popularize the improved cotton sowing and arrange for a co-operative sale of the produce. Government having desired to arrange for the distribution on a commercial bases, the distribution had to be so arranged that no deficit may have to be written off. It was not an easy thing to do since we have to depend for our seed supply on the Bombay Department which wants to run the business also on commercial basis. The difference of weight, Railway Transport and cartage in many cases makes it impossible for selling the cotton seed at market prices. Through the good offices of the ginning factories of Seth Bamanshaw of Aunkleswar, 1,53,890 lbs. of cotton seed was distributed in Mangrol and Vyara alone. Another 45,600 lbs. was sold through Gulam Mohamad Patel of Mangrol on behalf of the credit co-operative society. A good deal was purchased from convenient British Seed Depots., the total seed distributed coming to 3,08,400 lbs. The estimated area is over 62,000 bighas i.e. more than two and half times that of last year. Besides almost all gins are selling improved farm seed now and if these sales are considered, the area under cultivation under the improved seed would be much larger.

The transactions handled by the Cotton officer through various sources resulted in a net-loss of Rs. 80 owing to loss in Transit and fall in prices. This was met by contribution from the fund of the Agriculture Improvement Committee at Navsari.

38. In addition to the special Cotton officer, there is an Agricultural Graduate attached to each district for help and advice to the cultivators and to keep up the propaganda in their respective divisions.

Work of District
Agricultural Inspectors.

39. In addition to the cotton work which has already been noticed, there was considerable other interesting work in the Navsari District. The more important items affecting large areas were those concerned with the field tests of early Kolamb paddy, use of bone meal for rice and power crushing of cane. New tests dealt with the use of Sodium-nitrate for cotton and onions and the demonstration of the bullock-hoe for inter-culture, use of Ammonium-sulphate in Vyara is now an established practice and efforts were made to have it introduced in the Gandevi section also.

Work in Navsari
District.

The use of steeping Jowar in copper sulphate for smut prevention was specially concentrated in Navsari and Gandevi.

A yield of 50 Mds. of the early Kolamb was harvested in Anaval by the use of 36 lbs. of seed and extensive trials of this seed are expected in the ensuing season.

The use of bone-meal at the rate of one cwt. per bigha has given a strikingly bigger yield. Seventeen Mds. of the same will be used in the ensuing season in different locations to judge its real efficacy in increasing the yield.

The power cane crusher was used by Mr. Jahangirji of Anaval for crushing 4 bighas of cane. A test taken gave the following results. 16 Mds. of juice was obtained in 45 minutes with a consumption of 4 lbs. of Kerosene. The percentage of extraction was 63. The crusher was moved from here to Vyara and operated with a tractor and crushed 7 bighas of cane belonging to three farmers. The percentage of extraction was 63. The ordinary crusher would have given only 50 percent extraction under similar conditions. The rate charged was Rs 0-12-0. per 16 Mds. of juice.

296 copper sulphate packets were distributed and over 1,000 bighas were sown with seed so treated. There was no smut in treated fields and it is expected that the area of treated Jowar would be more than doubled in the ensuing season.

The Agricultural Association of the District was revived under the fostering care of Mr. Manilalbhai Nanawati, Suba Saheb of Navsari. It is hoped that during his tenure of the leadership of the District the work would not only be intensified but have a sounder foundation also. Mr. Naranji Bhaidas Desai's help in pushing the propaganda work of the Department while in charge of the Gandevi Mahal, deserves special attention. His sympathetic interest is an instance which it is hoped will be more generally followed.

40. In the Baroda District, the principal District work is in connection with the field tests of substituting and supplementing farm yard manure for tobacco by the use of a suitable quick acting manure. Until the year under report we had to remain satisfied by persuading the farmers to use the artificial manure in addition to their ordinary quantity of farm yard manure. The three years' results in their own fields have now convinced them about the utility of this manure. In the next season, the idea is to use the manure only in partly replacing the farm yard manure so that the farm yard manure thus saved may either go to other dry-crop farming or to further increase of tobacco area. The results will be watched with great interest as it is the beginning of the goal we had before us.

This year's results are given in Appendix XIX. It will be seen by a study of the statement that the average increase by the use of manure is a better crop by 33 percent. Roughly the cost of increasing the produce by 40 Mds. in these tests came to Rs. 100/- which is about Rs. 2-8-0. per Md. Any price of the produce above this cost price, is, therefore, so much gain to the farmer. As a result of these three years we can say that 100 to 150 lbs. of Sod. nitrate per bigha is a doze to which the crop easily responds.

We are indebted to Mr. Wagjibhai Bhajibhai Patel of Dharmaj for interesting himself in this matter and to make personal efforts in popularizing the tests.

In addition to the District work the Agricultural Inspector, Baroda, will also be in formal charge of the Dabhoi Wadhawana farm, which has already been reported upon. The budget for this farm forms a part of his grant and he will exercise a judicious check on the expenditure on the institution.

A few manurial tests at Sokhada Radhu and the extension of silo-filling are opening out other useful lines of propaganda work.

41. In addition to the District work the Agricultural Inspector is also in charge of the Jagudan Farm. During the year under report, steeping of Jowar, extension of Pusa wheat and supply of lucerne, were the principal activities. Copper-sulphate was distributed to 325 cultivators of nine villages. The area sown with this treated seed is estimated at more than 1,500 bighas. Unfortunately the season proved unsatisfactory and very few of the Jowar fields were able to mature the heads. Where this happened, its freedom from smut was a noticeable feature. If the season is propitious, a more concentrated effort is intended to be made next season.

About 2,500 lbs. of Pusa wheat seed was distributed in 7 Mahals of the Kadi District. The area sown from this seed came to about 30 bighas and the yields varied from 12 to 20 Mds. per bigha. In order to secure more authentic information and concentrate attention on the Pusa wheat distribution, a scheme of awarding prizes was prepared and accepted by the Agricultural Association at its annual meeting.

The season under report proved a very unsatisfactory one for the Kadi District and there was considerable apprehension regarding fodder for live-stock. A demand arose for lucerne seed and quite a propaganda for its cultivation resulted. Over 800 lbs. of the seed costing nearly as many rupees was distributed to 189 cultivators in fifty villages.

Leaflets regarding the extension of Pusa wheat and lucerne cultivation were prepared and distributed.

An annual gathering of the Kadi District Agricultural Association was held at Unza where the Departmental programme was discussed. The question of prohibiting export of live-stock from Kadi District was also considered but with no practical out-come.

42. Amreli District again experienced a season that was far from satisfactory. This naturally affects the propaganda work in the District.
- Work in Amreli District.

This is the one District in the Baroda State where iron ploughs have a future before them. Several of these are already in the field, but the palm will go to those who can give a decent implement at fair price and above all maintain satisfactory spare parts service. Chattanooga 55, B. T. 2, Kirlosker 15 and 100 and Sabul are all to be met with but which will eventually lead will depend upon factors mentioned above. Bhavnagar State is popularizing those implements at a concession price, a thing which we did in Baroda nearly a decade ago. However, that is now forgotten and comparison made of only the present policies.

All crop tests on farmer's fields with regard to Attare and Waggad cotton, Pusa wheat and safflower came to nought. The idea of these field tests, however inviting it may be, has rarely succeeded. There is not the same concentration of effort; there is not the same regard for seasons lost which are considerations of prime importance in experimental work. It is to be hoped that Amreli will not be allowed to be long left without resource of its own in this matter and that a farm will soon be opened for the District.

The one successful demonstration was that pertaining to use of Poona Furnace of Damnagar. The practice has been an established one for long in Kodinar but somehow it

had never appealed in the District proper. Mr. Patwardhan Shastri, Wahiwatdar of Damnagar took up the matter and with the help of the Agricultural Association there, a test was finally arranged. Fuel price had gone up and the saving resulting from the use of the Poona Furnace was so striking that there was demand for many more sets.

It is hoped that the lesson of the demonstration will be borne in mind in the next season. The interest of the Wahiwatdar and presence of the Suba-saheb have enabled the demonstration to be popular and similar combinations should result in further progress in the District.

(2) Demonstration and Shows.

43. There was no district demonstration during the year.

Agricultural and
Industrial Exhibition
in Baroda.

A general Agri-Industrial Exhibition was held in Baroda from 11th to 31st December 1923 in conjunction with a syndicate along with the exhibits of the Baroda Court in Empire Exhibition. A departmental stall was arranged showing the various activities of the Department and exhibits were received from all Districts through the Agricultural Inspectors. The Bombay Agriculture Department also sent in exhibits which added much to the completeness and attractiveness of the stall and we are very much indebted to their cordial help on such occasions.

A revival meeting of the Navsari Agricultural Association was held during the year under the guidance of the Suba-saheb and measures for more effective working discussed.

The Annual gathering of the Kadi District Agricultural Association was held at Unza and a review of the agriculture work of the year taken. It was decided to attract special attention to Pusa wheat by awarding of prizes to best growers. The question regarding export of cattle chiefly buffaloes from the District was also discussed without any practical result.

(3) Publications.

44. The Annual agricultural Calendar in Gujrathi was published and sold out in a month's time after publication. This shows the growing popularity of the Panchang. The publication of the Gujrathi agricultural quarterly 'Kheti and Sahakarya' is being kept up.

Khedut Panchang
and quarterly.

Leaflets on the cultivation of lucerne and Pusa wheat were published under the auspices of the Kadi District Agricultural Association.

(1) B. AGRICULTURAL ENGINEERING.

45. The section continued in charge of Mr. B. G. N. Acharya except for the period that he was transferred to the Railways when the charge remained with the Boring Overseer, Mr. Gandhi.

Charge.

46. A bad season means a strenuous demand on the Boring. During the year under report the question had become further complicated owing to the extreme shortage of drinking water supply. The situation in the Kadi District was particularly bad in this respect and the Department gave whatever assistance it can to the Local Board. Thus seven hand machines and two power driven ones were set apart for the Kadi Panchayat work.

Work of the Boring
Branch.

In order that a more effective supervision may be maintained, the head quarters of the Boring Overseer were temporarily shifted to Mehsana. Of the 14 Panchayat wells taken up, six were successful, six incomplete and two were abandoned.

47. It was while working on one of these wells and at Venpura in Chansma Taluka that an artesian water flow was struck at a depth of 222 feet. The flow of water is at the rate of 1,200 gallons

Artesian water flow.

per hour. Venpura, on this account, has been a centre of attraction. Several other deep borings in the various parts of the District are now on hand and their conclusion would solve the question of the possibilities of this source of water for purposes of economic crop production.

48. The boring stock of the Department consists of 19 hand Cawnpore sets, two Musto-patent power and two power calyx drills. Besides sets set apart for Kadi Panchayat described above, six Cawnpore sets were used in the Baroda District, one Musto-patent in Amreli and one calyx in Navsari District.

49. The total number of applications including Panchayat work came to 126. 110 wells were taken up of which 70 were successful. The increase of water was estimated at 116½ Koses but the percentage of success is only 63. This is due to the large number of abandoned wells and unsuitable places for boring. The total depth bored came to just a little over 9,000 feet. Details of work done are given in Appendices XX to XXIV.

50. The tractor operations progressed very satisfactorily during the year under report. In addition to the machines of the last season, six new tractors were brought by private initiative and about 2,500 bighas of new land opened. The Agricultural Engineer was constantly on the run in keeping all these machines in running order and the satisfactory progress is in a large measure due to the untiring energy of Mr. Acharya. There was such a rush of work during the latter part of the year that night work was undertaken by fitting the tractors with flash lights. Details of the newly purchased tractors are given in Appendix XXV.

The Fordson tractor owned by the Department was sent to Tulsipura for trial but the land being hard it was used only with cultipacker, when it covered an area of about 50

bighas. The power cane crusher was worked at Vyara with the same tractor and it was found to be the cheaper and more convenient way of providing the power.

Trials with the new power machine Dauntless Cultivator were taken on the Baroda Farm and the work turned out found to be satisfactory. It took an hour to cultivate one acre at a cost of Rs. 3. Nearly 16 acres were thus cultivated on the farm.

A trial with the hand tractor was also taken. The idea in purchasing this machine is to see if it could replace the bullocks in parts where the cost of maintenance has gone high. It seems from the trial that the tractor does not work with the expected speed. In a short trial it took nearly six hours to cultivate an acre and the cost worked at Rs. 3-11-0. The trial, however, was for too short a period and too small an area. Further tests will be taken.

The facility of the tractor operator and oil engine classes was well received by needy cultivators.

Ten applications for tagavi were received and after inspection of sites of seven of these, due recommendations were made.

51. Mr. Acharya deserves special mention for the energy skill and devotion with which he conducted the boring operations, helped the tractor owners and managed the section.

Special note for Mr. Acharya.

(C) VETERINARY.

52. A new general ruling regarding the financing of the Veterinary Dispensaries has been adopted by Government and made applicable during the year. This puts the Government share of the contribution to one-third of the total, the rest being made up by other sources mostly the Local Boards. Most of the Local Bodies rose to the occasion and as a result all the dispensaries with the exception of one at Amreli have been continued. The Navsari Dispensary has been transferred to Vesma.

Operations of the new rule and the Veterinary Dispensaries

The Navsari Prant Panchayat has taken the right course in this matter by taking upon itself the responsibility of providing for this need of agriculturist and making payments of the contributions from the Prant Panchayat Funds. It is an example that may be followed with advantage by other Boards if they are to discharge their responsibilities to the agricultural public in this matter in the right spirit.

A new dispensary was opened at Sidhpur during the year under report. The number of dispensaries working at the close of the year was thirteen and is made up as follows:— Vesma, Kathor, Karchelia and Vyara in Navsari District; Baroda, Dabhoi, Sankheda, Petlad and Bhadran in the Baroda District; and Mehsana. Patan, Vijapur and Sidhpur in Kadi District.

The new rule became operative in the middle of the year and until that time the Amreli Dispensary continued working and closed later.

53. In order to have a better check on the technical work of these dispensaries and to bring them to a uniform standard of service, a post of a Veterinary Inspector was created during the year and Mr. S. M. Vasawada appointed to it. He took charge of the duties in January 1924, and since then has closely examined the working of most of the dispensaries and made suggestions of improvement which are receiving due attention.

54. The total number of fresh cases treated during the year including those treated in the District while on tour came to 15,637 as against 14,621 during the previous year. If we add to these 460 cases remaining under treatment at the beginning of the year, the total number of cases receiving veterinary aid comes to 16,097, an average of about 1150 cases per dispensary. Fresh cases admitted at Dispensaries alone came to 14,342 and with cases on hand at the beginning of the year, the total came to 14,802.

Out of the fresh cases admitted for treatment, 14,132 were treated as out-door, 210 as in-door, 563 while on tour and 732 were inoculated against rinderpest.

55. Out of fresh cases admitted at the Dispensary as
 Class of patients. 2,189 were horses, 9,919 cattles, 560
 dogs and 1,464 made up the miscella-
 neous class including sheep, goat, camel, donkey, cats, birds
 etc. The 210 in-door patients were made up of 39 horses,
 168 cattle and 3 others. Details are given in Appendix
 XXVI, and XXX.

56. From the analysis of diseases treated at the dispensary
 Appendix XXVII, it seems that the
 Classification of dis- disorder of the digestive system num-
 eases and operations. bered 2,338, next in order were skin
 affections. 1,220 entries were responsible for specific troubles
 and 904 of the eye and ear. The miscellaneous class
 numbered 5,027.

The total number of operations came to 1,476, out of
 which 730 were major operations and 746 minor ones.

57. The total number of out-break reports received during
 the year came to 38. Twenty-four of
 Out-break of epide- these were for rinderpest and fourteen
 mics and preventive for foot and mouth disease. All these with
 inoculation. the exception of one were properly
 attended by the Veterinary Surgeons.

Preventive inoculations with anti-rinderpest serum was
 undertaken wherever the people were agreeable to its use. The
 total number of cases so inoculated came to 732. Details are
 given in Appendices XXVIII and XXX.

58. The village Patel and Talati on whom rests the
 primary responsibility of intimating out-
 Epidemics note pro- break of diseases do not seem to take
 perly reported this function seriously. Quick measures
 in combating the spread of the disease are an essence of suc-
 cess in dealing with them and insistence must be placed on
 prompt intimation being given. Stronger strictures from
 Government to that effect are necessary.

59. The stallion at Patan Veterinary Dispensary continues to give service to mares brought at the dispensary. The virility of the animal is, however, getting somewhat doubtful and it is intended to replace him as soon as a suitable animal was available. 17 mares were served during the year.

60. The total expenditure on account of Veterinary Dispensaries came to Rs. 28,327-9-2. The income including the contribution of 2/3 of the expenditure from other sources came to Rs. 17,883-13-8. Details are given in Appendix XXXI.

61. In conclusion, I wish to commend specially the services of Mr. Acharya, Agricultural Engineer to the notice of Government.

C. V. SANE.

Director of Agriculture.
Baroda State.

APPENDIX No. I.

Important posts in the Department of Agriculture in the
year 1923-24.

FARM SUPERINTENDENTS AND INSPECTORS.

Mr. P. P. Patel, B.Ag.	...	...	Amreli District Agricultural Inspector.
Mr. R. G. Patel, B.Ag.	...	...	Kadi District Agricultural Inspector.
Mr. G. K. Desai, B.Ag.	...	...	Navsari District Agricultural Inspector.
Mr. V. M. Kathavate, B.Ag.	...	...	Baroda Farm Superintendent.
Mr. D. S. Medatkar, B.Ag.	...	...	Baroda District Agricultural Inspector.
Mr. I. D. Desai, B.Ag.	...	...	Cotton Officer.

AGRICULTURAL ENGINEERING.

Mr. B. G. N. Acharya	...	...	Agricultural Engineer.
Mr. H. C. Gandhi	...	...	Boring Overseer.

VETERINARY BRANCH.

Mr. S. M. Vasawada, G.B.V.C.	...	...	Veterinary Inspector.
Mr. D. B. Pandya, G.B.V.C.	...	...	Baroda Veterinary Surgeon.
Mr. H. V. Save, G.B.V.C.	...	...	Pattan Veterinary Surgeon.

APPENDIX No. I. -*Concluded.*

Mr. C. V. Mankodi. Navsari Veterinary
Surgeon.

DAIRY.

Mr. Shashikant K. Desai - Superintendent for
Cattle Breeding and
Dairying.

APPENDIX No. II.

Statement showing Tagavi advances recommended to the cultivators in the year 1923-24.

Serial No.	Name of the cultivator.	Amount recommended.	For purchase of	Remarks.
2	2	3	4	5
BARODA DISTRICT.				
1	Kashibhai Khushalbai, Bamangam, Taluka Bhadran ...	11,111	Tractor	
2	Fakirbhai. Khodabhai Pipli, Taluka Bhadran ...	5,000	Pump	
3	Chunilal Bhikhabhai, Bhadran...	6,000	Pump	
4	Sardar Ramchandra Narayan Ambegaoker, Baroda ...	5,000	Tractor	
5	Manibhai Bhailal, Manej, Taluka Petlad ...	3,500	Pump	
KADI DISTRICT.				
6	Chimanlal Sankaleshwar. Kalol	5,000	Pump	
	Total ...	Rs. 35,611		

APPENDIX

The statement showing expenditure and receipts
of the Annual Report

Serial No.	Branch.	Pay.	Travelling allowance.	Experiments and demonstrations.	Other charges.
1	2	3	4	5	6
1	Head Office ...	11368- 7- 2	2155- 7- 0	1705- 4- 0	14327- 7- 3
2	Agricultural Engineering.	8718- 7- 3	2671- 3- 0	697- 4-11	17769- 2- 0
3	Baroda Farm ...	3083- 5-11	10- 3- 0	...	9672- 5- 3
4	Jagudan Farm ...	707- 2- 9	93- 7- 0	...	4539- 0-11
5	Dabhoi Farm ...	33- 5- 4	...	...	796- 3- 9
6	Dairy ...	7015-13- 9	246- 8- 6	...	28789-10- 7
7	Inspectors ...	6175- 5- 4	1354-14- 0	397-11- 6	243- 0- 0
8	Cotton Office ...	876-14- 8	205- 8- 6	...	245- 0- 0
9	Veterinary Dispensaries.	18649- 2- 3	689- 6- 0	...	8989- 0-11
	Total ...	56628- 0- 5	7426- 9- 0	2800- 4- 5	85370-14- 8

No. III.

of the Department of Agriculture as referred to in para 7
for the year 1923-24.

Total expenditure.	Receipts.	For the year 1922-23		Remarks.
		Expenditure.	Receipts.	
7	8	9	10	11
29556- 9- 5	568- 0-10	25117- 5-11	987- 8- 0	
29856- 1- 2	1864- 8- 6	17679- 0- 7	1289-15- 5	
12765-14- 2	12106- 7- 7	13544-15- 8	9100- 5-10	
5339-10- 8	2520- 6- 2	3439 -4- 5	2596-12- 6	
829- 9- 1	...	...	...
36052- 0-10	15697- 4- 8	30358- 2- 6	18327- 3-10	
8170-14-10	...	7621-14- 1	...	
1327- 7- 2	...	...	...
28327- 9- 2	17883-13- 8	28764-14- 6	7337- 8- 3	
152225-12- 6	50640- 9- 5	126525- 9- 8	39639- 5-10	

APPENDIX No. IV.

Statement showing Rainfall in different Talukas of the State in the year 1923-24.

District.	Taluka.	Rainfall of 1923-24.	Normal of last ten years.	District.	Taluka.	Rainfall of 1923-24.	Normal of last ten years.
1	2	3	4	5	6	7	8
BARODA.	Baroda City ...	18'22	38'02	KADI.	Kadi ...	10'57	28'34
	Baroda Mahal.	17'39	36'27		Kalol ...	11'19	27'34
	Padra...	13'21	32'29		Dehgam ...	14'42	28'99
	Karjan ...	17'32	38'47		Attarsumba ...	15'22	30'76
	Dabhoi ...	12'77	38'92		Visnagar ...	12'82	27'07
	Sankheda ...	18'03	42'65		Mehsana ...	10'04	27'01
	Tilakwada ...	23'95	39'43		Kheralu ...	8'60	24'34
	Sinor ...	23'33	38'50		Sidhpur ...	10'59	24'47
	Chandod ...	20'44	25'79		Pattan ...	9'29	21'35
	Petlad ...	12'53	30'50		Harij ...	6'73	21'84
	Bhadran ...	15'08	31'51		Vijapur ...	9'47	28'92
	Savli ...	17'37	36'44		Chansma ...	8'02	23'81
	Waghodia ...	15'38	39'49		Amreli ...	11'38	22'42
	NAVSARI.	Navsari ...	44'60		53'35	Bhimkatta ...	5'86	24'31
Gandevi ...		58'07	59'30	Dhari ...	7'16	21'33	
Palsana ...		37'55	51'55	Khambta ...	14'37	19'28	
Mangrol ...		24'81	39'31	Damnagar ...	13'62	21'27	
Kamrej ...		23'95	42'61	Ratanpur ...	11'03	22'16	
Vyara ...		58'09	57'33	Kodinar ...	18'46	27'24	
Songhad ...		64'68	54'96	Okhamandal ...	5'16	13'12	
Mahuva ...	47'02	50'60	Amreli.	Bevt ...	3'02	11'50	

APPENDIX No. V.

Statement showing the area and value of crops grown
on the Baroda Farm as referred to in Para 12th
of the Annual Report for the year
1923-24.

Serial No.	Name of the crop.	Area.		Yield.		Value.	Remarks
		A.	Gts.	Grain or other principal product.	Fodder.		
1	2	3	4	5	6	7	8
				Mds. Srs			
1	Bajri	...	12 20	376- 7	8,435	1474- 6- 7	
2	Cotton	...	7 ...	124-27	...	1450- 5- 9	
3	Cotton mix	...	1 20	19- 5	...	213- 9- 0	
	Tali	...	...	9- 4	...	59- 2- 4	
4	Cotton May sown	...	1 ...	27-23	...	304- 7- 6	
5	Ground-nut Dry	...	1 38-7	62-24½	...	172-14- 9	
	Green	...	...	120-12	181- 0	51-11- 6	
	Fodder	...	...	...	...	45- 4- 0	
6	Kodra mix	...	1 20	64-34	...	79-15- 6	
	Tuer	...	...	24	3- 8	1- 9- 7	
	Tal	...	...	1	...	0- 2- 2	
	Cotton	...	...	5	...	0-11- 3	
	Paral	...	...	...	...	9- 0- 0	
7	Tuer	...	1 9	15-29	21-11	42- 2- 3	
8	Tuer mix	...	2 ...	13-16	...	33- 8- 0	

APPENDIX No. V.—Continued.

Serial No.	Name of the crop.	Area.		Yield.		Value.	Remarks.
		A.	Gts.	Grain or other Principal product.	Fodder.		
1	2	3	4	5	6	7	8
				Mds. Srs.			
	Tuer grain	...	...	...	...	...
	Green pods	...	...	15-10	...	1-14- 6	
	Tali	...	...	...	...	...
	Tal	...	...	5-24	...	61-13- 3	
	Cotton	...	...	13-29½	...	89- 4- 9	
9	Gawar	...	2 36	54-19	...	154- 0- 0	
10	Castors	...	6 6	72-12	...	363-11- 5	
11	Tobacco	...	1 ...	20-25½	...	200-13- 0	
12	Wheat	...	4 10	170-13	203-30	590- 1-14	
13	Gram	...	1 ...	14-10	...	32- 7- 3	
	Green	...	...	1-10	22-10	1-14- 0	
	Gotar	...	...	...	...	0-11- 6	
14	English Vegetables.	...	1 36	...	...	...
	Cabbage	...	...	300- 6½	...	336-11-11	
	Flowers	...	...	215	...	18-10- 9	
15	Onions	...	30	394-30	...	408- 0- 3	
16	Chillies—						
	Dry	...	1 ...	149-39	...	278- 0- 3	
	Green	...	...	8-17	...	84- 4- 0	

APPENDIX No. V.—Continued.

Serial No.	Name of the crop.	Area.		Yield.		Value.	Remarks.
		A.	Gts.	Grain or other principal product.	Fodder.		
1	2	3	4	5	6	7	8
17	Maize	...	1	...	Mds Srs.	...	
	Cocks	...	...	87-30½	542-37	65- 7- 6	
	Fodder	...	...	...	...	101-12- 7	
18	Sundhia for grain	...	3	6	48-12	...	
	Bundles	...	...	...	2222	339- 2-10	
	Leaves	...	...	...	25-20	...	
19	Sundhia for fodder rain crops	...	3	5	...	812-38	152- 6- 9
20	Summer Sundhia	...	1	20	...	548-22	102-13- 6
21	Sudan grass	...	...	20	1-20	552 bundles.	50- 9- 2
22	Lucerne 1st year	...	2	5	2-13	1480- 8	1578- 1- 9
23	Lucerne 2nd year	...	1	...	2-13	500-36	392-14- 6
24	Guinia grass	...	1	37	...	627- 3	78- 6- 3
25	Outside Chaidi	...	2	20	...	...	50- 0- 0
26	Cotton Ratoon	...	...	20	7-12	...	80- 9- 3
	Ratoon Sundhia	...	...	29	...	117- 0	21-15- 0
27	Plantations	...	...	...	268	...	...
	Vines and Figs	...	...	20	...	...	2- 7- 0
	Guavas	...	3	20	...	...	2200- 0- 0
	Oranges	...	...	20	...	...	13- 6- 0

APPENDIX No. V.—Concluded.

Serial No.	Name of the crop.	Area.		Yield		Value.	Remarks.
		A.	Gts.	Grain or other principal product.	Fodder.		
1	2	3	4	5	6	7	8
28	Inter. crops	...	...	Mds Srs. ...	...	...	...
	Brinjal	...	...	62-16½	...	36- 2- 3	
	Cabbage	...	...	32-10½	...	36- 3- 1	
	Beens	...	...	0- 6½	...	0-13- 0	
	Knolkohl	...	...	16-11	...	41- 2- 0	
	Tomato	...	...	8-25	...	11-15- 4	
29	Planty Study	...	5	...	...	...
	Bajri	...	...	1- 8	90 bundles.	8- 3- 2	
	Cotton	...	...	0-24	...	6- 9-11	
30	Seed bed	...	10	...	...	...
	Tamatoes	...	...	10-39½	...	15- 3-11	
	Onion Seedlings	...	...	Nos. 6½	...	7- 9- 0	
	Salid	...	...	6-25	...	10- 9- 9	
	Beet	...	...	15-6	...	22-14- 9	
	Peeper	...	...	0- 2½	...	3-10 6	
	Onion seeds	...	...	0- 4½	...	4- 8- 0	
	Chillies Dry	...	...	0-34	...	8- 8- 0	
	Green	...	...	0-12½	...	0-10- 0	

APPENDIX No. VI.
Manurial trials of Tobacco (on Baroda Farm) 1923-24.

Serial No.	Kind of manure.	Quantity per acre in lbs.	No. of plants treated.	Dry weight obtained lbs.	Weight per hundred plants.	Yield per acre calculated in lbs.	Increase per acre over no top dressing. lbs.	Cost of the artificial	Value of the increase at Rs. 8 per one maund of 40 lbs.
1	2	3	4	5	6	7	8	9	10
1	Super phosphate...	60	810	219.0	27.3	1,321	203	11- 7-10	52- 9- 7+
2	Cotton seed meal...	250	428	109.5	25.5	1,234	117	20-15- 5	23- 6- 5+
3	Do. Do. + Sodium Nitrate	125 } 40	457	109.75	24.0	1,161	43	15-10- 2	5- 9- 7-
4	Cotton seed meal + Pot. Nitrate	125 } 47½	386	102.75	26.3	1,273	155	21-11- 3	31- 1- 0+
5	Sodium Nitrate	90	383	107.5	28.0	1,355	237	11- 9- 6	47- 6- 5+
6	Pot. Nitrate	95	364	117.5	32.2	1,559	441	22- 7- 0	88- 3- 2+
7	No top-dressing	...	387	89.5	23.1	1,118	...	...	...

APPENDIX No. VII.

Manurial trials of Onions on the Baroda Farm for the year 1923-24.

No.	Treatment per acre.	Yield per acre. Lbs.	Increase or decrease.	Cost of Artificial Rs. as. p.	Value of the increase. Rs. as. p.
1	2	3	4	5	6
1	Green manure only.	15,000	...	...	...
2	G. M. + Poudrette 20 lds.	23,580	8,580	25- 0- 0	220- 1- 5½
3	G. M. + Poudrette 20 lds. + S. N. 285 + S. P. 112 + P. S. 56.	25,120	10,120	64- 1- 9	259- 9- 4
4	G. M. + Poudrette + Am. S. 225 + S. P. 112 + P. S. 56.	24,000	9,000	62- 6- 3	230- 13- 9
5	G. M. + Poudrette + Castor cake 900.	24,040	9,040	33- 12- 0	231- 14- 2
6	G. M. + Poudrette + S. N. 285 + S. P. 112.	25,400	10,400	58- 2- 4	266- 12- 4
7	G. M. + Poudrette + S. N. 150 + C. C. 450 + S. P. 39.7.	23,460	8,460	43- 9- 2	217- 0- 1
8	G. M. + F. Y. M. 20 + S. P. 112.	23,600	8,600	21- 7- 2	220- 9- 7
9	Do. Do. Do. + A. M. S. 225.	23,160	8,160	34- 15- 8	209- 5- 0
10	Do. Do. + S. N. 285.	24,200	9,200	36- 11- 2	235- 15- 10
11	Do. Do. + S. N. 150 + C. C. 450 + S. P. 39.7 + P. S. 56.	23,400	8,400	49- 8- 7	215- 7- 6
12	Do. Do. + P. S. only 224.	22,640	7,640	23- 13- 5½	195- 15- 7
13	Do. Do. + P. S. only 100 lbs.	17,220	2,220	10- 10- 2½	56- 15- 1

APPENDIX No. VIII.

Spacing trial of Cotton on Baroda Farm.
1923-14.

Plot No.	Distance in feet.	Yield per acre.	Average.	Average of 3 years from the Report 1922-23.	Remarks.
1	2	3	4	5	6
53	2'	560	...	718.3	Not much wilt.
52	3'	424	...	682.6	Do. Do.
54	4'	848	...	822.3	Do. Do. + Low lying blackish soil.
47	4' x 1'	520	} 542	...	Slightly less attacked by wilt.
50	4' x 2'	564			
51	5'	476	...	836.5	Do. Do.
48	5' x 1'	440	} 486	...	Do. Do.
49	5' x 2'	532			
86	5'	1,072	...	...	Left side two rows did not grow beyond one foot or 2 owing to the adjoining Bajri plot.
85	4'	1,292	...	...

APPENDIX No. IX.

Spacing trials of Bajri on the Baroda Farm for the year 1923-24.

Spacing.	Plot.	Yield grain per acre.	Average yields.	Average weight of fodder.	Remarks.
1	2	3	4	5	6
1'	56	1,220	} 1,079	2,556	Rather low lying.
1'	57	1,040			
1'	60	988			
1'	61	1,068			
1½'	55	1,156	} 1,016	2,888	
1½'	62	876			
2'	58	896	} 858	2,160	
2'	59	820			

APPENDIX No. X.

The Statement showing the acreage, total yields and average, maximum and minimum out-turns per acre of principal crops on the Baroda Farm during the year 1923-24.

Serial No.	Crop.	Total area. A. G.	Total yield. Lbs.	Out-turns per acre.			Remarks.
				Average.	Maximum	Minimum	
1	2	3	4	5	6	7	8
1	Bajri	12-20	14,989	1,199.1	2,168 (7-8)	740 (116)	
2	Cotton, June- July sown.	7- 0.	4,680	668	1,292 (85)	314 (97)	
3	Cotton mix	1-20	765	510	732	378	
	Tali		364	242.2	364	78	
4	May sown Cotton.	1- 0	1,103	1103	...	...
5	Ground-nut (dry sold)	1'38'7	2,504	1,252	...	...
6	Castors.	6- 6	2,898	562.7	1,064 (1)	358 (19-20)	
7	Tur.	1- 0	571	571	...	...
8	Lucerne (1st year)	1- 0	35,258	35,258	...	...
9	Tobacco ...	1- 0	1,020	1,020	...	...

APPENDIX No. XI.

Statement showing the prices for the Baroda Farm products during 1923-24 and average cost of manure purchased.

Serial No.	Name.	Price per one maund 40 lbs.	Kind of manure	Cost.	Per.	Remarks.
1	2	3	4	5	6	7
		Rs. a. p.		Rs a. p.		
1	Bajri	2 - 9 - 2	Super-Phosphate	7-10-7	Per 1 md.	
2	Cotton	11- 0 - 8	Nitrate of Potash	9- 7-2	"	
3	Ground-nut	3 -10- 0	Ammonium-Sulphate	6- 3-6	"	
4	Castors	5 - 2- 0	Sodium-Nitrate...	5- 2-5	"	
5	Til	6 - 8- 0	Potassium-Sulphate	4- 4-1	"	
6	Tali	6 - 8- 0	Bone-meal	2- 7-6	"	
7	Mug ... ..	...	Farm yard	1- 4-0	Per cart load.	
8	Guwar	2 -13- 9	Castor-cakes	1- 8-0	per 1 md.	
9	Tuer	2 - 8- 0	Poudrette	1- 4-0	Per cart load.	
10	Wheat	2 -11- 4	...	...	...
11	Red Cawnpore Tuer.	...	...	...	...
12	Gram	1 -14- 0	...	...	...
13	Tobacco... ..	8 - 0- 0	...	...	...
14	Bajri fodder	5 - 0- 0	...	...	...
15	Sundhia	8 - 0- 0 per 100 bundles.	...	...	...
16	Lucerne... ..	1 - 0- 0 per 100 bundles.	...	...	...
17	Wheat Pusa 4	2 -12- 0	...	...	...
18	Sundhia seeds	3 - 8- 0	...	...	...
19	Lucerne fodder	0 -10- 0	...	...	...

APPENDIX No. XII.

The Statement showing the rate of labour, etc., on the Baroda Farm, 1923-24.

Item.	Charges.		Remarks.
	1922-23.	1923-24.	
1	2	3	4
LABOUR			All the rates are averages:-
Farm men.	} 0- 6- 0	0- 6- 3	The bullock, engine, miscellaneous charges have been calculated from actual expenses from June 1st to 31st May.
Prisoners			
Day labour	0- 6- 7	0- 5- 9½	
OTHER CHARGES.			
Engine	0-12- 0	0-10- 9	Per one hour.
Bullocks	1- 4- 6	1- 2- 9	Per one bullock.
MISCELLANEOUS.			
Including Watching, general cleaning, etc.,	12- 7- 0	9- 2- 0	Per acre.

APPENDIX No. XIII.
The Statement showing the produce and value of the
produce per plot of the Jagudan Farm for
1923-24.

Serial No.	Plot No.	Area.		Crop.	Produce.	Value of produce.
		B.	V.			
1	2	3	4	5	6	7
1	1-5	1	10	Bajri	Grain. Bundles. lbs. 383—709	44- 9- 6
				Pusa wheat	1,180—1,500	96- 2- 6
2	6-10	1	10	Pusa wheat	1,675—1,280	126-14- 6
3	11-12	1	...	Cotton.	Lbs. bolls 970	170- 7- 6
4	13-15	1	10	Bajri	404—713	46- 3- 0
				Pusa wheat	1,160—1,100	90- 5- 0
				Wajia	653—550	44-15- 6
5	16-20	2	10	Tobacco	Padas 1914	345-12- 6
6	21-30	5	...	Chillies Rajgiro.	Mds. Lbs. 212—20 2—20	} 368-13- 0
7	31-31 1	1	10	Pusa wheat	(1) 1,072—1,100		84- 6- 0
	1-2				(2) 640—858	52-10- 6
8	32-34	1	10	Bajri	130—209	13-14- 3
				Summar Sundhia	Fodder Mds. Lbs. 240—20	60- 2- 0
9	35	1	10	Pusa wheat	1,190—1,500	111-14- 0
10	36-37-37 1	1	15	Lucerne	Green fodder Mds. 132 Lucerne 543-20	167-14- 0 21- 0- 0

APPENDIX No. XIII—*Concluded.*

Serial No.	Plot No.	Area.		Crop.	Produce.	Value of produce.
		B.	V.			
1	2	3	4	5	6	7
11	38-39	1	5	Bajri	174—284	18-10- 3
12	40	0	5	Santra	7,815 Santras 96 Mosambi	204- 7- 0
13	6	...	15	Lemons	...	13-11- 0
14	Nursery	4	5	Bajri	.259—488	30- 1 -3

APPENDIX No. XIV.
Statement showing strength of the Dairy herd
for the year 1923-24.

Serial No.	Description.	Strength on 1st August 1923.	Changes during the year.					Total.
			Sold.	Dead.	Born.	Bought		
1	2	3	4	5	6	7	8	9
A	Cows.							
1	Cows	39	...	3	4	...	...	40
2	Heifers	8	...	...	...	...	4	4
3	Cows F. Calves.	23	4	2	11	...	...	28
4	" M. Calves.	23	8	2	13	...	...	26
5	Stud bull	2	1	...	...	...	...	1
(a)	Bullocks.							
6	Bullocks	4	...	...	...	1	...	5
	Total...	99	13	7	26	1	4	104
B	Buffaloes							
7	Buffaloes	32	1	3	1	1	...	30
8	Heifers	4	...	...	...	...	1	3
9	Buffaloes' F. Calves.	9	6	1	13	...	...	15
10	Buffaloes' M. Calves.	9	7	2	7	...	...	7
11	Stud bull	1	...	...	...	...	...	1
	Total...	55	14	6	21	1	1	56
	Grand Total... ..		160					

APPENDIX. No. XV.

• Statement showing some of the best performers in the herd during the last Lactation!

Serial No.	Name of the animal.	Milk yielded during Lactation.	Remarks.
1	2	3	4
1	Chandon	4,013 lbs.	
2	Lilor	3,682 "	
3	Raoman	3,679½ "	
4	Sakhina	3,431½ "	
5	Kusum	3,405½ "	
6	Yamuna	3,193½ "	Continues.
7	Madhuri	2,822½ "	
8	Manki	2,799 "	
9	Sundari	2,734 "	Gives excellent bull calves hence calves allowed to suckle more.
10	Triveni	2,731 "	
	BUFFALOES.		
11	Nani Chhagari	4,984 "	
12	Sanki	3,132 "	
13	Kina	3,198 "	
14	Harvidaya	3,150½ "	
15	Moti Chhagari	3,020 "	Continues.

APPENDIX No. XVI.

Statement showing percentage of fat during the year
1923-24.

Serial No.	Period.	Animals.	Percentage of fat.	Remarks.
1	2	3	4	5
			C. B.	
1	August 23 to October 23.	Cows. Buffs. Herd	4·7 7·1 5·9 herd.	
2	November 23 to January 24.	{ Cows Buffaloes	4·9 6·5	
3	January 24 to April 24...	{ Cows Buffaloes	4·5 7·5	
4	May to August 24 ...	{ Cows Buffaloes	4·3 7·0	

APPENDIX No. XVII

Statement showing production of fodder on the Dairy
Cattle Farm, Makerpura, 1923-24.

Serial No.	Survey No and Area.	Plot No.	Crops.	Yield of crop.		Remarks.
				Grain.	Fodder.	
1	2	3	4	5	6	7
1	B. 88 4 V. 9	I	Sundhia	...	19400 Sundhia	
2	87 3 18	II	Bajri, Mag. Math and Kanmi Ga- war.	...	9310 Bajri. 2028 Mag.	
3	90 2 3	III	Sundhia	...	10400 Sundhia	
4	91 8 18	IV	Bajri, Mag, Math, Sun- dhia and Val.	21	2000 Bajri. 1000 Mag. 27400 Sundhia	
5	95 2 3	V	Sundhia	...	9600 Sundhia	
6	96 2 7	VI	Sundhia	...	7255 Sundhia	
7	90 6 14	VII	Sundhia, Maize and Chola.	...	6080 Maize. 800 Chola.	
8	98 8 12	VIII	Chola and Sundhia.	...	11400 Sundhia 32200 Chola.	
9	92 8 11	IX	Bajri, Mag, Math.	16	2600 Bajri	
				Total	1,41,473 lbs.	

Disposal:—

1,20,015 lbs. seed to Dairy Cattle.

21,458, lbs. put in Silo hits.

1,41,473 lbs. (total)

APPENDIX No. XVIII.

Statement of fodder and concentrates fed to the Dairy
Cattle during the year 1923-24.

Serial No.	Name of the article.	Weight fed to the Dairy cattle.			Price per contract rates.			Remarks.
		Mds.	Srs.	T.	Rs.	As.	Ps.	
1	2	3			4			5
1	Cotton seed	1,035	27	20	2,191	15	6	
2	Kormu	1,162	36	0	2,438	0	4	
3	Oil cake	440	12	0	1,086	11	9	
4	Bran (Bhusu)	417	39	0	1,003	14	9	
5	Math	330	10	0	881	15	4	
6	Gram	114	10	0	250	12	2	
7	Gawar	570	8	0	1,231	15	4	
8	Bajri	18	15	0	51	6	0	
9	Suva	5	25	0	27	7	0	
10	Gal (Hickle)	12	24	0	104	12	3	
11	Oil	8	20	0	132	3	9	
12	Rock salt	5	0	0	25	2	8	
13	Barley	30	19	0	121	14	5	
14	Castor oil	39	39	30	11	9	7	
15	Salt	56	17	27½	100	13	4	
16	Wheat	11	0	0	38	9	8	
17	Dry Ginger	0	3	0	3	0	0	
18	Black piper	0	1	0	0	8	0	
19	Piper	0	0	20	1	8	0	
20	Halclar	0	1	0	0	12	0	
21	Alum (Fatakdi)	0	1	0	0	8	0	
22	Mag Dal	0	30	0	3	6	0	
23	Tal kacharia	1	0	0	12	0	0	
	Total amount of concentrates paid for	4,222	19	17½	9,720	13	10	
	Total fodder paid for	3,536	33	0	3,536	13	3	

APPENDIX No. XIX.

Statement showing the results of manurial experiments in Dharmaj in the year 1923-24.

Serial No.	Name of the person.	Area under experiment.			Treatment given to the plot.			Out-turn.				Remarks.
		Name of the field.	Area of comparison	Average No. of plants.	Sodium nitrate.	Super Phosphate.	Pot Sulphate.	Treated.	Un-treated.	Excess.	Percentage.	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Vaghjibhai Bajeebhai.	Adiyalawalu.	½	4,000	50	30	40	683	496	187	37	Per maund of 40 lbs.
2	"	"	½	"	75	...	...	681	492	189	38	Rates of manures are as follows :-
3	Talsibhai Revabhai.	Dharokhadiyu.	½	"	50	...	...	906	675	231	34	Rs. As. Pies.
4	"	"	½	"	75	30	...	969	725	244	33	7-15- 3 Sod.-nitrate.
5	Mathurbhai.	"	½	"	50	30	...	925	700	225	32	4- 9- 0 Sup.-phosphate.
6	Shankerbhai Umedbhai	Birjwalu.	½	"	75	...	...	906	625	281	45	6-13- 0 Pot. Sulphate.
7	Raisang Bhika.	"	½	"	50	...	...	1,052	800	262	32	The average weight of unmanured Pada is taken as 1 lb., while that of a manured Pada is calculated at 1½ lbs. each.
8	Chana Bhika.	"	½	"	50	30	...	...	...	...	...
9	" "	"	½	"	75	30	...	...	...	...	...
10	Govan Dayabhai.	Adiyalawalu.	½	"	75	30	40	...	...	...	...

APPENDIX No. XX.

Abstract of Boring work done during the year 1923-24.

Serial No.	Particulars.	Baroda.	Kadi.	Navsari.	Amreli.	Total.
1	2	3	4	5	6	7
1	Bores made	38	65	6	1	110
2	Bores successful ...	28	41	1	...	70
3	Bores unsuccessful ...	3	2	2	...	7
4	Bores abandoned at the request of the owner.	4	14	2	...	8
5	Bores incomplete ...	3	8	1	1	13
6	Total depth bored ...	1,947'-5"	6,738'-9"	202'-6"	118'-0"	9,006'-8"
7	Percentage of success.	...	...	...	...	...
8	Water in koses ...	60½	61	1	...	122½
9	No. of applications ...	43	60+14	5	4	126
10	Average number of working days per each bore.	22	24.62	38	61	...
11	Number of accidents.	2	10	2	1	15
12	Number of accidents removed	1	9	1	...	11
13	Average number of feet bored in one day.	2'-4"	3'-11" & 2'-3"	1'-3"	2'-0"	...

APPENDIX No. XXI.

Statement showing the number of Bore-holes made during the year 1923-24.

Serial No.	Village.	Taluka.	Successful.	Unsuccessful.	Abandoned at the request of well-owner.	Incomplete.	Total.	Water in koses.	Remarks.
1	2	3	4	5	6	7	8	9	10

NAVSARI DISTRICT.

With Calyx drill.

23	Dholi-Kui	... Mahuva ...	...	...	1	...	1	...	
24	Vyara...	... Vyara ...	...	...	1	1	2	...	
25	Kataswel	... Vasda State.	1	1	...	...	2	1	
Total...			1	1	2	1	5	1	

With Cawnpore sets.

26.	Kosudi...	... Mungrol ...	...	1	...	...	1	...	
Total...			1	2	2	1	6	1	

KADI DISTRICT.

With Cawnpore sets.

27	Sojitra...	... Chanasma ...	1	...	...	...	1	1	
28	Jakhana	... ..	1	...	...	...	1	1	
29	Ganjet	... ..	1	...	...	...	1	1	
30	Brahmanwada.	... ..	1	...	1	...	2	1	
31	Kesuni	... ..	...	...	1	...	1	...	
32	Kamalpur	... ..	1	...	...	...	1	1	
33	Sander	... Pattan	...	...	2	...	2	...	
34	Manund	... ..	...	...	1	...	1	...	
35	Deolarda	... ..	...	...	...	1	1	...	
36	Kasura-kui	... Visnagar	2	1	1	...	4	2	
37	Rasna	... ..	4	...	1	...	5	3	
38	Visnagar	... ..	1	...	...	...	1	1	
39	Valam	... ..	2	...	2	...	4	3	
40	Bhakak	... ..	1	...	...	...	1	3	
41	Chitroda	... ..	1	...	...	...	1	1	
42	Yadu	... ..	1	...	...	...	1	1	
43	Khandoran	... ..	...	...	...	1	1	...	
Total...			17	1	9	2	29	24	

Serial No.	Village.	Taluka.	Successful.	Unsuccessful.	Abandoned at the request of well-owner.	Incomplete.	Total.	Water in koses.	Remarks.
1	2	3	4	5	6	7	8	9	10
44	Jetalvasna ...	Visnagar ...	1	...	...	...	1	1	
45	Mewad ...	Mehsana ...	1	...	...	...	1	1	
46	Dela ...	"	1	...	...	...	1	1	
47	Pilodra ...	"	...	1	...	...	1	...	
48	Bamosana ...	"	3	...	...	...	3	5	
49	Bahiel ...	Dehgam ...	2	...	...	...	2	2½	
50	Isanpur Mota ...	"	1	...	1	...	2	2	
51	Ghamij ...	"	1	...	...	...	1	1	
52	Gunchbli ...	Vijapur ...	1	...	1	...	2	2	
53	Vasai ...	"	1	...	1	...	2	1	
54	Kañipur ...	Atarsumba...	1	...	...	...	1	1	
55	Suraj ...	Kadi	5	...	...	...	5	7½	
Total ...			35	2	12	2	51	49½	

Panchayat with Cawnpore set.

56	Kaji Aliasna ...	Visnagar ...	...	...	...	1	1	...	
57	Dawada ...	"	...	...	...	1	1	...	
58	Palodra ...	Mehsana ...	...	...	1	...	1	...	
59	Sarsav ...	Chanasma ...	1	...	...	...	1	1	
60	Venpura ...	"	1	...	...	...	1	2	Artesian flow.
61	Kanhravi ...	Pattan ...	...	...	1	...	1	...	
62	Suraj ...	Kadi	1	...	...	...	1	2	
63	Siapura ...	"	...	...	...	1	1	...	
64	Deusana ...	"	1	...	...	...	1	1	
65	Roda ...	Harij	...	...	...	1	1	...	
66	Rangpur ...	Kheralu	...	...	...	1	1	...	
Total ...			4	...	2	5	11	6	

With Musto patent Machine.

67	Balol ...	Mehsana ...	1	...	...	...	1	2	
68	Sapawada ...	Chanasma ...	1	...	...	...	1	3½	Artesian flow.

With Calyx Drill.

69	Gunja ...	Visnagar ...	...	...	...	1	1	...	
Total ...			6	...	2	6	14	11½	

AMRELI DISTRICT.

With Musto patent machine.

70	Dahjida ...	Amreli	1	1	...	
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APPENDIX No. XXI.

Statement showing the number of Bore-holes made during the year 1923-24.

Serial No.	Village.	Taluka.	Successful.	Un-successful.	Abandoned at the request of well-owner.	In-complete.	Total.	Water in koses.
1	2	3	4	5	6	7	8	9
BARODA DISTRICT.								
With Calyx drill								
1	Manjusar ...	Savli ...	3	...	...	...	3	3
With Cawnpore sets.								
2	Baroda ...	Baroda ...	5	1	1	...	7	10
3	Vasna ...	"	...	...	...	1	1	...
4	Jetalpur ...	"	2	1	...	...	3	2½
5	Gorwa ...	"	3	...	...	...	3	7
6	Sama ...	"	1	...	...	...	1	2
7	Subanpura ...	"	1	...	...	...	1	2
8	Ganeshpura ...	"	1	...	...	...	1	0
9	Akota ...	"	1	...	...	...	1	2
10	Sindhrot ...	"	1	...	...	...	1	2
11	Hansapura ...	"	...	...	1	...	1	...
12	Shahapura ...	"	1	...	...	...	1	2
13	Bamangam ...	Bhadran ...	1	...	...	1	2	3
14	Siewa ...	"	...	...	1	...	1	...
15	Valvod ...	"	3	...	...	...	3	7
16	Valan ...	Karjan ...	1	...	...	...	1	1½
17	Atali ...	"	1	...	...	...	1	3
18	Potlad ...	Potlad ...	...	...	...	1	1	...
19	Bhoj ...	Padra ...	1	1	...	...	2	2.
20	Padra ...	"	1	...	...	...	1	½
21	Jarod ...	Yaghodia ...	1	...	...	...	1	1
22	Dabhoi ...	Dabhoi ...	...	...	1	...	1	...
Total...			25	3	4	3	35	57½
Grand Total...			28	3	4	3	38	60½

APPENDIX

Statement showing number of wells bored

Serial No.	Name of district and Taluka.	From 1911-12 to 1922-23					For	
		Successful.	Water in koses.	Unsuccessful.	Incomplete.	Total.	Successful.	Water in koses.
1	2	3	4	5	6	7	8	6
Baroda								
1	Petlad	192	662½	19	...	211	...	...
2	Bhadran	106	462	12	1	119	4	10
3	Padra	70	208	9	...	79	2	2½
4	Baroda	53	121	13	1	67	16	39½
5	Vaghodia	10	14	3	...	13	1	1
6	Savli	10	18	8	1	19	3	3
7	Karjan	8	22½	1	...	9	2	4½
8	Sinor	4	9	...	...	4	...	...
9	Dabhoi	1	1	4	...	5	...	...
	Total	454	1518	69	3	526	28	60½
Kadi								
10	Visnagar	101	189½	28	2	131	14	21½
11	Dehegam	88	180½	18	...	106	4	5½
12	Mehsana	30	56½	4	...	34	6	9
13	Vijapur	20	47½	1	1	22	2	3
14	Kalol	14	23	1	...	15	...	...
15	Sidhpur	9	20	6	...	15	...	...
16	Attarsumba	8	12	1	...	9	1	1
17	Kadi	5	7	4	...	9	7	9½
18	Chansma	3	3	3	...	6	7*	8
19	Pattan	1	1	...	...	1	...	...
20	Kheralu	1	1	8	...	9	...	...
21	Harij ... ..	...	...	...	...	...	...	...
	Total	280	541	74	3	357	41	57½
Navsari								
22	Navsari	50	57	3	...	53	...	...
23	Gandevi	25	44½	3	...	28	...	...
24	Kamrej	11	12½	2	...	13	...	...

No. XXII.

in different Talukas till the end of 1923-24.

1923-24.			Total to the end of 1923-24					Remarks.	
Unsuccessful.	Incomplete.	Total.	Successful.	Water in losses.	Unsuccessful.	Incomplete.	Total.		
10	11	12	13	14	15	16	17		
District.									
...	1	1	192	662½	19	1	212		
1	1	6	110	472	13	1	124		
1	...	3	72	210½	10	...	82		
4	1	21	69	160½	17	1	87		
...	...	1	11	15	3	...	14		
...	...	3	13	21	8	...	21		
...	...	2	10	27	1	...	11		
...	...	...	4	9	...	...	4
1	...	1	1	1	5	...	6		
7	3	38	482	1578½	76	3	561		
District.									Two artesian flows.
5	3	22	115	211	33	3	151		
1	...	5	92	185½	19	...	111		
2	...	8	36	65½	6	...	42		
2	...	4	22	50½	3	...	25		
...	...	...	14	23	1	...	15
...	...	...	9	20	6	...	15
...	...	1	9	13	1	...	10		
...	1	8	12	16½	4	1	17		
2	1	10	10	11	5	1	16		
4	1	5	1	1	4	1	6		
...	1	1	1	1	8	1	10		
...	1	1	...	...	...	1	1
16	8	65	321	598½	90	8	419		
District.									
...	...	...	50	67	3	...	53
...	...	...	25	44½	3	...	28
...	...	...	11	12½	2	...	13

APPENDIX

Statement showing number of wells bored

Serial No.	Name of District and Taluka.	From 1911-12 to 1922-23.					For	
		Successful	Water in koses.	Unsuccessful.	Incomplete.	Total.	Successful.	Water in koses.
1	2	3	4	5	6	7	8	9
25	Mahuwa	8	14	1	1	10	...	...
26	Palsana	4	7	...	...	4	...	...
27	Vyara	3	8½	...	2	5	...	...
28	Kataswel (Bansda State.)	...	...	...	1	1	1	1
29	Mangrol ... ..	...	...	...	...	...	...	...
	Total...	101	154	9	4	114	1	1
							Amreli	
30	Okhamandal ...	113	9½	6	...	19	...	...
31	Amreli	3	7	...	1	4	...	...
32	Kodinar	2	...	...	...	2	...	...
33	Byet	2	1	...	...	2	...	...
	Total...	20	17½	6	1	27	...	...
	Grand Total...	855	2,230½	158	11	1,024	70	122½

NO. XXII—*Concluded.*

in different Talukas till the end of 1923-24.

1923-24.			Total to the end of 1923-24					Remarks.
Un-success-ful.	Incomplete.	Total.	Successful.	Water in losses.	Unsuccess-ful.	Incomplete.	Total.	
10	11	12	13	14	15	16	17	18
1	...	1	8	14	2	...	10	
...	...	...	4	7	...	...	4	
1	1	2	3	8½	1	1	5	
1	...	2	1	1	1	...	2	
1	...	1	...	...	1	...	1	
4	1	6	102	155	13	1	116	
District.								
...	...	...	13	9½	6	...	19	
...	1	1	3	7	...	1	4	
...	...	...	2	1	...	...	2	
...	...	...	2	1	...	...	2	
...	1	1	20	17½	6	1	27	
27	13	110	925	2,353	185	13	1,123	

APPENDIX XXIII.

List of applications received in the
year 1923-24 for Boring.

Serial No.	Name of Taluka.	Last year Balance.	Received this year.	Total.	Boring done.	Applications cancelled.	Owner unwilling.	Balance at the end of the year.
1	2	3	4	5	6	7	8	9
Baroda District for Cawnpore and Drill machines.								
1	Baroda	1	23	24	20	...	1	3
2	Savli	3	3	6	2	...	3	1
3	Vaghodia	1	...	1	1	...	...	...
4	Petlad ... ..	...	2	2	1	...	...	1
5	Bhadran	1	4	5	4	1	...	...
6	Sankheda... ..	1	...	1	...	...	...	1
7	Karjan ... ..	...	2	2	2	...	...	...
8	Padra ... ..	...	7	7	3	...	1	3
9	Dabhoi ... ..	...	2	2	1	...	1	0
	Total ...	7	43	50	34	1	6	9
Navsari District for Hand & power Drills.								
10	Mahuva	3	...	3	...	...	...	3
11	Mangrol ... ..	...	1	1	1	...	...	...
12	Navsari ... ..	...	1	1	...	...	...	1
13	Vyara ... ..	...	3	3	...	...	...	3
	Total ...	3	5	8	1	...	...	7

APPENDIX XXIII.—*Concluded.*

List of applications received in the year 1923-24
for Boring.

Serial No.	Name of Taluka.	Last year Balance.	Received this year.	Total.	Boring done.	Applications cancelled.	Owner unwilling.	Balance at the end of the year.
1	2	3	4	5	6	7	8	9
		Musto Patent.						
14	Vyara	1	...	1	...	...	...	1
		Kadi District for Cawnpore Set.						
15	Chansma ... ..	...	6	6	6	...	...	...
16	Pattan ... ..	...	9	9	4	...	5	...
17	Visnagar ... ..	...	22	22	19	...	3	...
18	Mehsana ... ..	...	5	5	5	...	...	...
19	Dehagam ... ..	...	5	5	4	...	1	...
20	Vijapur ... ..	...	5	5	5	...	...	...
21	Attarumba ... ..	...	1	1	1	...	...	...
22	Kadi ... ..	...	5	5	5	...	...	...
23	Harij ... ..	...	1	1	...	...	...	1
24	Kalol ... ..	...	1	1	...	...	...	1
	Total ... ..	...	60	60	49	...	9	2
		Amreli District with Musto Patent.						
25	Amreli	2	1	3	1	...	...	2
26	Dhari ... ..	...	1	1	...	...	...	1
27	Damnagar ... ..	...	1	1	...	...	...	1
	Total	2	3	5	1	...	...	4
	Grand total	13	111	124	85	1	15	23

APPENDIX

Statement showing Boring work done

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka.	Dia. of Bore.
1	2	3	4	5
	With Calyx Drill.			
1	M. Shri Mugatram Aditram ...	Manjusar	Savali	4"
2	Do.	"	"	"
3	Do.	"	"	"
	With Cawnpore Sets.			
1	Patel Kashibhai Khushalbbhai ...	Bamangam	Bhadran	4"
2	R. R. Sheth Maganlal P. ...	Vasana	Baroda	3"
3	Patel Gordhanbbhai N. ...	Siswa	Bhadran	3"
4	Bhaiji Abaram Patel ...	Valan	Karjan	2½"
5	Shri. R. R. Bhadrasingrao ...	Baroda	Baroda	2½"
6	Shri. R. R. Bhadrasingrao ...	Baroda	"	2½"
7	Shastri Shankarrao G. ...	Jetalpur	"	3"
8	Ambegaokar Narayan R. ...	Jetalpur	"	3"
9	Od Adesing Mokamsing ...	Gorwa	"	4"
10	Patel Lalloobhai Gordhan ...	Sabhanpur	"	3
11	Parmar Hira Daji ...	Sama	"	3
12	Abdeally Allimiyabbhai ...	Petlad	Petlad	3
13	Od Adesing Mokamsing...	Gorwa	Baroda	4
14	Manekji Hormasji ...	Baroda	"	3
15	Patel Chunilal Haribhai...	Atali	Karjan	2½

No. XXIV.

during the year 1923-24.

Depth of well.	Depth of Boring.	No. of working days.	Water before Boring in koses.	Water after Boring in koses.	Departmental Charges.
6	7	8	9	10	11
DISTRICT.					
50'-0"	40'- 0"	29	3	1	61- 0- 0
20'-0"	23'- 0"	16	4	1	46- 5- 6
50'-0"	38'- 0"	13	5	1	28-13- 6
40'-0"	103'- 0"	55	3	3	30- 8- 0
48'-0"	57'- 0"	15	1	...	...
56'-0"	104'- 0"	68	8	...	317-10- 5
32'-0"	37'- 0"	9	1	1½	24-12-10
50'-0"	45'- 0"	10	½	1	26-10- 5
50'-0"	80'- 0"	40	1½	...	55-14-10
40'-0"	45'- 0"	18	1	1½	20- 2- 0
30'-0"	73'-11"	16	½	1	26- 0- 0
40'-0"	50'- 0"	14	1	3	12- 4- 0
45'-0"	35'- 0"	5	½	2	6- 2- 0
80'-0"	50'- 0"	10	1	2	21- 0- 0
61'-0"	135'- 8"	83	1	...	...
60'-0"	45'- 0"	23	3	...	37- 8- 0
69'-0"	34'- 0"	11	4	3	38-14- 0
85'-0"	30'- 0"	8	½	3	53-12-10

APPENDIX

Serial No.	Name of well-owner	Name of Village.	Name of Taluka.	Labour Charges.
1	2	3	4	12
	With Calyx Drill.			BARODA
1	M. Shri Mugatram Aditram ...	Manjusar	Savali	114- 8-0
2	Do.	"	"	27- 0-0
3	Do.	"	"	38- 0-0
	With Cawnpore Sets.			
1	Patel Kashibhai Khushalbhai ...	Bamangam	Bhadran	276- 0-0
2	R. R. Sheth Maganlal P. ...	Vasna	Baroda	262- 8-0
3	Patel Gordhanbhai N. ...	Siswa	Bhadran	278-12-0
4	Bhaji Abaram Patel ...	Valan	Karjan	37- 8-0
5	Shri R. R. Bhadrasingrao ...	Baroda	Baroda	70-14-0
6	Shri R. R. Bhadrasingrao. ...	Baroda	"	522- 8-0
7	Shastri Shankarrao G. ...	Jetapur	"	18- 0-0
8	Ambegaokar Narayan R. ...	Jetapur	"	117- 0-0
9	Od Adesing Mokamsing ...	Gorwa	"	127- 2-0
10	Patel Lalloobhai Gordhan ...	Sabhanpur	"	60- 0-0
11	Parmar Hira Daji ...	Sama	"	134- 0-0
12	Abdeally Allimiyabhai ...	Petlad	Petlad	521- 8-0
13	Od Adesing Mokamsing...	Gorwa	Baroda	221- 3-0
14	Manekji Hormasji ...	Baroda	"	67- 0-0
15	Patel Chunital Haribhai ...	Atali	Karjan	53- 6-0

No. XXIV.—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.
13	14	15	16
DISTRICT.			
175- 8- 0	4- 6- 0	Agriculture.	Successful.
73- 5- 6	3- 3- 0	"	"
66-13- 6	1-12- 1	"	"
306- 8- 0	2-15- 7	"	"
...	...	"	Incomplete.
596- 6- 5	5-11- 9	"	Unsuccessful.
62- 4-10	1-10-11	"	Successful.
97- 8- 5	2- 2- 8	"	"
578- 6-10	7- 3- 8	"	Unsuccessful.
200- 2- 0	4- 7- 0	"	Successful.
143- 0- 0	3- 0- 0	"	"
139- 6- 0	2-12- 0	"	"
66- 2- 0	1-14- 0	"	"
155- 3- 0	3- 0- 0	"	"
...	...	"	Incomplete.
258-11- 0	5-11- 0	"	Unsuccessful.
105-14- 0	3- 1- 0	"	Successful.
107- 2-10	3- 9- 1	"	"

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka	Dia. of Bore.
1	2	3	4	5
16	Shri. R. R. Bhadrasingrao ...	Baroda	Baroda	3
17	Zaveri Fakirbhai... ..	Ganeshpura	"	3
18	Kesharbhai Lakhabhai	Bhoj	Padra	2½
19	Patel Bhagabhai N.	Jarod	Waghodia	3
20	Vaghari Gokal Parbhudas	Akota	Baroda	3
21	Patel Ranchodhbhai N.	Bhoj	Padra	2½
22	Baroda Model Farm	Baroda	Baroda	4
23	Patel Mulaji Nagin	Gorwa	"	3
24	Dhurabhai Babarbhai	Valvod	Bhadran	3
25	Thakore Harisingji R.	Sindhrot	Baroda	3
26	Shri. Bhadrasingrao A.	Baroda	"	3
27	Nathabhai Ajubhai	Valvod	Bhadran	2½
28	Motibhai Nathabhai	Dabhoi	Dabhoi	3"
29	Maganbhai Veribhai	Valvod	Bhadran	3"
30	Kashibhai Khushalbhai	Bamangam	"	4"
31	Jahangirji Manekji	Baroda	Baroda	3"
32	Manibhai Zaverbhai	Padra	Padra	3"
33	Maganbhai Ranchhodhbhai	Samaspura	Baroda	3"
34	Sonabhai Bapubhai	Gorwa	"	3"
35	Patel Bhajibhai P.	Shahapura	"	3"

No. XXIV.—Continued.

Depth of well.	Depth of Boring.	No. of working days.	Water before Boring in koses	Water after Boring in koses.	Departmental Charges.
6	7	8	9	10	11
45'-0"	50' -0"	16	1	...	19-12-10
60'-0"	27' -0"	9	10	10	21-10- 5
60'-0"	37' -6"	13	1	2	78- 6- 6
45'-0"	52' -0"	16	1	1	16- 0- 0
60'-0"	84' -6"	15	1	2	28-10- 5
60'-0"	39' -0"	28	1	...	35- 2- 5
59'-0"	25' -0"	7	6	2	5- 4- 0
60'-0"	44' -0"	9	1	3	20- 8- 5
58'-0"	33' -0"	16	1	3	12- 0- 0
37'-6"	33' -0"	14	3	2	23- 2- 5
45'-0"	85' -0"	16	1	1	24-14- 5
60'-0"	85' -0"	21	1	1	26-12-10
35'-0"	61'-6"	25	1	...	58- 8- 0
60'-0"	98'-0"	49	1	3	76-12- 8
40'-0"	58'-4"	37	2	...	...
69'-0"	32'-0"	10	4	3	29- 2- 5
57'-6"	35'-0"	22	1	‡	30-10- 5
50'-0"	40'-0"	14	1	...	22- 6- 5
29'-0"	20'-0"	7	1	1	6-12- 0
50'-0"	44'-0"	35	3	2	51-10- 5

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka	Labour Charges.
1	2	3	4	12
16	Shri. R. R. Bhadrasingrao ...	Baroda	Baroda	157- 0-0
17	Zaveri Fakirbhai ...	Ganeshpura	"	60-14-0
18	Kesharbhai Lakhbhai ...	Bhoj	Padra	39- 8-0
19	Patel Bhagabhai N. ...	Jarod	Waghodia	120- 0-0
20	Vaghari Gokal Parbhudas ...	Akota	Baroda	95- 2-0
21	Patel Ranchhodbhai N. ...	Bhoj	Padra	158-12-0
22	Baroda Model Farm ...	Baroda	Baroda	67- 0-0
23	Patel Mulaji Nagin ...	Gorwa	"	46- 0-0
24	Dhurabhai Babarbhai ...	Valvod	Bhadran	60- 8-0
25	Thakore Harisingji R. ...	Sindhrot	Baroda	55- 0-0
26	Shri. Bhadrasingrao A. ...	Baroda	"	85- 0-0
27	Nathabhai Ajubhai ...	Valvod	Bhadran	91- 0-0
28	Motibhai Nathabhai ...	Dabhoi	Dabhoi	138- 4-0
29	Maganbhai Veribhai ...	Valvod	Bhadran	293- 8-0
30	Kashibhai Khushalbhai ...	Bamangam	"	281- 8-0
31	Jahangirji Manekji ...	Baroda	Baroda	63- 0-0
32	Manibhai Zaverbhai ...	Padra	Padra	85- 2-0
33	Maganbhai Ranchhodbhai ...	Samaspura	Baroda	56- 8-0
34	Sonabhai Bapubhai ...	Gorwa	"	30-12-0
35	Patel Bhaijibhai P. ...	Shahapura	"	268- 8-0

No. XXIV—Continued.

Total cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.
13	14	15	16
176-12-10	3- 8- 6	Agriculture.	Unsuccessful.
82- 8- 5	3- 0-10	"	Successful.
117-14- 6	3- 2-11	"	"
136- 0- 0	5- 0- 0	"	"
123-12- 5	2- 6- 0	"	"
193-14- 5	2- 4-11	"	Unsuccessful.
72- 4- 0	1-13- 0	"	"
66- 8- 5	2-10- 6	"	Successful.
72- 8- 0	1-10- 0	"	"
78- 2- 5	2- 5-10	"	"
109-14- 5	3- 5- 3	"	"
117-12-10	1- 6- 2	"	"
196-12- 0	8- 3- 0	"	Unsuccessful.
370- 4- 8	3-12- 5	"	Successful.
...	...	"	Incomplete.
92- 2- 5	2-14- 0	"	Successful.
115-12- 5	8- 4-11	"	"
78-14- 5	1-15- 6	"	Unsuccessful.
37- 8- 0	1- 9- 0	"	Successful.
320- 2- 5	7- 4- 5	"	"

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka.	Dia. of Bore.
1	2	3	4	5
	With Calyx Drill.			NAVSARI
1	Bhagwansing Viramsing...	Dholikui	Mahuwa	3''
2	Kawasji Rustamji ...	Cate'swell	Bansda State	3''
3	Vyara Dhanka Boarding ...	Vyara	Vyara	4''
4	Thakor Umedbhai Lalbhai ...	"	"	4''
5	Kawasji Rustamji ...	Cate'swell	Bansda State	3''
	With Cawnpore Sets.			
1	Ebrahim Mohamad Randera ...	Kosadi	Mangrol	2½''
	With Musto's Patent.			AMRELI
1	Kanabi Jetha Hira ...	Dabida	Amreli	4''
	With Cawnpore Sets.			KADI
1	Patel Prabhudas Joyataram ...	Sojitra	Chansma	2½''
2	Patel Bhaichand Morar ...	Sander	Patan	"
3	Patel Kalyan Bhaichand ...	"	"	"
4	Chaturbhai Haribhai ...	Kansarakui	Visnagar	"
5	Patel Hema Bhaichand ...	Manund	Patan	"
6	Chodhari Kala Hathi ...	Mewad	Mehsana	3''
7	Chodhari Sawa Visa ...	Dela	"	2½''
8	Patel Rambhai C. ...	Kansarakui	Visnagar	"
9	Patel Shankarbhai M. ...	Nikharia	Chansma	"

No XXIV—Continued.

Depth of well.	Depth of Boring.	No. of working days.	Water before Boring in koses.	Water after Boring in koses.	Departmental Charges.
6	7	8	9	10	11
DISTRICT.					
18'-0"	256'-0"	53	1	...	583- 2- 0
30'-0"	144'-6"	48	1	...	1,281-12- 0
48'-0"	39'-0"	110	1	...	...
25'-0"	51'-0"	18	...	...	...
30'-0"	34'-0"	15	1	1	164-13- 4
55'-0"	117'-6"	28	...	...	82- 4-10
DISTRICT.					
49'-0"	118'-0"	61	‡	...	...
DISTRICT.					
32-0	121'-0"	33	‡	1	38- 8-10
33-0	80'-0"	9	‡	...	7-14- 0
33-0	100'-0"	26	‡	...	22-12- 0
60-0	81'-0"	20	0	...	35-14-10
48-0	85'-0"	21	‡	...	24- 8- 0
22-6	89'-0"	21	‡	1	30-10- 0
37-6	111'-0"	22	‡	1	28- 0-10
30-0	27'-0"	27	‡	...	41- 2-10
30-0	66'-0"	9	‡	1	6-12- 0

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka.	Labour Charges.
1	2	3	4	12
	With Calyx Drill.			NAVSARI
1	Bhagwansing Viramsing...	Dholikui	Mahuwa	169- 0-0
2	Kawasji Rustamji ...	Cate'swell	Bansda State,	161- 8-0
3	Vyara Dhanka Boarding ...	Vyara	Vyara	829-10-0
4	Thakor Urmedbhai Lalbhai ...	"	"	96- 0-0
5	Kawasji Rustamji ...	Cate'swell	Bansda State.	23- 8-0
	With Cawnpore Sets.			
1	Ebrahim Mohamad Randera ...	Kosadi	Mangrol	149- 0-0
	With Musto's Patent.			AMRELI
1	Kanabi Jetha Hari ...	Dabida	Amreli	51-4-0
	With Cawnpore Sets.			KADI
1	Patel Prabhudas Joyataram ...	Sojitra	Chansra	229- 0-0
2.	Patel Bhaichand Morar ...	Sander	Patan	58- 8-0
3	Patel Kalyan Bhaichand ...	"	"	185- 8-0
4	Chaturbhai Haribhai ...	Kansarakui	Visnagar	176- 4-0
5	Patel Hema Bhaichand ...	Manund	Patan	157- 8-0
6	Chodhari Kala Hathi ...	Mewad	Mehsana	147- 0-0
7	Chodhari Sawa Visa ...	Dela	"	143- 0-0
8	Patel Rambhai C. ...	Kansarakui	Visnagar	165- 0-0
9	Patel Shankarbhai M. ...	Nikharia	Chansma	58- 8-0

No. XXIV—Continued.

Total cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.
13	14	15	16
DISTRICT.			
752- 2- 0	2-15- 0	Agriculture.	Unsuccessful.
1,443- 4- 0	10- 0- 0	"	"
...	...	"	"
...	...	"	Incomplete.
188- 5-4	5- 8- 7	"	Successful.
231- 4-10	1-15- 7	"	Unsuccessful.
DISTRICT.			
51- 4- 0	...	"	Incomplete.
DISTRICT.			
262- 8-10	2- 2- 0	"	Successful.
66- 6- 0	0-13- 3	"	Unsuccessful.
208- 4- 0	2- 1- 3	"	"
212- 2-10	2- 9- 1	"	"
182- 0- 0	2- 2- 9	"	"
177-10- 0	2- 0- 0	"	Successful.
171- 0-10	2- 2- 3	"	"
206- 2-10	1-13- 2	"	Unsuccessful.
65- 4- 0	2- 6- 0	"	Successful.

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka.	Dia. of Bore.
1	2	3	4	5
10	Parikh Shankarlal B.	Bahiyel	Dehgam	3"
11	Patel Tulasibhai H.	Ganjet	Chansma	2½"
12	Patel Nana Vasta	Guchhali	Vijapur	"
13	Chodhari Dewaji Dalsang	Bramanwada	Chansma	"
14	Chodhari Samala Ramsang	Basana	Visnagar	"
15	Patel Gangaram Shankar	Kesani	Chansma	"
16	Patel Prabhudas Punjadas	Visnagar	Visnagar	"
17	Chodhari Bechar N.	Basana	"	"
18	Patel Ishwarbhai P.	Guchhali	Vijapur	"
19	Umedbhai Ichhabhai	Valam	Visnagar	"
20	Swami Mohangar R.	Bhalak	"	"
21	Harkhabhai T. Patel	Valam	"	"
22	Chodhari Mogha Umed	Basana	"	"
23	Chodhari Ramasang N.	Bramanwada	Chansma	"
24	Miya Saibhai G.	Bahiyel	Dehgam	"
25	Chodhari Rewa Jiwa	Chitroda	Visnagar	"
26	Chaturbhai Haribhai	Kansarakuti	"	"
27	Kanji Hemabhai	Valam	"	"
28	Patel Chhagan S.	Vasai	Vijapur	3"
29	Chodhari Nathu N.	Basana	Visnagar	"
30	Trivedi Ishwarbhai D.	Kanipur	Attarumba	"

No. XXIV—Continued.

Depth of well.	Depth of Boring.	No. of working days.	Water before Boring in koses.	Water after Boring in koses.	Departmental Charges.
6	7	8	9	10	11
30-0	34'-0"	13	1	$\frac{1}{2}$	32- 4- 0
36-0	62'-0"	21	$\frac{1}{2}$	1	32- 6-10
30-0	134'-0"	14	$\frac{1}{2}$	2	26- 4-10
42-0	57'-6"	30	$\frac{1}{2}$	1	30- 0- 0
47-0	64'-0"	13	$\frac{1}{2}$	2	...
45-0	117'-0"	14	$\frac{1}{2}$	...	12-12-10
57-0	74'-0"	47	$\frac{1}{2}$	1	54- 4-10
36-0	84'-0"	9	$\frac{1}{2}$	2	...
30-0	46'-0"	10	$\frac{1}{2}$	...	8-12- 0
37-0	55'-0"	8	$\frac{1}{2}$	2	16-10-10
60-0	85'-0"	14	$\frac{1}{2}$	3	27- 2-10
33-0	60'-0"	26	1	...	22-12- 0
45-0	170'-0"	49	$\frac{1}{2}$	$\frac{2}{3}$	20- 2-10
45-0	171'-0"	26	$\frac{1}{2}$	...	36-12- 0
48-0	88'-0"	20	$\frac{1}{2}$	2	30- 0- 0
36-0	90'-0"	22	$\frac{1}{2}$	1	19- 4- 0
60-0	135'-0"	25	$\frac{1}{2}$	1	24- 8- 0
48-0	137'-0"	26	$\frac{1}{2}$	$1\frac{1}{2}$	24- 8- 0
27-0	72'-0"	35	$\frac{1}{2}$	...	41-8- 5
37-0	116'-0"	29	1	1	8-12-10
48-0	146'-0"	28	$\frac{1}{2}$	...	34- 4-10

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka.	Labour Charges.
1	2	3	4	12
10	Parikh Shankarlal B.	Bahiyel	Dehgam	97- 8-0
11	Patel Tulasibhai H.	Ganjet	Chansma	156- 0-0
12	Patel Nana Vasta	Guchhali	Vijapur	108- 0-0
13	Chodhari Dewaji Dalsang	Bramanwada	Chansma	226- 8-0
14	Chodhari Samala Ramsang	Basana	Visnagar	93- 0-0
15	Patel Gangaram Shankar	Kesani	Chansma	85- 0-0
16	Patel Prabhudas Punjadas	Visnagar	Visnagar	350- 4-0
17	Chodhari Bechar N.	Basana	"	64- 8-0
18	Patel Ishwarbhai P.	Guchali	Vijapur	67- 8-0
19	Umedbhai Ichhabhai	Valam	Visnagar	42- 2-0
20	Swami Mohangar R.	Bhalak	"	105- 0-0
21	Harkhabhai T. Patel	Valam	"	179- 4-0
22	Chodhari Mogha Umed	Basana	"	66-12-0
23	Chodhari Ramasang N.	Bramanwada	Chansma	342-12-0
24	Miya Saibhai G.	Bahiyel	Dehgam	173- 8-0
25	Chodhari Rewa Jiwa	Chitroda	Visnagar	155- 0-0
26	Chaturbhai Haribhai	Kansarakui	"	186-12-0
27	Kanji Hemabhai... ..	Valam	"	198-12-0
28	Patel Chhagan S.	Vasai	Vijapur	227- 2-0
29	Chodhari Nathu N.	Basana	Visnagar	178-8 -0
30	Trivedi Ishwarbhai D.	Kanipur	Attarsumba	172- 8-0

No. XXIV—Continued.

Total cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.
13	14	15	16
129-12- 0	1-15- 5	Agriculture.	Successful.
188- 6-10	5- 8- 8	"	"
134- 4-10	2- 2- 8	"	"
256- 8- 0	1- 14-6	"	"
93- 0- 0	1- 9-10	"	"
97-12- 0	1- 8- 5	"	Unsuccessful.
404- 8-10	3- 7- 3	"	Successful.
64- 8- 0	0-14- 0	"	"
76- 4- 0	0-14- 6	"	Unsuccessful.
58-12-10	1- 4- 5	"	Successful.
132- 2-10	2- 9- 4	"	"
202- 0- 0	2- 6- 0	"	Unsuccessful.
86-14-10	1- 7- 2	"	Successful.
389- 8- 0	2- 4- 8	"	Unsuccessful.
203- 8- 0	2-14- 0	"	Successful.
174- 4- 0	1-15- 9	"	"
211- 4- 0	2- 5- 6	"	"
233- 4- 0	1- 1- 5	"	"
268-10- 5	1-11- 4	"	"
187- 4-10	2- 9- 7	"	Unsuccessful.
206-12-10	1-12- 7	"	Successful.

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka.	Dia. of Bore.
1	2	3	4	5
31	Patel Madheva Manji	Pilodra	Mehsana	3"
32	Vaidya Nanashankar M.... ..	Pilodra	"	"
33	Patel Ratna Bechar	Vadu	Visnagar	2½
34	Patel Amathalal Madhaji	Vasai	Vijapur	"
35	Chodhari Virasang D.	Bamosana	Mehsna	"
36	Becharbhai Jijibhai	Isanpura	Dehagam	"
37	Chodhari Ramasang M.... ..	Basana	Visnagar	"
38	Chodhari Banaji M.	Khandosan	"	"
39	Patel Jeshankar C.	Isanpura	Dehgam	"
40	Chodhari Kesbar D.	Kamalpur	Chansma	"
41	Virachand Gangaram	Jetal Vasana	Visnagar	"
42	Trivedi Jethalal B.	Ghamij	Dehgam	"
43	Khoda Nathu	Bamosana	Visnagar	"
44	Alibhai Umarbhai	Suraj	Kadi	"
45	Patel Dharamadas A.	Suraj	"	"
46	Chodhari Narsang S.	Bamosana	Mehsana	"
47	Patel Motibhai Talja	Kansarakui	Visnagar	"
48	Patel Ambalal B.	Suraj	Kadi	"
49	Kalidas N. Patel... ..	Suraj	"	"
50	Patel Vaghaji M.	Deodarda	Patan	4"
51	Patel Shankarbhai S.	Suraj	Kadi	2½"

No. XXIV—Continued.

Depth of well.	Depth of Boring.	No. of working days.	Water before Boring in koses.	Water after Boring in koses.	Departmental Charges.
6	7	8	9	10	11
33'-0"	146'-0"	28	$\frac{1}{2}$	...	29-12-0
28'-0"	189'-0"	94	$\frac{1}{2}$	...	...
39'-0"	151'-0"	50	$\frac{1}{2}$	1	560-0-10
40'-0"	81'-0"	7	1	...	6-2-0
45'-0"	109'-0"	33	$\frac{1}{2}$	1	48-2-10
37'-0"	45'-0"	10	$\frac{1}{2}$	2	20-12-10
30'-0"	90'-0"	3	$\frac{1}{2}$	2	...
35'-0"	135'-0"	88	$\frac{1}{2}$	...	...
40'-0"	68'-0"	15	$\frac{1}{2}$	...	38-10-10
83'-0"	68'-10"	135	$\frac{1}{2}$	1	51 8-10
37'-6"	139'-0"	44	$\frac{1}{2}$	1	50-12-10
40'-0"	75'-0"	18	$\frac{1}{2}$	1	26-4-10
37'-6"	121'-0"	33	$\frac{1}{2}$	2	44-2-10
38'-0"	94'-0"	13	$\frac{1}{2}$	1	22-12-10
22'-6"	116'-0"	7	$\frac{1}{2}$	1	11-6-0
45'-0"	117'-0"	29	$\frac{1}{2}$	2	32-0-10
27'-0"	119'-0"	18	$\frac{1}{2}$	1	17-4-0
36'-0"	70'-0"	11	$\frac{1}{2}$	2	18-0-10
33'-0"	100'-0"	15	$\frac{1}{2}$	1	21-14-10
45'-0"	70'-0"	14	1	...	...
34'-0"	90'-0"	14	$\frac{1}{2}$	2	24-8-10

APPENDIX

Serial No.	Name of well-owner	Name of Village.	Name of Taluka.	Labour Charges.
1	2	3	4	12
31	Patel Madheva Manji	Pilodra.	Mehsana	229- 8-0
32	Vaidya Nanashankar M.... ..	Pilodra	"	665- 4-0
33	Patel Ratna Bechar	Vadu	Visnagar	286- 4-0
34	Patel Amathalal Madhaji	Vesai	Vijapur	34- 0-0
35	Chodhari Virasang D.	Bamosana	Mehsana	232- 8-0
36	Becharbhai Jijibhai	Isanpura	Dehgam	40- 0-0
37	Chodhari Ramasang M.	Basana	Visnagar	22- 8-0
38	Chodhari Banaji M.	Khandosan	"	294- 0-0
39	Patel Jeshankar C.	Isanpura	Dehgam	170- 0-0
40	Chodhari Keshar D.	Kamalpur	Chansma	205-10-0
41	Virchand Gangaram	Jetal Vasana	Visnagar	253- 0-0
42	Trivedi Jethalal B.	Ghamij	Dehgam	121- 8-0
43	Khoda Nathu	Bamosana	Visnagar	222- 8-0
44	Alibhai Umarbhai	Suraj	Kadi	90- 8-0
45	Patel Dharmadas A.	Suraj	"	74- 0-0
46	Chodhari Narsang S.	Bamosana	Mehsana	205- 3-0
47	Patel Motibhai Talja	Kansarakui	Visnagar	147- 0-0
48	Patel Ambalal B.	Suraj	Kadi	54- 0-0
49	Kalidas N. Patel... ..	Suraj	"	82- 8-0
50	Patel Vaghaji M.	Deodarda	Patan	...
51	Patel Shankarbhai S.	Suraj	Kadi	91- 8-0

No. XXIV—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.
13	14	15	16
259- 4- 0	1-12- 4	Agricultural.	Unsuccessful.
665- 4- 0	...	"	"
342- 4-10	2- 4- 3	"	Successful.
40- 2- 0	0- 8- 0	"	Unsuccessful.
280-10-10	2- 9- 1	"	Successful.
60-12-10	1- 5- 7	"	"
22- 0- 0	0- 4- 0	"	"
294- 0- 0	...	"	Incomplete.
208-10-10	3- 1- 1	"	Unsuccessful.
257- 2-10	3-12- 6	"	Successful.
303-12-10	2- 2-11	"	"
147-12-10	1-15- 6	"	"
266-10-10	2- 3- 3	"	"
113- 4-10	1- 3- 3	"	"
85- 6- 0	0-11- 9	"	"
237- 0-10	2- 5- 0	"	"
164- 4- 0	1- 6- 3	"	"
72- 6-10	1- 0- 6	"	"
104- 6-10	1- 0- 8	"	"
...	...	"	Incomplete.
116- 0-10	1- 4-10	"	Successful.

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka	Dia. of Bore.
1	2	3	4	5
			PANCHAYAT	
	With Cawnpore Sets.			
1	Kazialiasana well	Kazialiasana	Visnagar	2½"
2	Pilodra well	Pilodra	Mehsana	"
3	Sarsawa well	Sarsawa	Chansma	"
4	Kanthravi well	Kanthravi	Patan	"
5	Dawada well	Dawada	Visnagar	"
6	Venpura well	Venpura	Chansma	"
7	Suraj well	Suraj	Kadi	"
8	Deosana well	Deosana	"	"
9	Siyapura well	Siyapura	"	"
10	Roda well	Roda	Harij	4"
11	Rangpura well	Rangpura	Kheralu	4"
	With Musto's Patent.			
1	Balol well	Balol	Mehsana	4" 2½"
2	Sapawada well	Sapawada	Chansma	2½"
	With Calyx Drill.			
1	Gunja well	Gunja	Visnagar	4"

No. XXIV.—Continued.

Depth of well.	Depth of Boring.	No. of working days.	Water before Boring in koses.	Water after Boring in koses.	Departmental Charges.
6	7	8	9	10	11
WELLS.					
40'-0"	166'-5"	105	‡	...	576- 0- 8
45'-0"	...	...	...	...	18- 0- 0
35'-0"	183'-0"	60	‡	1	214-13- 5
30'-0"	38'-0"	21	‡	...	116- 9- 8
50'-0"	151'-0"	133	‡	...	572- 8- 0
24'-0"	201'-0"	82	‡	4	330- 9- 0
30'-0"	94'-0"	49	‡	2	193- 6-10
37'-0"	111'-0"	52	‡	1	302- 1- 8
40'-0"	124'-0"	44	...	...	368- 0- 8
40'-0"	45'-0"	35	‡	...	350- 9- 3
45'-0"	87'-3"	63	‡	...	324-11- 4
50'-0"	84'-0" 209'-4"	69	‡	2	799-11- 4
45'-0"	78' & 203'	71	‡	2	960- 3- 6
50'-0"	73'-3"	83	‡	...	...

APPENDIX

Serial No.	Name of well-owner.	Name of Village.	Name of Taluka	Labour Charges.
1	2	3	4	12
			PANCHAYAT	
	With Cawnpore Sets.			
1	Kazialiasana well	Kazialiasana	Visnagar	981- 0-0
2	Pilodra well	Pilodra	Mehsana	14- 0-0
3	Sarsawa well	Sarsawa	Chansma	154- 0-0
4	Kantharavi well	Kantharavi	Patan	70- 0-0
5	Dawada well	Dawada	Visnagar	300- 0-0
*6	Venpura well	Venpura	Chansma	631- 0-0
7	Suraj well	Suraj	Radi	192- 0-0
8	Deosana well	Deosana	"	240-12-0
9	Siyapura well	Siyapura	"	260- 0-0
10	Roda well	Roda	Harij	134- 0-0
11	Rangpura well	Rangpura	Kheralu	193- 0-0
	With Musto's Patent.			
1	Balol well	Balol	Mehsana	480- 0-0
*2	Sapawada well	Sapawada	Chansma	376- 8-0
	With Calyx Drill.			
1	Gunja well	Gunja	Visnagar	...

*Artesian Flood.

No. XXIV—*Concluded.*

Total cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.
13	14	15	16
WELL.			
1,557- 0- 8	9- 6- 0	Panchayet.	Unsuccessful.
32- 0- 0	... ..	"	"
368-13- 5	2- 0- 2	"	Successful.
186- 9- 8	4-14- 6	"	Unsuccessful.
872- 8- 0	5-12- 5	"	Incomplete.
961- 9- 0	4-12- 6	"	Successful.
385- 6-10	4- 1- 7	"	"
542-13- 8	4-14- 3	"	"
628- 0- 8	5- 1- 0	"	Incomplete.
484- 9- 0	10-12- 3	"	"
517-11- 4	6- 0- 0	"	"
1,279- 4-11	6- 1-11	"	Successful.
1,336-11- 6	5-10- 7	"	"
...	...	"	Incomplete.

APPENDIX

Statement showing the details

Serial No	Name of tractor.	No. of Tractors.	H. P.	Plough	Price.
1	2	3	4	5	6
1	Waterloo Boy.	1	12-25	3 Furrow Joh Deere.	Rs. 5,000 (approx.) with plough.
2	New International.	1	15-30	3 Furrow In- ternational.	Rs. 6,300
3	"	"	"	"	"
4	Lausons.	3	15-30	3 Furrow In- ternational,	Rs. 5,000 each.

No. XXV.

of tractors bought in 1923-24.

Name of person buying the tractor.	Where worked.	Remarks.
7	8	9
Mr. C. B. Patel, Sayaji Iron Works.	In Attarumba Taluka.	This was bought by Mr. Patel and worked in Attarumba. Work was quite satisfactory. Worked about 500 bighas in the season.
Sardar R. N. Ambegaokar, Baroda.	First at Ajwa Road and then near Bala- sinore (on hire.).	Work turned out was very good. Worked about 450 bighas.
Mr. Tulsibhai B. Amin, Tulsipura.	Tulsipura.	Do. Do. about 500 bighas ploughed.
Mr. C. B. Patel S. I. W., Baroda.	2 at Navanagari, Rajapipla State. 1 Sold to Mr. Madha- vsingh Thakore of Madhavpura.	Tractors received Late in the season. Work turned out not up to expectation Heavy type of tractor. Did about 150 bighas altogether.

APPENDIX

Statement showing classification of animals treated
Surgeons in the

Serial No.	Name of the Dispensary.	Last year's cases on hand.	Out-door patients.				
			Horses.	Cattle.	Dogs.	Others.	Total.
1	2	3	4	5	6	7	8
1	Baroda	143	742	676	344	195	1,957
2	Petlad	45	124	885	23	161	1,193
3	Bhadran	53	118	1,541	20	42	1,721
4	Dabhoi	44	163	769	36	208	1,176
5	Sankheda	13	161	999	5	71	1,236
6	Pattan	16	237	746	26	87	1,096
7	Mehsana	6	45	634	24	47	750
8	Sidhpur ... ..	...	64	208	7	35	314
9	Vijapur	17	154	647	13	124	938
10	Vesma	25	71	705	37	22	835
11	Karchelia	43	95	1,070	4	360	1,529
12	Vyara... ..	12	82	279	7	26	394
13	Kathor	22	105	416	6	75	602
14	Amreli	21	28	344	8	11	391
	Total	460	2,189	9,919	560	1,464	14,132

No. XXVI.

at dispensaries and in the District by the Veterinary year 1923-24.

In-door patients.					Grand Total.				
Horses.	Cattle.	Dogs.	Others.	Total.	Horses.	Cattle.	Dogs.	Others.	Total.
9	10	11	12	13	14	15	16	17	18
19	99	...	2	120	778	866	369	207	2,220
...	...	...	...	...	128	916	24	170	1,238
...	...	...	...	...	126	1,586	20	42	1,774
...	...	...	...	...	176	792	38	214	1,220
6	9	...	...	15	169	1,018	6	71	1,264
9	48	...	1	58	250	805	26	89	1,170
...	5	...	...	5	46	643	25	47	761
...	...	...	...	...	64	208	7	35	314
...	...	...	...	...	159	658	13	125	955
...	...	...	...	...	73	728	37	22	860
5	7	...	...	12	100	1,105	4	375	1,584
...	...	...	...	...	82	289	8	27	406
...	...	...	...	...	110	431	6	77	624
...	...	...	...	...	28	365	8	11	413
39	168	...	3	210	2,269	10,410	591	1,512	14,802

APPENDIX No.

Serial No.	Name of the Dispensary.	Result.					Operations.			Daily average.	
		Cured.	Relieved.	Died.	Discontinued.	Remained on hand.	Major.	Minor.	Total.	Out-door.	In-door.
1	2	19	20	21	22	23	24	25	26	27	28
1	Baroda ...	2,054	115	2	1	48	121	75	196	33.1	3.5
2	Petlad ...	1,120	36	15	52	15	48	40	88	39.2	...
3	Bhadran ...	1,692	...	10	37	35	43	20	63	33	...
4	Dabhoi ...	957	208	11	...	44	70	46	116	16	...
5	Sankheda ...	1,206	31	9	...	18	45	54	99	17	2
6	Pattan ...	920	80	16	138	16	121	55	176	20.16	2.3
7	Mehsana ...	624	90	9	31	7	45	40	85	20.53	.31
8	Sidhpur ...	231	33	18	14	18	31	14	45	12.7	...
9	Vijapur ...	812	55	28	39	21	64	43	107	29	...
10	Vesma ...	682	84	2	68	24	20	187	207	23.8	...
11	Karchelia ...	1,455	2	8	88	31	41	75	116	16	1
12	Vyara... ...	350	21	9	22	4	7	15	22	7.2	...
13	Kathor ...	556	45	8	...	15	40	26	66	14	...
14	Amreli ...	400	12	...	...	...	34	56	90	20	...
	Total ...	13,059	812	145	490	296	730	746	1,476	301.69	9.11

XXVI—Concluded.

Mofussil cases.	Post mortem examination.	Fees charged.			Charge of medicine per case.			Remarks.
		Rs.	A.	P.	Rs.	A.	P.	
29	30	31	32	33	34	35	36	37
408	...	103	11	0	...	...	...
640	1	...	...	...	...	...	...
955	
460	
857	
570	...	30	6	0	...	...	...
571	...	8	9	0	...	...	...
120	...	2	15	0	...	...	...
505	
522	...	23	15	0	...	...	...
1,163	
116	...	10	14	0	...	...	...
315	...	16	0	0	...	...	...
264	...	4	6	0	...	...	...
7,466	1	203	12	0	...	...	...

APPENDIX

Statement showing the classification of diseases of animals

Serial No.	Name of the Dispensary.	Classification of					
		Specific.	Nervous.	Circulatory.	Skeleton.	Eye and ear.	Skin.
1	2	3	4	5	6	7	8
1	Baroda	26	162	210	192	228	150
2	Petlad	16	50	54	57	87	78
3	Bhadran	38	5	42	11	53	58
4	Dabhoi	122	1	...	63	141	207
5	Sankheda	165	1	12	45	68	69
6	Pattan	202	14	10	12	20	28
8	Mehsana	92	10	...	...	25	15
8	Sidhpur	12	8	17	35	21	21
9	Vijapur	258	6	13	21	51	358
10	Vesma	100	19	17	31	40	61
11	Karchelia	151	5	5	48	95	33
12	Vyara	6	1	5	33	37	106
13	Kathor	33	6	16	78	24	83
14	Amreli ... ..	...	22	27	46	14	44
	Total	1,221	310	428	672	904	1,936

No. XXVII.

treated in the dispensaries during the year 1923-24.

diseases.						Total.	Remarks.
Lymphatic.	Digestive.	Respiratory.	Urinary.	Genital.	Miscellaneous		
9	10	11	12	13	14	15	16
164	338	175	109	92	231	2,077	Opened on the 15th January 1924.
41	147	71	25	108	459	1,193	
...	225	3	14	39	1,233	1,721	
...	407	...	96	...	139	1,176	
4	208	...	32	...	26	1,251	
2	148	26	21	11	660	1,154	
...	95	4	14	5	495	755	
3	58	12	4	11	112	314	
...	138	51	33	9	...	938	
...	145	16	10	45	351	835	
3	213	31	8	26	923	1,541	
4	54	11	8	11	118	394	
38	73	16	18	46	171	602	
15	89	11	1	13	109	391	
270	2,338	427	393	416	5,027	14,342	

APPENDIX

Statement showing the numbers of report of out-break

Number.	Name of the dispensary.	Reports received.							Reports		
		Rinderpest.	Anthrax.	Foot and Mouth diseases.	Pleuro Pneumonia contagious	Black quarter.	Other diseases.	Total.	Rinderpest.	Anthrax.	Foot and Mouth diseases.
1	2	3	4	5	6	7	8	9	10	11	12
1	Baroda	1	...	...	...	...	...	1	1	...	...
2	Petlad	1	...	...	...	...	...	1	1	...	...
3	Bhadran ... ..	...	...	...	...	...	...	...	...	...	...
4	Dabhoi	1	...	1	...	...	...	2	1	...	1
5	Sankheda ... ..	...	...	1	...	...	...	1	...	...	1
6	Pattan ... ..	...	...	...	...	...	...	...	...	...	...
7	Mehsana ... ..	...	...	...	...	...	...	...	...	...	...
8	Sidhpur ... ..	...	...	...	...	...	...	...	...	...	...
9	Vijapur	1	...	...	...	...	...	1	1	...	...
10	Vesma	7	...	10	...	...	...	17	7	...	10
11	Karchelia	10	...	2	...	...	...	12	9	...	2
12	Vyara	1	...	...	...	...	...	1	1	...	...
13	Katho	2	...	...	...	...	...	2	2	...	...
14	Amreli ... ..	...	...	...	...	...	...	...	...	...	...
	Total	24	...	14	...	...	...	38	23	...	14

No. XXVIII.

received and attended during the year 1923-24.

attended.				Reports not attended.								Remarks.
Pleuro Pneu- monia contagious	Black quarter.	Other diseases.	Total.	Rinderpest.	Anthrax.	Foot and Mouth diseases.	Pleuro Pneu- monia contagious	Black quarter.	Other diseases.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	
...	1	Opened in January 1924
...	1	...	...	...	...	...	...	...	...
...	
...	2	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...
...	
...	
...	
...	
...	
...	1	...	...	...	...	...	...	...	...
...	17	...	...	...	...	...	...	...	...
...	11	1	...	...	...	...	...	...	1	
...	1	...	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...
...	
...	
...	37	1	1	Closed in December 1924

APPENDIX

Statement showing the result of preventive inoculation carried

Serial No.	Names of the dispensaries.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks.	No. of animals which died uninoculated in course of outbreak.			
					Equines.	Bovines.	Others.	Total.
1	2	3	4	5	6	7	8	9
1	Baroda ...	...	...	...	...	...	...	...
2	Petlad ...	...	...	...	...	12	...	12
3	Bhadran...	...	...	...	...	...	...	...
4	Dabhoi ...	Rinder- pcst	Serum.	1	...	15	...	15
5	Sankheda ...	...	...	...	...	...	...	...
6	Pattan ...	...	...	...	...	...	...	...
7	Mehsana ...	...	...	...	...	...	...	...
8	Sidhpur ...	...	...	...	...	...	...	...
9	Vijapur ...	...	...	...	...	1	...	1
10	Vesma ...	Rinder- pest.	Serum.	1	...	34	...	34
11	Karchelia ...	...	...	1	...	117	...	117
12	Vyara ...	...	...	...	...	...	...	...
13	Kathor ...	Rinder- pest.	Serum.	1	...	14	...	14
14	Amreli ...	...	...	...	...	...	...	...
		Total ...		4	...	193	...	193

No. XXIX.

out by Veterinary Surgeons during the year 1923-24.

No. of animals inoculated.				No. of animals which died after inoculation.				Remarks.
Equines	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.	
10	11	12	13	14	15	16	17	18
...	
...	
...	
...	219	...	219	...	...	...	...
...	
...	
...	
...	
...	
...	195	...	195	...	...	...	...
...	298	...	298	...	5	...	5	
...	
...	20	...	20	...	...	...	...
...	
...	732	...	732	...	5	...	5	

Closed in December 1923.

APPENDIX

The Statement showing the number of animals treated,

Serial No.	Name of the dispensary.	Rinderpest.				Anthrax.			
		Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.
1	2	3	4	5	6	7	8	9	10
1	Baroda ...	...	...	...	...	...	...	...	...
2	Petlad ...	15	...	12	27	...	...	...	...
3	Bhadran ...	...	...	...	...	...	...	...	...
4	Dabhoi ...	70	10	5	85	...	...	...	...
5	Sankheda ...	...	...	...	...	...	...	...	...
6	Pattan ...	...	...	...	...	...	...	...	...
7	Mehsana ...	...	...	...	...	...	...	...	...
8	Sidhpur ...	...	...	...	...	...	...	...	...
9	Vijapur ...	...	...	1	1	...	...	...	...
10	Vesma ...	4	23	11	38	...	...	...	...
11	Karchelia ...	30	...	42	72	...	...	...	...
12	Vyara ...	12	...	...	12	...	...	...	...
13	Kathor ...	1	...	...	1	...	...	...	...
14	Amreli ...	...	...	...	...	...	...	...	...
	Total ...	132	33	71	236	...	...	...	...

No. XXX.

villages visited and days spent on tour in the year 1923-24.

Foot and mouth disease.				Pleuro Pneumonia.			
Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.
11	12	13	14	15	16	17	18
...
...
...
90	90	...	...	...	...
...
...
...
...
...	14	...	14	...	...	...	...
38	76	...	114	...	...	...	...
...
...
...
...
128	90	...	218	...	...	...	...

APPENDIX No.

Serial No.	Name of the dispensary.	Hæmorrhagic Septicæmia.				Other diseases.			
		Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.
1	2	19	20	21	22	23	24	25	26
1	Baroda ...	...	...	...	...	...	...	...	...
2	Petlad ...	...	...	...	...	...	...	...	...
3	Bhadran ...	...	...	...	...	...	...	...	...
4	Dabhoi ...	...	...	...	...	...	...	...	...
5	Sankheda ...	...	...	...	...	...	...	...	...
6	Pattan ...	...	...	...	...	...	...	...	...
7	Mehsana ...	...	...	...	...	4	1	...	5
8	Sidhpur ...	...	...	...	...	...	...	...	...
9	Vijapur ...	...	...	...	...	...	98	...	98
10	Vesma ...	...	...	...	...	1	...	...	1
11	Karchelia ...	...	...	...	...	...	...	...	...
12	Vyara ...	...	...	...	...	...	...	...	...
13	Kathor ...	...	...	...	...	6	...	...	6
14	Amreli ...	...	...	...	...	...	...	...	...
	Total ...	...	...	...	...	11	99	...	110

XXX.—*Concluded.*

Total.				Number of villages visited.	Number of days spent on tour.	Remarks.
Cured.	Relieved.	Died.	Total.			
27	28	29	30	31	32	33
...	...	...	...	1	3	There was a report of rinderpest from Itola but no patient was suffering. The disease was subsided.
15	...	12	27	1	2	Treated with medicine.
...
160	10	5	175	5	18	Do. Do.
...	
...	
4	1	...	5	5	5	Do. Do.
...	...	...	...	...	...	Opened on 15th January 1924.
...	112	1	113	3	8	Treated with medicine.
43	99	11	153	18	30	"
30	...	42	72	10	32	"
12	...	...	12	1	2	"
6	...	...	6	3	2	"
...	...	...	...	...	...	Closed in December 1923.
270	222	71	563	47	102	

APPENDIX

The Statement showing the receipts and expenditure of the

Serial No.	Name of the dispensary.	Budget				
		Pay.	Travelling allowance.	House rent.	Contry medicines.	English medicines.
		Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.
1	2	3	4	5	6	7
1	Baroda ...	2,238-12- 0	25-12- 0	275	510-15- 0	464- 6- 0
2	Petlad ...	1,376- 9-11	38-15- 0	180	245- 7- 6	337-14- 3
3	Bhadran ...	1,170- 3- 1	84- 9- 0	165	200- 0- 0	140- 2-11
4	Dabhoi ...	1,316- 7- 0	45- 1- 6	180	249-13- 0	228- 6- 9
5	Sankheda ...	1,303- 2- 7	...	180	215- 0- 0	178-15- 4
6	Pattan ...	1,674- 0- 5	207- 8- 0	...	195-15- 6	227-15- 0
7	Mehsana ...	1,402-12- 3	13- 5- 6	...	150- 0- 0	177- 7- 1
8	Sidhpur ...	686- 0- 8	75-14- 6	126	117- 6- 3	178- 8- 6
9	Vijapur ...	1,348- 2- 0	38-14- 0	180	149-11- 9	188- 9- 3
10	Vesma ...	1,617-15- 1	44-11- 0	91	246-10- 3	182-10- 6
11	Karchalia ...	1,367- 1- 1	39- 4- 0	168	179-14- 0	227- 6-11
12	Vyara ...	992- 7- 7	19- 3- 6	180	34- 7- 9	133- 1- 3
13	Kathor ...	1,146-14- 0	56- 4- 0	180	286- 4- 6	179-12- 6
14	Amreli ...	1,008-10- 7	...	...	79- 2- 9	5- 0- 9
	Total...	18,649- 2- 3	689- 6- 0	1,905	2,860-12- 3	2,850- 5- 0

No. XXXI.

Veterinary Dispensaries in details in the year 1923-24.

Expenditure.				Receipt during the year.	Remarks.
Instruments and dead-stock.	Contingency.	Miscellaneous.	Total.		
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
8	9	10	11	12	13
22- 0- 0	32- 4- 0	69- 4- 0	3,638- 5- 0	103-11-0+	Rs. 17,526-7-11 Panchayet contribution.
5- 4- 0	37- 8- 0	...	2,221-10- 8	...	
23- 0- 0	51- 6- 6	3-14- 0	1,838- 3- 6	...	
23- 5- 4	51- 0- 0	28-10- 0	2,122-11- 7	...	
23- 5- 0	36-12- 0	50- 0- 0	1,987- 2-11	...	
7-10- 0	50- 0- 0	38-13- 0	249-13-11	119-13- 9	
1- 0- 0	30- 0- 0	18- 0- 0	1,792- 8-10	15- 1- 0	
196- 0- 0	30- 0- 0	143-13- 0	1,553-10-11	50-15- 0	
20- 7- 0	45-12- 0	30- 3- 0	2,001-11- 0	10- 0- 0	
...	43- 4- 0	37- 0- 0	2,263- 2-10	36- 1- 6	
...	60- 0- 0	22- 5- 0	2,063-15- 0	...	
...	35-12-10	...	1,395- 0-11	...	
...	60- 0- 0	10- 0- 0	1,919- 3- 0	16- 0- 0	
9- 0- 0	18- 7- 0	8- 0- 0	1,128- 5- 1	5-12- 0	
330-15- 4	582- 2- 4	459-14- 0	28,327- 9- 2	357- 5- 9	

श्री. स. दु. जे. भा. भांडे ३७/२८ दि. ता. २८-२-२५.

REVIEW

OF THE

AGRICULTURAL DEPARTMENT

for the year 1923-24.

—:0:—

The Department continued under the immediate control of Mr. C. V. Sane, during the year.

The grades of the graduate staff, Veterinary Surgeons and office establishment were improved. Important changes in the grades and the staff. Cotton Officer's post, and the Boring Branch were made permanent and a new post of Veterinary Inspector was created during the year under review. The post of the Deputy Director of Agriculture was abolished and the incumbant Mr. Patel was made to retire.

In addition to the meetings and conferences of special importance which the Director attended at Poona and Banglore, the Department showed activity in important undertakings, such as (1) Framing of the Cotton Transport Act, (2) Opening of the Dabhoi Wadhvana Farm, (3) Preparation of the Agricultural Exhibits for the Empire Exhibition, (4) Supplying materials to the Economic Court of the Baroda Museum, (5) Arranging the Departmental Stall in the Exhibition at Baroda. (6) Organization of the Tractor and Oil Engine Classes, (7) Expansion of the Tractor Operations, and (8) last, but not the least, the spotting of an artesian flow in parts of Kadi District which, if successful, opens up possibilities of irrigation farming.

The experimentation and the propaganda work at the farms seem to have been fairly done. It's a pity that the grape vines have not been making satisfactory progress. Government hope that the fruit culture scheme will soon be ripe for introduction.

The Cattle Breeding Farm and the Dairy which has developed from a small Palace Dairy into a well-organized institution still afford sufficient scope to the Department for bringing them to the level of a model institution by reducing the cost of maintaining the same to a reasonable limit and improving the condition of the live-stock which is alleged to be due to lack of pasturage. Government expect better results and confidently hope that the Department will devise means to run the institution on a sound business-like manner keeping in view the comforts and conveniences of Their Highnesses and the Royal Family.

The propaganda work in cotton was mainly carried out in the Navsari District and efforts were made to guard the entry of Khandesh Cotton in Navsari Section by opening check stations. As a result of the free improved seed distribution, about 62,000 Bighas were under cotton cultivation which is 2½ times that of the last year. The co-operation of the Revenue officers and the proprietors of Ginning Factories has led to a great extent in achieving satisfactory results. It is gratifying to note that Mr. Mañilal is taking keen interest in the solution of the Agricultural problems. Government confidently hope that the Revenue Officers in other Districts also will co-operate with the officers of the Department and help them in intensifying interest in the public by popularizing the various tests made by the Department and showing the utility of the Department and the good it could achieve by the hearty co-operation of both the Department. At the same time it should not be forgotten that the Agricultural Inspectors should as a rule keep the Revenue Officers informed of their activities.

Shortage of drinking water, particularly due to scarcity of rain, resulted in greater demand for boring operations during the year. The Department undertook the work of 110 wells out of the applications for 126. Out of this 70 were successful. A little low percentage of successful wells was mainly due to a large number of abandoned wells and unsuitable places for boring.

People are now alive to their responsibilities as has been evidenced by the ready response given by most of the Local Boards and Municipalities in contributing their share of the expenses of maintenance of the Veterinary Dispensaries.

On the whole, the activities of the Department in various directions afford immense possibilities for the benefit of His Highness' subjects, if the energies of the District Officers are skilfully directed towards those movements which are more practical and not merely theoretical. Demonstrations and experiments should be so selected and made as would benefit the majority and are workable by the Agriculturists generally. The responsibilities of the officer at the head are no doubt great, but, it is confidently hoped Mr. Sane will overcome the same by discharging his duties with tact and co-operation as he has been doing, with all interested in and connected with the affairs directly or otherwise.

Baroda,
28th February 1925.

G. B. AMBEGAOKER,
Naib Dewan.

S. V. P.

- SHORT SUMMARY.

FOR

HIS HIGHNESS THE MAHARAJA SAHEB AS PER H. O. No. 4,
DATED 1ST DECEMBER 1921.

1. The Department continued to work under the direction of Mr. C. V. Sane.
 2. Government have graciously improved the grades of the graduates the other staff of the Department.
 3. A Cotton Transport Act in conformity with that passed by the Bombay Government was framed.
 4. Tractor operations have been very successful during the year, six more tractors having been purchased by private initiative.
 5. Fruit culture scheme is pending consultation with the Bombay Departmental Horticulturist.
 6. Considerable discarding of animals had to be done from the Cattle Breeding Farm and Dairy.
 7. Pusa wheat in Kadi District is being popularized.
 8. A farm in Amreli is very badly needed.
 9. An artesian flow was struck at Venpura in Chansama at depth of 222 feet.
 10. A tractor operator's and oil engine class was organised and was well received.
 11. All Veterinary Dispensaries with the exception of Amreli continued to work under the new ruling of 1/3rd contribution from Local Bodies. Amreli Veterinary Dispensary had, therefore, to be closed.
-

Annual Report
OF THE
Department of Agriculture
Baroda State

FOR THE YEAR 1924-25

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ANNUAL REPORT
OF THE
Department of Agriculture
FOR THE YEAR 1924-25.

The Department continued to be in charge of Mr. C. V. Sane B.Ag. (Bombay), B.Sc. (Kansas), Charge and personnel. M.Sc. (Wisconsin) U. S. A.

The points that deserve notice here with regard to the personnel are (1) the resignation by Mr. B. G. N. Acharya of the post of the Agricultural Engineer in view of a prospect for further training in Europe; (2) the charge of the Cotton Officer being vested in the Agricultural Inspector, Navsari for the time being.

The post of the Agricultural Engineer has been filled by a temporary appointment of the Boring Overseer to the post owing to lack of suitably qualified candidates.

A fresh recruit has been drafted into the Department in Mr. G. G. Nawathe, who passed his B.Ag. Examination as a Baroda State Scholar and was available for employment. He has been for the present appointed as Chitnis to the office of the Director of Agriculture, but as the work of the Department enlarges, there is every prospect of his being absorbed in the technical field of activities.

A proposal was on foot to permit periodical entrance of fresh blood in the Department by transfer of suitable graduates in this Department to the Revenue Service but the idea has not been found acceptable to Government. The only chance now left for fresh recruits is in enlarging the

activities of this Department and it is hoped that such a broadening of efforts will soon be accomplished.

Appendix I will show the important posts in the Departmental cadre and the name of the incumbent against each.

2. There has been no important administrative change during the year beyond increasing the number of second grade Veterinary Surgeons' posts from three to five. This has, however, not solved the initial difficulty of attracting suitable candidates. The only way it seems we can get their services in Baroda is by training them ourselves by suitable scholarships in the Bombay Veterinary College.

3. There has been a comparative lull this year with regard to meetings of Provincial or Imperial character. An All-India Agricultural Conference along with a Cattle Conference was to be held in Dehli in January 1925 but the idea was later abandoned.

With regard to meetings in Baroda, first place must be given to the meetings of the Cattle and Fodder Improvement Committee, which has been appointed by Government and of which the Director of Agriculture is a member.

The Advisory Board Meeting took place this year in February 1925 and the Departmental activities and programme were placed before the Board for discussion and acceptance.

Besides the Revenue Conferences at Navsari and Mehsana at which the District Agricultural work is discussed and programme for the next season adopted, the Director also attended the Co-operative Conferences at Kodinar, Kosamba and Billimora and discussed the agricultural bearing of the subjects on the agenda.

Two departmental conferences were held during the year in October, one for the Veterinary Section and the other for the Agricultural Section. The subjects submitted by members for consideration were discussed and suitably disposed. Such periodical conferences are valuable in as much as they furnish an opportunity for inter-change of ideas, which should lead to a greater feeling of brother-hood.

The Director attended the Panchayet Conference and the special budget Session of the Dhara Sabha and explained the departmental budget requirements.

4. In the notable undertakings of the year, mention must be made of the rules sanctioned by Government in connection with the working of the Agricultural Engineering Section. These have now been published and have considerably facilitated the working of the Section.

Notable undertakings of the year.

Under this category, mention must also be made of the detailed technical enquiry of the Palace Dairy and Cattle Breeding Farm undertaken by the Director at the suggestion of Government.

5. The principal outstanding features of the year's work may be considered to be (a) the unabated extension of tractor cultivation, no less than thirty new tractors having been added to the previous total and nine of which were sold in the Baroda territory; (b) a beginning in the joint sale of cotton at Kapura in Vyara Taluka; (c) extensive comparative tests of Pusa wheat with the local Wajia in six Talukas and in twenty-four fields in the Kadi District; (d) and an extensive propaganda in pit siloes by Co-operative Societies.

Out-standing features of the year's work.

Mention may also be made here of the find of an artesian flow at a depth of 175 ft. from the ground level at Manupur, which was inaugurated by Nek Namdar Dewan Saheb Sir Manubhai in February last and is named after him in commemoration of the auspicious event.

6. Applications for Tagavi advances for installation of Oil Engine and Pump were received from seven persons totalling a loan of Rs. 33,550, and for tractor purchase from three applicants totalling a demand of Rs. 21,500 amounting in all to Rs. 55,050. These were forwarded to the Revenue Department for action with due advice regarding technical requirements.

Appendix II shows details regarding these.

7. The total expenditure and receipts of the Department came to Rs. 1,29,281-7-1. and Rs. 56,403-11-3 respectively as against Rs. 1,52,225-12-6 and Rs. 50,640-9-5. respectively for the previous year.

The following table gives the figures under each head separately. Details are given in Appendix III.

No.	Item.	Expenditure.	Receipts or contributions.
1	2	3	4
		Rs. as. p.	Rs. as. p.
1	Head Office... ..	17,141-14- 6	523- 6- 6
2	Agricultural Engineering including Boring... ..	18,278- 4- 5	5,511-10- 8
3	Agricultural Farms	21,775- 0- 5	12,326-12- 8
4	Dairy and Cattle Breeding Farm	33,285-10-10	18,333-11- 0
5	Propaganda.	9,740-11- 4	10- 0- 0
6	Veterinary Dispensaries	29,059-13- 7	1,9698- 2- 5
	Total	1,29,281- 7- 1	56,403-11- 3

8. The seasonal condition of the year has been, on the whole, satisfactory. Rains commenced earlier by a week or so, for Navsari and Baroda and much more so for Kadi and

Seasonal conditions and crop prospects.

and Amreli. The monsoon kept an excellent pace specially for Navsari and the current was relatively stronger in Kadi than in Baroda. The September rains in both these districts were specially opportune. For the Amreli District, the season commenced in a particularly gratifying manner but later the current failed to reach the part. But just when the crop condition was getting critical, favourable monsoon conditions set in, in the latter part of August, and saved the situation. Further showers in the second and fourth week of September helped to turn the season from almost a hopeless one to one of tolerable crop prospects. Okhamandal, however, remained sub-normal throughout.

The late September rains in Baroda did considerable damage to mature standing crops but improved the prospects of the Rabi crops considerably. The season thus closed with an excellent harvest for Navsari and a fair one for the rest of the territory. Rain-fall records by Talukas are given in Appendix IV.

Although water shortage was not specifically on the books this year, the cycle of lean years through which this part of country is passing has made water shortage a chronic question so far as the supply of drinking water is concerned.

No serious insect pest or crop disease requiring special attention was reported during the year. Some damage was reported on account of the successive spells of cold weather, occasioning frost on more than one occasion specially in the lighter sections of the soil. Cotton and castors were affected more and wheat to a lesser extent in Kadi District. /

9. The working of the Department may conveniently be divided into three main sections :—
Working of the Department.

- (A) Agricultural.
- (B) Agricultural Engineering.
- (C) Veterinary.

(A) AGRICULTURAL

10. In the Agricultural Section are included the following activities :—

Activities of the
Agricultural Section.

- (a) Agricultural Farms.
- (b) Dairy and Cattle Breeding Farm.
- (c) Propaganda.

(a) FARMS.

11. The department has under its control two principal farms, one at Baroda and the other at Jagudan in the Kadi District. A special Farm near Dabhoi has been recently opened for demonstrating the best use of the Wadhawana Tank water.

A Farm for Amreli District has been sanctioned to be opened at Amreli and arrangements are being made to select a suitable site.

(1) BARODA FARM.

12. The Farm is situated about a mile from Baroda Railway Station on the Alembic Factory Road and represents more or less the Goradu soil tract of the Baroda District. It is of but little use for cotton work owing to the bulk of the cotton crop in the District being grown on black soils. The gross area of the farm is 84 acres, of which nearly 66 were cropped during the year. The principal crops grown were bajri, cotton, cotton mixtures, castor, tur, jowar, sundhia, ground-nut, tobacco, lucerne, wheat, onion, chillies and vegetables. About four and half acres are under fruit-trees mainly guavas. Details of crops and yields will be found in Appendix. V.

13. The rains commenced some-what early on 15th June and gave a total rain-fall of 25.49 inches in 54 days. Rain in June and July was favourable but the same cannot be said

Rain-fall and crop
conditions.

of the showers in August, during the whole of which only 5.65 inches was registered. Crop prospects would have been severely affected, had it not been for the smart rain in September and thus though the rain-fall was below average, the distribution gave a fair crop prospect.

Of the 50 days on which rain-fall was recorded, 32 i.e. 64% were below 50 cents and only 16 were above an inch, showing how weak the current was for most of the season.

The October heat and late frosty weather had adversely affected the crop—particularly cotton.

14. Although the season was favourable for sowing, considerable difficulty was experienced in getting a proper stand of the crop owing to the early appearance of Katras. What stand was eventually obtained was further depleted by loss from wilt and white ants in cotton in particular. A succession of frosty weather completed the loss until barely 25% of the cotton crop was actually collected.

The scourge of wilt proceeds unabated, increasing the area under its infection, all the valuable cash crops like cotton, tobacco and ground-nut having been dominated by this disease, so that it is getting more and more difficult to have a well balanced cropping scheme.

For preventing loss by Katras, various methods were employed, but none seemed to have any direct control over the pest. Ground-nut and castor were less affected while sann appeared to invite first attention. Paris green dusting did not effectively check their spread or their numbers.

Boll worm in cotton has its usual toll, but the loss by white ants seemed to be on the increase.

15. The important points that demand special emphasis are those pertaining to (a) the manual tests on cotton, tobacco, onions and wheat; (b) results of the rotational series;

Principal items of work.

(c) May sown cotton; (d) ground-nut mixtures; and (e) late sowing of Bajri results.

16. The manurial tests of cotton gave no results owing to the heavy damage to the crop as a combined result of wilt, white ants and frosts. The use of bone-meal for cotton, however, is now under observation for five years and the following gives the average results of the out-turn per acre:-

No.	Treatment.	Out-turn per acre average of 1919-20 to 1924-25.
1	2	3
1	Farm yard manure 12 cart loads per acre.	547 lbs.
2	Farm yard manure 12 cart loads + 150 lbs. of bone-meal.	743 lbs.

This means an increase of over 36 percent at a cost for the bone-meal which is well within the limit of economic adoption of the practice. Detailed results are shown in Appendix VI.

The results of tobacco manures have not been very satisfactory. As opposed to it, the results on onions have been very consistent for the last three years. The best increase is obtained by the use of 400 lbs. of Sodium-nitrate in conjunction with 100 lbs. of Super-phosphate. The increase alone gave an additional income of over Rs. 300 at a cost of Rs. 60 or so and the results deserve to be extensively popularized in view of the large increase that results. Detailed results of three years are given in Statements VII and VIII.

With regard to manurial trials on wheat, the results indicate that with no other crop to precede the wheat in the rainy season, even 100 lbs. of Sodium-nitrate with Super-phosphate in the same quantity gave profitable yield. But if

a previous crop like Bajri has been taken, then the doze of Sodium-nitrate has to be at least lbs. 200 to have remunerative results. The out-turns of wheat in this test are given in Statement IX.

17. A rotational series had been laid down in 1921-22 and the results of the 4 year cycle are now available for discussion. These are given in Appendix X. The rotations consisted of a 4 year cycle as given below:-

- Results of other trials discussed.
- (a) (1) Bajri with manure 12 cart loads; (2) cotton; (3) sundhia for fodder and grain; (4) castor.
 - (b) (1) Bajri manured; (2) cotton; (3) tobacco manured; (4) sundhia.
 - (c) (1) Fallow with green manure and 150 lbs bone-meal; (2) Bajri; (3) cotton; (4) sundhia.
 - (d) (1) Cotton manured; (2) Bajri; (3) cotton manured (4) Bajri.

The results are not as accurate as would be desired, chiefly on account of varying loss in cotton due to wilt and tobacco and the inability of growing tobacco in all seasons. The best all round result has been obtained in the first rotation and next in order is the third one.

Financially expressed results are no doubt somewhat coloured owing to the current high prices of cotton, but even so the first series of rotation show better profit than all the rest namely a net gain of Rs. 151, over 4 years per acre.

The third rotation would be specially valuable where land had gone very foul, as a year's rest with green manure would suppress the growth considerably and besides give a chance for clean cultivation.

Only these two rotations are, therefore, being kept for further information on the subject.

2 A. D.

The practice of May sowing of cotton with necessary waterings has been found not only a successful one but one which seems to have attracted considerable attention of visitors to the farm. During the year under report wilt attack was particularly acute in this plot and cotton in nearly three quarters of the area had succumbed; but even so an out-turn per acre of 413 lbs. of seed cotton was realized. In addition to a better crop, the system has the further advantage of having part of the picking early enough so as to escape danger from frost. Thus while the general picking commenced on 3rd March during the year under report. The picking for this area commenced on 10th January and nearly 50% of the crop was collected before the general picking commenced. The additional cost of watering would depend upon the season. During the year under report four waterings were given in all including the preliminary waterings and the cost came to about Rs. 28.

The ground-nut mixture along with Tur and castor proved no better than the cotton one of earlier days. In the Tur ground-nut mixture, the loss in ground-nut by wilt was so heavy that no comparable results were available. In the case of castor and ground-nut, the castor had grown tall with but little fruit and the crop of ground-nut had to be hand dug. The soil had set so hard that even with hand digging only a small proportion of the pods could be retrieved. The secret of the whole matter is that unless ground-nut could be harvested at the right time, the crop does not become remunerative and this naturally sets a limit to the area that any one holding could have. An acre to an acre and a half is all that could be ordinarily handled without prejudice to the pressing needs of the other farm crops.

The trial of late sowing of Bajri was more or less forced on our hands. The rains in September have been recently so common, that nearly the whole crop of Bajri is levelled to the ground bringing in its train the dis-colouring and loss of the grain.

The results of late sowing of Bajri are very encouraging. Thus Bajri sown on 4th August 1924, gave a yield of 921 lbs. of Bajri grain as against 977 lbs of Bajri sown on 21st July 1924. The grain in the later sown crop was much brighter and the fodder of far better quality than of the early sown crop.

18. Other important field crops requiring mention are ground-nut and chillies. Harvesting of ground-nut had been very expensive coming to Rs. 2 per maund of 40 lbs. Tractor harvesting was attempted but did not succeed.

Chillies are being so persistently attacked by the disease bringing on malformation of the leaves that it will be some time before any large area would be put down to this crop.

The guava plantation has borne fairly well.

The new plantation is not yet in full bearing.

Of the mango grafts imported, only one "poteo" is surviving to-day. Twenty-five Ratnagiri alphonso were planted during the year and seventeen of these have so far survived.

The bearing of figs was heavy but shedding also was heavy in proportion. In addition, the fruit lacked the flavour it showed last season. Grape vines have not done well owing to defective pruning. Pomegranates do not seem to make very attractive growth.

19. Amongst implements, three new implements were tried. These were the (a) Dixie Wonder; (b) Handy Andy; (c) thirty peg-tooth-harrow. None of these, however, showed any particular advantage over the horse hoe we are now using nor any particularly adaptabilities to our requirements.

The spring-tooth-harrow, horse hoe and cultivator continue to give the excellent service associated with their use.

The sabul plough has been particularly useful for green manuring.

The tractor has been used to a greater extent than ever before and the belief is gaining that a small tractor with suitable equipment in the shape of implement should be, not only useful but even an economic adjunct for farm of this size.

The silo was filled as usual with green matter totalling 3,4320 lbs. mainly made up of maize, some of sundhia and a little of guinea grass. The cost of filling the silo came to only Rs. 0-13-6, for 1,000 lbs. It was filled between 3rd and 6th October and opened on the 9th of March and yielded 30,180 lbs of. feedable silage. The cost of silage works out at Rs. 9-14-0 per 1,000 including cost of fodder at the rate of as 5 per maund of 40 lbs.

Two demonstrations were arranged during the year, one was in October for the benefit of the Dhara Sabha members and the other in connection with tractor demonstration in January in connection with the Panchayet Conference and meeting of the Advisory Board.

Amongst the distinguished visitors to the institution were H. H. the Maharani Saheb; H. H. the Begam Saheb of Bhopal; and H. H. the Rani Saheb of Cooch Behar.

20. The total expenditure of the farm including establishment came to Rs. 14,429-3-11 and the Finances. income came to Rs. 9,473-2-5. The total of farm contingencies alone came to Rs. 10,804-4-11.

Statements giving prices of farm produce, manures, and labour charges are given in Appendix XI to XIII.

(2) JAGUDAN FARM.

21. This Farm is situated near the Railway Station of Jagudan about seven miles from Mehsana on the Ahmedabad side and represents Situation.

the light sandy soil section of the Kadi District. The area of the Farm is about 25 bighas.

22. The rains commenced with a shower in the first week of June totalling 71 cents. It was not well followed however by subsequent currents and the sowing had to be deferred until more moisture in the soil was assured. Most of the sowing was done between 5th and 26th of July.

Seasonal conditions and crop prospects.

The fear that the rains may fail to put in timely appearance for crop growth constantly weighed on the minds of farmers. It will be evident from the fact that there were only 26 days on which precipitation was recorded, which were distributed as follows:—; 4 in June; 12 in July; 5 in August; and 5 in September.

The total rainfall amounted to 22.56 inches and represents the average of the tract, but its intensity was very weak except for the last rains. For there were only five records showing more than an inch of rain between measurement, one in July, one in August and 3 in September. In fact, the rains in September represent more than a third of the season's rainfall and to it must largely be attributed the success of the season in spite of the initial handicap.

Katras among insect pest had done considerable damage to the pulse crops. There was no loss by rust on wheat but frost conditions on more than one occasion took a heavy toll from cotton and castor and to a lesser extent from wheat.

23. The principal work on the farm is in connection with the popularization of the Pusa wheat in the District. During the year under report, the returns of Pusa 12 which has been found to be the most suitable type to distribute gave an average out-turn of 2,200 lbs. to the acre with a maximum of 2,800 lbs. A large part of the farm produce is reserved for

Principal work on the farm.

distribution in the District for demonstration of its superiority over the local Wajia type.

The other important work is in connection with the extension of fruit trees. Among these the citrous fruits have received first attention and a good crop of santras is being harvested for the last two or three seasons. More than 2,000 fruits have been sold during the year under report. The extension of this crop will occupy the attention of the propoganda section next year. It is also intended to put down a larger area under fruit trees on the farm.

Wheat after Bajri gives better total returns than wheat alone but the opportunity of renovating the land that one gets in green manuring the land, must not be lost sight of.

Other incidentally important crops are Bajri, chillies, tobacco and cotton. An out-turn of nearly 1,200 lbs. of Bajri per acre on the Jagudan Farm is not a mean performance and is entirely due to the careful treatment of the land. Chillies would have done far better but for the frosty weather.

Details of the farm cropping and other useful figures are given in Appendix. XIV & XV.

24. A test with the pit method of silage was taken on the farm and 9,533 lbs. of green sundhia was placed in the pit measuring about 10 feet in diameter and $7\frac{1}{2}$ feet deep at a cost of Rs. 33-15-0 for labour alone. The pit was opened in the beginning of April and the silage fed to the cattle on the farm between 5-4-25, to 17-5-25. Nearly fifty per cent of the silage taken out was good and the cattle ate it with evident relish.

The area is now served by three wells in the main block but the shortage of water in these is causing considerable anxiety. The new well that was sunk last season was bored 140 feet deep from the bottom of the well at a cost of Rs. 900 roughly, but only half a koss of water was struck. Further

deepening of the bore hole is necessary and will be taken up next season.

25. The total expenditure of the farm came to
 Finance. Rs. 4,721-0-2. and the income to
 Rs. 2,560-7-8.

(3) DAHBOI WADHAWANA FARM.

26 This agricultural station can hardly be called a farm,
 Situation. but rather an experimental plot and is
 situated about two miles from the Dabhoi
 Railway Station on the side of the Waghodia Line.

27. The object of the farm is to find out and demonstrate
 Object in what way the Wadhawana Tank water
 could be best utilized to the mutual
 advantage of the farmers and the Government. The history of
 the project has been somewhat chequered and has not
 unfortunately been able to command general satisfaction and
 in some cases there is down right opposition to its use. It
 will be readily seen, therefore, that in spite of our best efforts,
 the attempt to prove the usefulness and productive capacity
 of the tank water, will be unpopular.

28. The farm area came in the possession of the Depart-
 ment on 14th June 1924, but before we
 Work done. could lay it out properly, the same night
 a rainfall of two to three inches was recorded, thus interfering
 with our plans and expectations.

The plotting work took some time and was finished on
 8th July 1924, and the sowings commenced from 23rd July.
 The season had, however, continued to be a wet one and
 nearly 36 inches of rain was recorded up-to the middle of
 October 1925.

In addition to the wet weather, further trouble was
 caused by an un-expected over-flow in the fields on more than
 two occasions and drowning all the crops on the farm, namely .

onion, garlic, lucerne, cotton, wheat, Jowar, cabbage, and sundhia, i. e. nearly every thing on the farm was flooded and damaged in consequence.

Touch of frost added its own share to the damage and the stray cattle did the rest, closing the year with very disappointing results.

There is reason to believe that these floodings have been intentional as the work this Department is called upon to do is of an unsympathetic character so far as the farmers are concerned.

The aim in laying out the cropping scheme has been kept, not so much the study of intensive crops like sugar-cane, but of an extensive nature like watering of cotton. In addition possible crops are also being tried to see if any of these with a short period of growth can be taken with advantage.

29. Seeing the hostile attitude of the people towards the object of the farm and the difficulties that we have had to experience compels us to the conclusion that a mere two year plot would hardly meet the case, more especially as the tests involved are of a very unpopular character. The interest of Government in the proper use of the Wadhawana Tank are of a permanent nature and as the capacity of the tank can yet be increased, it would be quite in keeping with the importance of the project to have a regular permanent farm located there.

(b) DAIRY AND CATTLE BREEDING FARM.

30. At the suggestion of Government a detailed technical inspection of the Institution was undertaken and submitted to Government, which has resulted in the transfer of the Dairy to the Director of Commerce and Industries. The administering was handed over from 1st

Dairy transferred to the Director of Commerce and Industries.

July 1925, but to minimize account difficulty, it was decided to let the budget remain under this Department where it had been for most of the period.

It was presumed that the Director of Commerce will include the detailed report in his section, but since the report has been forwarded to this Department, the essential details of the work will be given below.

31. The Institution is located at Makerpura, a suburb about 4 miles from Baroda. Its main object is to build up a pedigree herd of Kathiawar breed of Gir cows and Jafferabadi buffaloes.

A farm of about 30 acres is attached to the Institution for purpose of fodder supply.

32. The live stock on hand at the end of the year is reported as 125 against 160 of the previous year; the milch stock comprises of 38 cows and 21 buffaloes. Details are given in Appendix XVI.

The health of the stock, on the whole, has been only fair. An out-break of Hoemorrhæmic septicæmia took place amongst the buffaloes and carried away three victims. Prompt inoculation stopped further attacks from the disease.

A mild attack of rinder pest had also broken out but timely measures brought the disease under control without any fatality.

33. The total quantity of milk produced during the year came to 1,07,961·5 lbs. Out of this the cows produced 69,448·5 lbs. and the buffaloes gave 38,513 lbs.

57,015·5 lbs. of the total milk yield, was supplied to the General Hospital; 15,189 lbs. to the Royal Family and
3 A. D.

12,109.5 lbs. to other customers, the rest of the milk viz. 23,647.5 lbs. was separated yielding 2331 lbs of cream.

Appendix XVII gives some of the best lactation records of the year and Appendix XVIII shows the seasonal and class variation of butter fat in the milk.

34. Although increase of milk yield in the pail is the inevitable result of weaning, it cannot be considered to be the object of weaning.

Effect of weaning.

If we consider that in cases where calves are not weaned, only three quarters are milked in the pail and the fourth left for the calf, then the proportion not received in the pail is about $\frac{1}{3}$ of what is received in the pail. Conversely, when weaning is adopted on the same assumption as above, the proportion of increase due to weaning would be roughly $\frac{1}{4}$ of the total milk received in the pail.

The average yield per cow and buffalo this year came to 3,019.4 and 3,209.4 respectively, and is calculated to have given an increase over last year's records by 742 in the case of the cow and 767 for the buffalo. This increase is mainly attributed to the adoption of weaning system, feeding of silage and timely grown fodder crops.

As already observed, if we deduct one quarter of the milk as mechanical or apparent increase due to weaning, this year's figures of milk yield comparable to last year will stand roughly as 2,265 per cow and 2,407 per buffalo, against 2277 per cow and 2442 for the buffalo in the previous year.

It will be seen from the above that the increase of milk yield per animal on which so much emphasis has been laid is the result of confusion of ideas, it being largely mechanical as explained earlier and not a genuine one so as to be classed in the performance of animals.

35. The main object of weaning is to reduce the long dry period between lactations by bringing about more regular calving and it is

Object of weaning.

reported that success has attended the practice in almost 75 cases out of 100. As proof of this general tendency, however, only one instance and that of the best cow of the herd has been reported and if it is typical of the measure of success achieved, it is remarkable since the dry period is expected to be reduced to only 100 from 530, dry days of the previous lactation. It is a pity more detailed data regarding this important subject are not included in the report.

36. The total fodder consumed during the year came to 6,04,309 lbs. 2,49,834 lbs. out of this was Fodder produced and concentrates fed. produced on the farm and lbs. 3,54,475 were bought from the contractor.

Out of a total farm produce of 2,49,834 lbs. only 81,995 lbs. was put in the silo pits i.e. just about a third. Out of six silo pits filled during the year four were opened and gave good silage. The total percentage of loss coming to 18.8. Two siloes one of sundhia and the other of grass, have been kept over to see how silage keeps after a season's lapse.

About 1,50,730 lbs. of concentrates were fed to the cattle at a cost of Rs. 8,928-12-11. Details regarding these are given in Appendix XIX and XX

37. The total expenditure of the year is reported to be Rs. 33,285-10-10 and receipts came to Expenditure and income. Rs. 18,333-11-0. The latter includes however Rs. 2,893-5-8 of last year's bills and cannot, therefore, be considered as this year's income. Deducting this amount, the income for the year stands at Rs. 15,440-5-4.

(C) PROPAGANDA.

38. The propaganda work is carried on by three agencies Lines of work. (1) Work by District staff; (2) demonstration and shows; (3) Publications.

(1) WORK BY DISTRICT STAFF.

39. The main activity of the Cotton Officer is concerned with the Navsari District. The cotton Transport Act came into operation for the first time this year and considerable care had to be exercised in giving effect to the Act and at the same time to try to remove real hardships in all possible ways but still consistent with the spirit of the Act. Four check stations were placed at Ukai, Wankwel, Gaysabar and Don on the Songhad frontier to prevent ingress of Navapur cotton. Licenses were also issued to fifteen villages of Kamrej Taluka which banked on the Tapti and produced cotton of a superior zone although territorially placed in the inferior zone on the other bank of the river.

40. One main activity with regard to improvement consists in aiding the spread of the improved seed. Various agencies are instituted in pushing the seed forward. Distribution of improved seed. Out of a total quantity of lbs. 3,61,800 of improved seed distributed, a considerable proportion is given out to people by an arrangement with the gin owners; some has been issued through and to Co-operative Societies and the rest is made up by sale from the seed depots in the neighbouring British territories. When special facilities for such a centre were needed, a departmental seed store was arranged and the seed distributed even at a loss. One such was opened during the year at Simodra in Mangrol. Details of seed distributed are given in Appendix XXI.

41. The question of joint sale of cotton is very vitally connected in securing for the cultivators the full benefit of the improved cotton they are growing. A beginning was made in this direction during the year by a joint sale of cotton, with a view to co-operative selling in course of time. Joint sale of cotton.

The ground was being prepared for this venture in Kapura in Vyara Taluka for the last two years and a few

people were at last persuaded to give a trial to the suggestion. As is the luck of all pioneers, they had to contend against great obstacles——artificial as well as natural——since a fire broke out in the gin, where this cotton was stocked for sale. Fortunately, for them as well for the movement, their cotton narrowly escaped being damaged, and beyond having to cart the cotton to a gin some distance, the owners came out of the accident without much scorching.

The people had naturally to be helped at every step by the Cotton Officer, but it is a movement worth taking a considerable trouble about and as a result a premium of Rs. 21 or so was received. Quite a part of the produce had to be sold on a falling market or the average price for the people who sold their cotton jointly would have shown a greater advantage than Rs. 6 per bhar. as they actually received.

As a result of this movement Rs. 2,196 more were realized by the joint sellers than they otherwise would have got and with cotton belonging to 38 members, it averages about Rs. 58 more per member.

The experiment, having succeeded in spite of the accident and other difficulties, the people are feeling much more confident about its operations next season and it is hoped that the method will spread as the benefit becomes better known.

That the above is the case is evident from the fact that a Co-operative Cotton sale Society has already been registered at Karjan, in Kamrej Taluka and its operations next season will be watched with great interest by all concerned. Other centres have also shown their willingness to join in the same movement and it is expected that the special Cotton Officer will be of great assistance to the people in the preliminary stages. Details of the Kapura joint sale are given in Appendix XXII.

42. In addition to the special Cotton Officer, there is an agricultural graduate attached to each District for help and advice to the cultivators and keep up the propaganda in their respective divisions.

Work of the District
Agricultural Inspectors.

43. Besides cotton, there is considerable other propaganda work in this District, the principal one being the successful trial of an early and finer variety of rice in place of the local, coarse 'kada'. This year's results have been exceedingly gratifying and nearly the whole of the produce of these tests has been reserved for seed purposes. In addition to this, 2,400 lbs. of fresh seed was ordered and has been all sold. The tests promise to open up a large field of action for propaganda purposes if the extensive trials to be taken on hand next season give equally satisfactory results. The details of these tests will be found in Appendix XXIII.

Work in the Navsari
District.

Another direction in which propaganda work is being carried on is in connection with manures. Tests were arranged on the farmer's fields with bone-meal for rice and sodium-nitrate for cotton and onions. The result of the last of these tests are so striking that an increase of 3,000 to 6,000 lbs. of onions has been obtained by the use of 60 to 120 lbs. of sodium-nitrate per acre.

Power crushing of cane is another useful bit of demonstration. The use of power makes the use of a more efficient crusher possible and the more complete recovery of the juice from the same stock clearly brings out the advantages of power crushing. In the tests taken in this connection, it was proved that while the ordinary crusher yielded only 62% juice from the cane, the power crusher increased the juice percent to 70, thus giving an additional 8% juice. This resulted in giving 160 lbs. of gul more per bigha or at the rate of Rs. 5 per 40 lbs. a gain of Rs. 20 per bigha or more than Rs. 30 per acre. Details of the tests are given in Appendix XXIV.

The work of steeping of Jowar in copper sulphate is going on a pace and during the year under report about 500 packets and more than 1,500 acres were sown with steeped seed.

Improved implements in the form of cultivators and Kirlosker ploughs of various patterns were obtained for three cultivators and one set has also been placed for demonstration at each of the Vyara and Songadh, Dhanka Boarding school farms.

44. In the Baroda District, principal attention is given to the manurial problem of the tobacco section. The last three years have been spent merely as preliminary grounding since considerable prejudice in this matter had to be overcome. It has now been established to the satisfaction of the discerning and progressive tobacco growers that in sodium-nitrate we have a substance to which the plant readily responds even when given as top-dressing in addition to the usual proportion of farm yard manure. The farm yard manure however is limited in quantity and there is keen competition in securing it by all tobacco growers. Prices of this manure have accordingly gone very high and hence the problem of finding a partial substitute.

A beginning was made in this direction during the season under report by reducing the quantity of farm yard manure by half and compensating the same by 100 lbs. of sodium-nitrate. As a result it is found that this reduction of doze and its substitution by sodium-nitrate has, without adding to the cost of manuring increased the out-turn by about 200 lbs. which is therefore nett gain. These tests will be further continued and repeated until the point is proved to the conviction of all. Details of the tests are given in Appenix XXV.

A small test with sodium-nitrate as manure for cotton was taken with encouraging effect. The tests will be

repeated next season before taking up propaganda in that direction.

In addition to the district propaganda work, the Agricultural Inspector, Baroda was responsible for the supervision of the Dabhoi Wadhawana Farm.

45. In the Kadi District the principal propaganda work pertains to extension of pusa wheat. With the assistance of the Kadi Agricultural Association, selected seed from the Jagudan Farm was issued to four certified growers in each of the six Talukas of Kadi, Sidhpur, Patan, Mehsana, Visnagar and Kheralu for comparative tests with the local Wajja and the results of these tests have been very gratifying. Thus as an average of trials at 18 places, the out-turn works out at about 2,300 lbs. to the acre, which may be considered to be a very good out-turn. The best result works out at 3,421 lbs. of wheat per acre. The corresponding yields of Wajja were 1,700 lbs. and 2,856 lbs. respectively. Details are given in Appendix XXVI.

The use of copper-sulphate for smut prevention has been taken up as an important propaganda work and resulted in 1,700 acres being sown with treated seed. The rain-fall conditions however have been very unsatisfactory and the treatment could not show telling results.

A beginning is being made in the trial of the improved strain of Wagad isolated at Viramgam, which is intended to take place of the present mixture.

The Agricultural Inspector in Kadi is also in charge of the Jagudan Farm and works as Superintendent. If the propaganda work in wheat is to be pushed to its logical conclusion, a whole time Inspector would be a desirable thing.

46. Amreli District is having a run of such lean years that agriculture in the tract is becoming more and more a matter of chance. This has made crop tests on the farmers' fields

an impossible task. It has therefore now been decided to open a Government Farm to take up the agricultural problems of the District. Most of the propaganda work must have as its basis a fair season and this we are denied in Amreli for the last couple of seasons. The work in demonstrating Poona furnace is very valuable and was shown at one place in Damnagar with success, but the area under sugar-cane is also shrinking owing to water shortage. Cotton and wheat are two important crops in Amreli and the opening of the Farm, it is hoped will enable us to tackle the crops in a continuous manner.

47. An activity that deserves special mention is in connection with the intensive propaganda carried on for acquainting the agriculturists with regard to the possibility of silage in ordinary farming. The way of its successful demonstration was opened up owing to the intense interest the Registrar of Co-operative Societies exhibited in the work and who formed about twenty special societies for undertaking silage work alone. 3,575 mds. of green fodder was thus ensiled and the resulting silage in many cases has been found to be of a satisfactory nature by the people and in these cases, it may be said that, the possibility of preserving green fodder in a palatable condition has been demonstrated. Appendix No. XXVII. One point that is to be borne in mind in this connection is that all the silage was by the 'Katcha pit' silo' method and that while we have heard a lot regarding the possibilities of silage in this country, our Government is the first to demonstrate its practicability on such a large scale. This year's propaganda it is hoped, will open the way for more tests of the kind and the movement will be watched with great interest by all.

(2) DEMONSTRATION & SHOWS.

48. No big show was held during the year under report, but an opportunity was taken to show the members of the Legislative Assembly the work being done at the Baroda Farm and the Palace Dairy.

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49. The occasion of the meeting of the Advisory Board and Panchayet Conference was availed of for arranging tractor demonstration, on the Baroda Farm along with the other work. Case, International, John Deere and Chase tractors took part in the arrangement. An interesting cinema show was given in the evening, in co-operation with the visual instruction branch; the tractor farming film was kindly supplied by agents for the Case Tractor.

(3) PUBLICATIONS.

50. The annual agricultural calendar in Gujarati was published as usual and was immediately sold out.

51. The quarterly Kheti and Sahakarya is being published as usual.

Gujarati agricultural quarterly.

(B) AGRICULTURAL ENGINEERING.

52. The section remained in charge of Mr. B. G. N. Acharya until his resignation came into effect from 2nd March 1925. Since then the charge has remained with Mr. H. C. Gandhi as a temporary measure, a suitable candidate not being yet available to fill up the post permanently.

53. The Department has four power machines, two of the musto type and two calyx, and nineteen hand machines of the Cawnpore type. One musto and calyx and 6 hand sets were put to work in the Kadi District, three Cawnpore sets worked in Baroda and one calyx and musto worked in Navsari and Amreli respectively.

54. Although agriculturally the season was fair to normal, the difficulty of water supply in demand for boring drinking wells continued. The Kadi

District Local Board has now organized their own boring section to meet this difficulty and the only work the Agriculture Department did for them was for Gunja. Sweet water was struck in the well at a depth of 225 ft. but owing to its sub-surface level, a hand pump about 300 gallons per hour capacity had to be fitted to test the flow. The village people found it in-sufficient and new bore is intended to be made by the Panchayet.

55. It is necessary to utter a note of warning here with regard to the demand of the people of having none but an artesian supply. A warning. It is not always possible to tap an artesian spring and to throw away good potable water merely for this imaginary gift would be against the interest of the community. In a place like Gunja for instance, where potable water is absolutely not to be had, even a sub-surface sweet water that can be pumped out must not be lightly spurned. It may easily happen to be a case of leaving this one and not tapping the other.

56. The number of applications received during the year came to 69 and with thirty applications from the last season's standing the total number came to 99. 71 wells out of these were taken up with the following results. 46 were successful, 2 un-successful, 15 abandoned at the request of the owners and 8 left in-complete. The total increase of water is calculated at 84 koses. The total boring in feet came to 4,702. Details of boring work done are given in Appendix. XXVIII to XXXII.

57. The Departmental Fordson tractor was sent to Vyara to operate the cane power crusher and rendered a successful account of its use. It was also used to demonstrate power cultivation after the cane crushing work was over. Tractor work.

A trial of the Hand Tractor was taken in interculturing cotton in 3 acres. The result of the test however is not very

encouraging. The work is altogether too slow and the working of the machine somewhat cumbersome.

The Fordson Tractor was used on the Baroda Farm to a much larger extent and was found a useful supplement. It was also used for giving power cultivation demonstration whenever required.

The advance of the tractor has gone on during the year unabated. 8 case, 13 International and 9 John Deere tractors have been sold and nine of these are in Baroda territory. There is a considerable effort at consolidation of the tractor advance and the question of its being made serviceable in ordinary farming is already before those, who have forged ahead in this progressive method of opening up new lands. Details of the newly purchased tractors are given in Appendix. XXXIII.

The working of the tractor has been a success in Baroda alone and it is in no small measure due to the foresight of the Baroda Government in according facilities to the users in the way of operation and repairs. The services of the Agricultural Engineer were freely given whenever needed and the tractor operator has often been able to help people over slight difficulties. We will have to keep up this assistance until like the oil engine and pump the tractor becomes a farm equipment in suitable surroundings.

58. An oil engine and tractor class was conducted and was well availed of by those, who were interested in these problems.

Tractor and oil engine Class.	
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59. The total Expenditure.	expenditure on this section came to Rs. 18,278-4-5 and the income to Rs. 5,511-10-8.
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(c) VETERINARY.

60. Thirteen dispensaries continued to work during the year under report according to new ruling of one third of the expenditure by Government and the rest by Local Boards.	
Strength and distribution of Veterinary Dispensaries.	

Five of these are situated in the Baroda District, at Baroda, Petlad, Bhadrán, Dabhoi and Sankheda; four in Navsari District, at Vyara, Kathor, Vesma and Karchelia; and four in Kadi, at Mehsana, Patan, Sidhpur and Vijapur.

61. The total number of fresh cases admitted in the dispensary comes to 14,731 against 14,342 of the previous year. Out of these 14,407 were out-door and 324 as in-door patients. The daily average attendance for all these dispensaries combined comes to 295.48 for out-door and 7.52 for in-door patients. Last year's cases on hand at the beginning of the year were 310. Cases treated on tour came to 630. Details are given in Appendix XXXIV.

62. Out of animals coming for treatment, 2,199 were horses, 10,322 were cattle, 492 dogs and 1,719 of the miscellaneous class of goats, sheep, camels etc.

63. From the analysis of diseases treated at the dispensary Appendix XXXV it seems that the disorders of the digestive system numbered 2,703 next in order were skin affections; 397 entries were responsible for specific troubles and 920 of the eye and ear. The miscellaneous class numbered 5,508.

The total number of operations came to 1,629 out of which 706 were major operations and 923 minor ones.

64. Altogether 41 reports of out-break of epidemic diseases were received during the year. 17 of these were for rinder-pest, 14 for Hoemorrhagic Septicaemia and 10 for foot and mouth disease. Details are given in Appendix XXXVI to XXXVIII.

Out of total number of 1,075 preventive inoculations, 878 were for rinder-pest and 197 for Hoemorrhagic Septicaemia.

65. The stallion at Patan Veterinary Dispensary continues to give service to mares brought at the dispensary. The virility of the animal is, however, getting somewhat doubtful and it is intended to replace him as soon as a suitable animal was available, 19 mares were served during the year.

66. Mr. S. M. Vasawada was confirmed as Veterinary Inspector during the year. All the dispensaries were duly inspected by him and reports submitted with regard to the working of the various dispensaries and due action taken as indicated by the inspector.

The Veterinary Inspector tested Burdizzo method of castration and the results at Karchelia show a further demand for its use in the District.

68. The total expenditure for working the dispensaries came to Rs. 29,059-13-7 and the income came to Rs. 19,497-11-2 by contribution and Rs. 200-7-3 as miscellaneous receipts. Details are given in Appendix XXXIX.

Baroda,
Dated 9th January 1925. }

C. V. SANE,
Director of Agriculture,
Baroda State.

APPENDIX No. I.

Important posts in the Department of Agriculture in the year 1924-25.

FARM SUPERINTENDENTS AND INSPECTORS.

Mr. P.: P. Patel, B.Ag.	...	...	Agricultural Inspector, Amreli District.
Mr. R. G. Patel, B.Ag.	...	...	Agricultural Inspector, Kadi District and Superintendent, Jagu- dan Farm.
Mr. G. K. Desai, B.Ag.	...	...	Agricultural Inspector, Navsari District.
Mr. V. M. Kathavate, B.Ag.	...	...	Superintendent, Baroda Farm.
Mr. D. S. Medatkar, B.Ag.	...	...	Agricultural Inspector, Baroda District.
Charge with Mr. G. K. Desai, B.Ag.	...	...	Cotton Officer.

AGRICULTURAL ENGINEERING.

Mr. B. G. N. Acharya.	}	...	...	Agricultural Engineer.
Mr. H. C. Gandhi.				
Mr. H. C. Gandhi	...	...	...	Boring Overseer, upto 28th February 1925.
Mr. N. L. Desai	...	...	...	Boring Overseer from 28th February 1925.

VETERINARY BRANCH.

Mr. S. M. Vasawada, G.B.V.C.	...	Veterinary Inspector.
Mr. D. B. Pandya, G.B.V.C.	...	Baroda Veterinary Surgeon.

Mr. H. V. Save, G.B.V.C. Patan Veterinary Surgeon. Mr. Save's services lent to Khangi Department from 17-11-25 & Mr. R. K. & Pathak was in charge of the Dispensary till the end of the year.

Mr. C. V. Mankodi Vesma Veterinary Surgeon.

APPENDIX No. II.

Statement showing Tagavi advances recommended to
the cultivators in the year 1924-25.

Serial No.	Name of the cultivator.	Village.	Taluka.	Amount re- commended.	For purchase of	Remarks.
1	2	3	4	5	6	7
1	Pragjibhai Bhimbhai Vakil.	Kodinar	Kodinar	5,000	Engine pump	
2	Shivabhai Haribhai Patel.	Itola	Baroda	5,000	"	
3	Dosabhai Javshedji ...	Borsad	Mangrol	2,000	Pump	
4	Sardar Ramchandra Narayanrao Ambegaokar.	Baroda	Baroda	5,000	Tractor	
5	Shamaibhai Talsibhai ...	Makar-pura	Do.	4,000	Engine pump	
6	Nathabhai Narottam Patel.	Shinor	Shinor	5,000	"	
7	Motibhai Govindbhai Patel.	Bhadran	Bhadran	6,500	Tractor	
8	Parshottam Dwarkadas Patel.	Bhuvel	Do.	6,550	Engine pump	
9	Maganlal Pursottam Haribhakti.	Baroda	Baroda	10,000	Tractor	
10	Parsotham Naranbhai Patel.	Bhuvel	Bhadran	6,000	Engine	
	Total...	...	Rs.	55,030		

APPENDIX

Statement showing expenditure and receipts of the

Serial No.	Branch.	Pay.	Travelling allowance.	Experiments and demonstrations.	Other charges.
1	2	3	4	5	6
1	Head Office ...	11,553- 3- 5	1,587- 8- 9	1,336-10- 3	2,664- 8- 1
2	Agricultural Engineering	7,430- 7- 0	1,775- 2- 6	133-12-10	8,938-14- 1
3	Baroda Farm ...	3,475- 0- 8	32-10- 6	...	10,921- 8- 9
4	Jagudan Farm ...	860-15- 0	99- 0- 6	...	3,761- 0- 5
5	Dabhoi Farm ...	501-15- 0	33- 7- 0	...	2,089- 6- 7
6	Dairy ...	7,407-12- 7	...	...	25,877-14- 3
7	Inspectors ...	6,357-12- 3	1,629- 9- 3	460- 9- 8	255- 8- 0
8	Cotton Office ...	796- 0- 8	45- 0- 6	...	196- 3- 0
9	Veterinary Dispensaries.	18,460- 2- 0	716-11- 9	...	9,882-15-10
	Total...	56,843- 4- 7	5,919- 2- 9	1,931- 0- 9	64,587-15- 0

No. III.

Department of Agriculture for the year 1924-25.

Total expenditure.	Receipts.	For the year 1923-24.		Remarks.
		Expenditure.	Receipts.	
7	8	9	10	11
17,141-14-6	523-6-6	29,556-9-5	568-0-10	
18,278-4-5	6,511-10-8	29,856-1-2	1,864-8-6	
14,429-3-11	9,473-2-5	12,765-14-2	12,106-7-7	
4,720-13-11	2,560-7-8	5,339-10-8	2,520-6-2	
2,624-12-7	293-2-7	829-9-1	...	
33,285-10-1	18,333-11-0	36,052-0-10	15,697-4-8	
8,703-7-2	10-0-0	8,170-14-10	...	
1,037-4-2	...	1,327-7-2	...	
29,059-13-7	200-7-3 + 19,497-11-2 Panchayet contribution.	28,327-9-2	17,883-13-8	
1,29,281-7-1	56,403-11-3	1,52,225-12-6	50,640-9-5	

APPENDIX No. IV.

Statement showing rain-fall at each Taluka Head Quarters
for the year 1924-25.

District.	Taluka.	Rain fall of 1924-25.	of Normal last ten years.	District.	Taluka.	Rain-fall of 1924-25.	Normal of last ten years.
1	2	3	4	5	6	7	8
		In. Cents.	In. Cents.			In. Cents.	In. Cents.
BARODA.	Baroda City ...	26'00	31'36	KADI.	Kadi ...	29'10	26'06
	Baroda Mahal.	24'69	29'55		Kalol ...	25'50	24'45
	Padra ...	26'37	25'71		Dehgam ...	26'65	25'25
	Karjan. ...	34'44	32'95		Attarsumba ...	29'28	27'36
	Dabhoi ...	36'49	33'31		Visnagar ...	22'60	24'38
	Sankheda ...	38'85	37'81		Mehsana ...	21'14	25'43
	Tilakwada ...	33'67	33'79		Kheralu ...	31'66	23'08
	Sinor ...	40'92	34'24		Sidhpur ...	28'19	22'55
	Chandod ...	36'9	25'67		Pattan ...	17'35	19'22
	Petlad ...	22'72	24'90		Harij ...	20'92	19'97
	Bhadran ...	28'82	25'11		Vijapur ...	26'14	25'91
	Savli ...	24'88	29'40		Chansma ...	15'16	20'63
	Waghdia ...	32'00	33'80		Amreli ...	15'58	18'83
	Navsari ...	54'76	50'60		Bhimkatta ...	17'4	21'58
NAVSARI.	Gandevi ...	56'17	57'60	Dhari ...	11'6	18'10	
	Palsana ...	42'99	46'78	Khamba ...	17'48	16'92	
	Mangrol ...	34'93	34'55	Damnagar ...	10'0	17'90	
	Kamrej ...	48'6	38'62	Ratanpur ...	13'30	18'16	
	Vyara ...	48'2	55'05	Kodinar ...	19'32	23'14	
	Songadh ...	58'31	54'83	Okhamandal ...	3'12	10'07	
	Mahuwa ...	38'88	48'08	Beyt ...	5'59	9'02	

APPENDIX No. V.

Statement showing acreage and value of crops raised on the
Baroda Farm, 1924-25.

Serial No.	Name of the crop.	Area.		Yield.		Value.	Remarks.
		A.	Gts.	Grain or other principal product.	Fodder.		
1	2	3	4	5	6	7	8
1	Korda mixture ...	1	20	48-27	2 Cart loads.	55- 4- 0	
2	Cotton ...	7	5	41-22	...	251-14- 3	
3	Cotton til mixture ...	1	20	4-13	} ...	26- 3- 6	
	Til,			1-18½		7- 5- 0	
4	Cotton (May sown).	1	...	10-13	...	62- 5- 6	
5	Cotton (Ratoon ) ...	...	20	4-29	...	38-10- 3	
6	Ground-nut ...	1	21	55-39½	176- 0	154- 7-10	
7	Ground-nut + Tur ...	...	30	8-20	22- 0	23- 1- 0	
	Tur ...	...	...	6-20	1-30	15-10- 9	
8	Ground-nut ...	1	...	17-30	77- 0	110- 7- 2	
	Castors,			12-28			
9	Tur + Til mixture ...	1	...	17-27	5- 0	41-15- 8	Tur only.
10	Cotton, Tur and Til... mixture,	1	...	2-25 6-15 0-27	Cotton Tur 3-0 Tal.	} 34-12-11	
11	Maize for fodder ...	1	...	6- 7½	503-28	164-15- 9	
12	Bajari... ...	12	27	281- 4	7,255	795- 2- 6	
13	Tobacco ...	2	20	63-34	...	215- 8- 0	
14	Sundhia for seed ...	3	11	28-11	25-30	209- 5- 9	
	Green fodder ...	...	...	...	24- 0		

APPENDIX No. V—Continued.

Serial No.	Name of the crop.	Area.		Yield.		Value.	Remarks.
		A.	Gts.	Grain or other principal product.	Fodder.		
1	2	3	4	5	6	7	8
15	Sundhia for fodder ...	2	39	5- 1	772 +	242- 0- 3	
	Green fodder ...	...	...	...	617-24	.	
16	Sundhia ratoon ...	1	20	...	550 +	{ 147-10-0	
	Green fodder ...	...	...	...	402- 0		
17	Castors big ...	5	4	105-14½	...	495- 9- 5	
18	Castors small ...	...	20	4-17	...	20-12- 1	
19	Sudan grass ...	...	20	...	535	31-12-10	
20	Gawar for seed ...	3	22	61-14	88- 0	173-15- 2	
21	Chillies ...	1	...	2-20 0- 4	Green. Dry.	{ 4-3-9	
22	Vegetables ...	1	10	489-30 1,642 12-33½ 0-17½ 6- 3½ 205 } 0- 8½ 0-22 1,455 970 9-20½ 2- 2½	Cabbage Knolkhol Tomatoes Peas. Cauli flower. Bhinda Gawar Salet. Beat. Brinjals Chillies.		756- 2- 6
23	Onions	20	322- 2	...	317-14-11	
24	Plantation ...	4	...	...	...	1131-15-0	
25	Guinea grass ...	1	10	258- 0	...	24- 6- 6	
26	Lucerne grass, 2nd year.	1	...	6-37	1066-10	943- 2- 6	
27	Wheat ...	1	...	63-39	3,460	394- 2- 3	

APPENDIX No. V—Continued.

Serial No.	Name of the crop.	Area.		Yield.		Value.	Remarks.
		A.	Gts.	Grain or other principal product.	Fodder.		
1	2	3	4	5	6	7	8
28	Mango, figs, chikoo, Plantains and etc.	...	36	2-31 0-1½	Plantains Figs.	14-12-6	
29	Maize...	...	30	46-17½	...	58-14-1	
30	Ground-nut ...	...	15	37-11½ 1-7½	331-20	128-8-0	Green dry.
31	Guinea grass ...	...	5'8	...	258-0	25-10-6	
32	Out-side chaidi ...	2	20	...	...	99-0-0	
33	Seed bed ...	...	10	1,750 3,475 275 525 750 0-17½ 0-36	Tobacco* Cabbage Knolkhol Cauli flower Variali Onions seed Onions	73-15-1	*Seedlings " " " "

SECOND CROPPING.

1	Wheat ...	1	...	47-14	2,240	167-7-9
2	Gram...	...	20	3-38	...	7-6-6
3	Castors ...	...	20	9-27	...	45-8-0
4	Lucerne grass ...	2	...	...	2591-39	1619-15-9
5	Onions ...	...	15	193-31	...	176-9-10

APPENDIX No. VI.

Manurial trials of cotton on the Baroda Farm from
1919-20 to 1924-25.

Treatment per acre.	1919-20.		1920-21.		1922-23.		1923-24.		1924-25.		Remark.
	Plot	Yield.	Plot	Yield.	Plot	Yield.	Plot	Yield.	Plot	Yield.	
1	2	3	4	5	6	7	8	9	10	11	12
Farm yard manure 12 cart loads.	26	640	17	656	16	702	14	520	16	216	Yield lbs per acre.
Farm yard manure, 12 cart loads + Bone-meal, 150 lbs.	25	1184	18	644	15	640	13	844	15	406	

APPENDIX No. VII.

Manurial trials of onions on the Baroda Farm, 1924-25.

Manures per acre.	Yield, dry per acre, lbs.	Increase or decrease.	Cost of artificial.	Value of the increase at annas 0.14-7 per 40 lbs.
1	2	3	4	5
Farm yard manure, 12 cart loads.	18,630	...	...	..
Nil. + Soda nitrate, 400 lbs.	33,285	14,655	58-14-9	333-15-0
Nil. + Am. sulphate, 318 lbs.	30,912	12,282	45-14-11	279-13-9
Farm yard manure + Am. sulphate 225 + super-phosphate. 112	30,636	12,006	35-9-0	273-9-0
Do. + Soda nitrate + Do. 285.	30,608	11,978	44-7-3	272-15-8
Do. + Do. + Do. + Pot. Sulphate. 56.	29,973	11,343	50-7-9	258-8-2
Do. + castor-cake + Supr. 900 lbs. 100	29,421	10,791	52-10-11	245-13-8
Do. + Am. sulphate + Supr. 225 100 lbs.	29,007	10,377	34-10-2	236-7-1
Do. + Do. + Do. 42 + Pot-sulphate 56.	26,937	8,307	41-9-6	189-4-4
Do. + Soda. N. + castor cake + Super. 150 450 100	26,882	8,252	41-5-10	188-0-6
Do. + Soda Nitr. + Super. ph. 285 100	25,254	6,624	43-8-5	150-14-0
Castor-cake + Super phos. 900 100	21,982	3,352	52-11-11	76-5-4

APPENDIX No. VIII.

Statement showing percentage of increase in the income of onions
by manurial trials on the Baroda Farm 1924-25.

Manures given per acre.	Increase. %			Remark.
	1922-23.	1923-24.	1924-25.	
1	2	3	4	5
Soda nitrate + Super-phosphate 285 112	16'4	69'0	64'0	
Do. + Do. + Pot Sulp. 56	22'0	67'0	61'0	
Castor cake, 900 lbs.	8'5	62'0	67'0* +	*100 lbs. Supr. phosphate.
Ammon. Sul. + Supr. + Pot. Sul. 225 112 56	19'0	60'0	44'0	
Castor cake + Soda. N. + Supr. 450 150 112	21'9	56.0	44'0	
Ammonium-sulphate. + Supr. 225 112	...	...	64'0	
Ammonium sulphate 225	23'0	54'0	56'0* +	*100 lbs. Supr.
Soda nitrate, 285	negative	61'0	35'0* +	*100 lbs. Supr.
Soda nitrate, 400 lbs. + 100 lbs. Supr.	...	...	78'0	
Ammonium sulphate. + Supr. 318 100	...	...	65'0	
Potassium Sulphate 224.	...	59'0	...	
Do. Do. 100.	...	14'0	...	

APPENDIX No. IX.

Statement showing the trials of wheat on the Baroda

Farm for the year. 1924-25.

Plot.	Kind.	Manurial treatment per acre.	Date of sowing.	No. of water-ings.	Date of harvest.	Yield grain per acre.	Remark.
1	2	3	4	5	6	7	8
7-8	Pusa 4	Green manuring of sann.	11-11-24	7	19-3-25	2425	
"	"	Do. + soda nitrate 100 lbs	"	"	"	3373	
"	"	Do. + do. + supr Phos. 100 lbs.	"	"	"	3060	
"	Pusa 12	Green manuring of sann.	"	"	"	2272	
"	"	Do. + sodium nitrate 100 lbs	"	"	"	2944	} Very severely lodged.
"	"	Do. do. supr. phos 100 lbs	"	"	"	3184	
		AFTER BAJRI MANURED WITH 12 CARTS F. Y. M.					
9-10	Pusa 4	No artificials.	2-12-24	7	28-3-25	1760	
"	"	Soda nitrate, 100 lbs.	"	"	"	1991	
"	"	Do. + supr. phos., 100 lbs.	"	"	"	1867	
"	"	Soda nitrate, 200 lbs.	"	"	"	2380	
"	Pusa 12	No artificials.	"	"	"	1779	
"	"	Soda nitrate, 100 lbs.	"	"	"	2100	
"	"	Do. + supr. phos. 100 lbs.	"	"	"	2116	
"	"	Soda nitrate, 200 lbs.	"	"	"	2283	

APPENDIX No. X.

Rotational trials of (1) Bajri manured; (2) Cotton; (3) Sundhia; and
(4) Castors on the Baroda Farm; 1924-25.

Crop.	Total for four years. 1921-22-1924-25			Averages per acre.			Remarks.
	Yield of grain.	Value of all produce.	Cost of production.	Yield of grain.	Value of all produce.	Cost of production.	
1	2	3	4	5	6	7	8
Bajri.	3,392	274- 3-2	246-7- 8	848	68- 8- 9	61- 9-11	
Cotton.	2,429	519- 1-8	246-6-10	607	129-12-0	61- 9- 8	
Sundhia.	...	326-15-4	153-0- 0	...	81-11-10	38- 4- 0	
Castors.	3,470	321-11-0	189-1-10	867	80- 6- 9	47- 4- 5	

(b) (1) Bajri manured; (2) Cotton; (3) Tobacco manured; (4) Sundhia

Crop.	Total for four years.			Averages per acre.			Remarks.
	Yield of grain.	Value of all produce.	Cost of production.	Yield of grain.	Value of produce.	Cost of production.	
1	2	3	4	5	6	7	8
Bajri.	3626	320-15- 4	254- 2- 6	906½	80- 3-4	63- 8-7	
Cotton.	2718	561- 2-10	257-12 -6	679½	140- 4-6	64- 7-1	
Tobacco.	three years only.	177-10- 0	306-14- 4	...	44- 6-0	76-11-7	
Sundhia.	...	268- 5- 8	196-14- 4	...	67- 1-5	49- 3-7	

APPENDIX No. X—continued.

(c) (1) Fallow green manure 150 lbs. bone-meal;

(2) Bajri; (3) Cotton and (4) Sundhia.

Crop.	Totals for four years.			Averages per acre,			Remarks.
	Yield grain.	Value of all produce.	Cost of production.	Yield grain.	Value of all produce.	Cost of production.	
1	2	3	4	5	6	7	8
Fallow.	...	...	167- 7- 5	...	...	41-13- 9	
	Three years						
Bajri	3728	284-10-8	175- 7-11	1242	94-14-2	58- 7-11	Three years' result after a fallow.
	Two years.						
Cotton	872	213-12-10	103- 4- 6	436	106-14-5	51-10- 3	Two years'
	Three years.						
Sundhia.	1802	254- 0- 4	147-14- 4	600	84-10-9	49- 4- 9	

(d) (1) Cotton manured; and (2) Bajri.

Crop.	Yield per acre average.	Value of all produce.	Cost of production.	Remarks.
1	2	3	4	5
Cotton.	418	89- 4- 1	66- 1- 7	
Bajri.	619	61-12- 7	38-14- 2	

APPENDIX No. XI.

Statement showing the acreage, total yields
and average, minimum and maximum out-turns
per acre of principal crops on the Baroda Farm
during the year 1924-25.

Crop.	Area		Total yield.	Out-turn per acre.		
	A.	G.		Average.	Maximum.	Minimum.
	1	2		3	4	5	6
Bajri	12-27		11,244	933	1,006	586
Cotton, June sown.	7-5		1,662	223	542	80
Cotton tali mixture.	1-20		173	115	128	98
	tali.		58½	38	44	29
Cotton, May sown.	1-0		413	413	...	...
Ground-nut.	1-21		2,240	1,493	...	...
Castors.	4-16		2,910	661	897	336
Lucerne, 1st year.	2-0		1,03,679	51,800	52,909	...
„ 2nd year.	1-0		42,650	42,650	...	...
Tobacco.	2-20		2,495	998	1,433	652
Wheat after a fallow in Kharifs.	1-0		2,559	2,559	...	...

APPENDIX No. XII.

Statement showing analysis of manures and castor seeds
on the Baroda Farm, 1924-25.

Kind of manure.	N.	Potash	P. O.	Fat	Remarks.
	%	K. O. 2 %	2 5 %	%	
1	2	3	4	5	6
Farm yard.	1.20	...	...	...	8.33 stones N. is on fine matter.
Castor-cake. (Mill)	4.87	...	...	...
Pot-Sulphate. (Baroda)	...	16.70*	...	...	*Potassium S. received from the Director of Com- merce, Baroda.
" Poona.	...	49.41	...	...
Super. Phos. Poona.	Insoluble	...	3.94	...	
" "	Soluble	...	16.94	...	
Ammo. sulphate. Poona.	20.49	...	...	...
Castor seeds, Big.	...	...	...	47.20	} Farm grown.
" Small.	...	...	...	42.40	

APPENDIX No. XIII.

The Statement showing rate of labour, etc., on

'Baroda Farm, 1924-25.

Item.	Charges.		Remarks.
	1923-24.	1924-25.	
1	2	3	4
LABOUR.			All the rates are averages.
Farm men. } Prisoners. }	0 -6 -3	0- 6- 6	The bullocks labour. Engine and miscellaneous charges have been calculated from actual expense from June 1st to May 31st.
Day labour.	0 -5- 9½	0- 6- 8	
OTHER CHARGES.			
Engine.	0-10- 9	0-11-10	Per one hour.
Bullocks.	1- 2- 9	1-10- 0	Per one bullock.
MISCELLANEOUS.			
Including watching general cleaning and etc.	119- 2- 0	15- 0- 3	Per acre.

APPENDIX No. XIV.

Statement showing the produce and value of the produce
of the Jagudan Farm for the year 1924-25.

Serial No.	Plot No.	Area.		Crop.	Produce.	Value of produce.
		B.	V.			
1	2	3	4	5	6	7
1	1-5 1-12	2	10	Chillies.	7,147 lbs.	Rs. a. p. 357- 4- 6
2	6-10 13-15 36	4	2	Cotton.	2,334 Bolls	264- 5- 3
3	16-20	2	10	Bajri.	lbs. Bundles 707- 1,700	113-10- 6
4	16-20 21-25 31	5	15	Wheat.	7,569 ...	638-12- 3
5	26-30 1	1	5	Fodder.	270- 695	43- 8- 6
6	26-20 42 Nursery	6	...	Juwar.	388- 1,333	59- 7- 0
7	31-31 1 32-34	3	...	Sundhia.	... 14,733	106-15- 6
8	31 1	...	15	Lucerne.	32½- 626	44-12- 0
9	32-34 38-39	2	15	Rape seed and Castor.	R. 220 C. 251	47-15- 0
10	35	1	10	Tobacco.	... 710	131- 0- 6
11	37-37 1	...	10	Variali.	134 ...	22- 4- 6
12	40	...	5	Oranges.	2,161 fruits	95- 4- 9
13	...	...	15	Nursery Lemons Fields.	lbs. Bundles 602 2,470	110- 0- 0 95- 4- 0

APPENDIX No. XV.

Statement showing irrigational charges for the crops on the Jagudan Farm for the year 1924-25.

No.	Crop.	Area.		Number of waterings	Total area irrigated	Expenditure
		Bigha.	Vasa.			
1	2	3	4	5	6	7
1-5	Chillies... ..	1	10	15	22-10	Rs. A. P. 14- 0- 0
6-10	Cotton	1	7	2	2-14	1-11- 0
11-12	Chillies... ..	1	...	15	15-0	9- 6- 0
13-15	Cotton	1	10	2	3-0	1-14- 0
16-20	Wheat	2	10	9	22-10	14- 1- 0
21-25	Wheat	2	10	10	25-0	15-10- 0
$\frac{31}{1}$	Lucerne grass... ..	...	15	25	18-15	11-11- 0
31	Wheat ... ..	...	15	9	6-15	4- 3- 0
32-34	Rape-seed	1	10	3	4-10	2-13- 0
35	Tobacco	1	10	2	3-0	1-14- 0
36	Cotton	1	5	2	2-10	1- 9- 0
$\frac{37-37}{1}$	Variyali ... ..	...	10	5	2-10	1- 9- 0
$\frac{26-30}{1}$	Sundhia ... ..	...	15	1	0-15	0- 8- 0
16-20	Bajri ... ..	...	10	1	0-10	0- 8- 0
26	Lemon... ..	...	15	16	12-0	7- 8- 0
40	Orange . ... ..	...	5	26	6-10	4- -1 0

APPENDIX No. XVI.

Statement showing strength of the Dairy herd for the year 1924-25.

Serial No.	Description.	Strength on 1st August, 1924.	Changes during the year.					Total.
			Sold.	Dead.	Born.	Bought.	Transferred.	
1	2	3	4	5	6	7	8	9
A. Cows.								
1	Cows ...	40	4	2	4	...	...	38
2	Heifers ...	4	1	...	9	...	4	8
3	Cows, F. youngsters ...	28	14	2	10	...	9	13
4	Cows, M. youngsters ...	26	9	8	15	...	2	22
5	Stud bulls ...	1	...	...	2	...	...	3
6	Bullocks ...	5	...	...	...	...	...	5
	Total ...	104	28	12	40	...	15	89
B. BUFFALOES.								
7	Buffaloes ...	30	3+1 to Panjra pole, ...	6	1	...	...	21
8	Heifers ...	3	...	...	...	...	1	2
9	Buffalo F. youngsters ...	15	5	8	7	...	...	9
10	Buffalow M. youngsters ...	7	3	8	7	...	...	3
11	Stud bull ...	1	...	...	...	...	...	1
	Total ...	56	12	22	15	...	1	36
	Grand Total ...	125						

APPENDIX No. XVII.

Statement showing some of the best performers in the Dairy herd during the last lactation, 1924-25.

Serial No.	Name of the animal.	Milk given during last lactation.	Milk during current lactation.	Remarks.
1	2	3	4	5
Cows.				
1	Chandon ...	lbs ozs 4,013-	lbs. ozs. 5,259	Continues 12 lbs a day.
2	Vedami ...	First calf	5,694	Continues 8 lbs. a day.
3	Madhulata ...	First calf.	4,207-8	" 10 "
4	Kusum ...	34,05-8	3,800-8	" 4 "
5	Yamuna ...	First calf	3,721-8	
6	Madhuri ...	2,822-8	3,689	" 4 "
7	Gajra ...	First calf.	3,330-8	
8	Vinoda ...	2,199-0	2,988	
9	Kunj ...	2,051-8	2,662	
10	Tajan ...	2,170-8	3,070-8	
11	Dabi ...	2,348-8	2,541	" 10 "
12	Bhima ...	First calf.	2,414	" 10 "
13	Kailash ...	First calf.	1,107	" 12 "
14	Chamali ...	2,072-8	2,391	†calved on 2-6-25
BUFFALOES.				
1	Chandrabhaga ...	1771	3,987-8	Continues 20 lbs a day.
2	Vina ...	3,198	3,399-8	
3	Laxmi ...	...	3,219-8	
4	Harvidya ...	New.	3,150-8	
5	Ansuya ...	New.	3 008	
6	Sulochana ...	1,473-8	3 008	" 10 "
7	Navi ...	New.	2,930	
8	Bakuli ...	926 sick.	3,317-8	
9	Gulab ...	2,313-8	2,561	" 10 "
10	Gandi ...	1,758-8	2,693	
11	Reshami ...	2,016-8	2,415-8	
12	Jaya ...	1,782-8	2,233	

* She was sent to Prince Dhairyasilrao on 24-7-25 in full milk.

APPENDIX No. XVIII.

Statement showing percentage of fat on Dairy Farm for the year 1924-25.

Serial No.	Period.	Animals	Percentage of fat.	Remarks
1	2	3	4	5
1	August 24 to October 24.	Cows, buffs and herd	C. B. 4'5-7 Herd 5'8	
2	November 24 to January 24.	Cows Buffaloes.	4 6'3	
3	January 25 to April 25	Cows Buffaloes.	4'6 7'1	
4	May 25 to August 25.	Cows Buffaloes.	4'6 7	

APPENDIX No. XIX

Statement showing the fodder produced on Dairy Farm by plot numbers, cost of production and valuation of produces for the year 1924-25.

Serial No.	Survey No.	Area.	Crops.	Cost of production.	Yield crop.		Valuation of products.	Remarks.
					Grain.	Fodder.		
1	2	3	4	5	6	7	8	9
		B. V.		R. a. p.		Mds. Srs.	Rs. As. P.	
1	88	4-9	Sundhia and Val.	191-9-7	...	502-10 30 Val	532- 4- 0	
2	87	3-18	Sundhia.	166-9-2	...	270-0	270- 0- 0	Dried and bundled.
3	90	2-9	Sundhia.	104-7-7	...	180-0	180- 0- 0	"
4	91	8-15	Maize and Sundhia.	372-8-9	...	680-15	680- 6- 0	138 Mds, 5 Srs, of maize.
5	95	2-3	Sundhia.	96-10-7	...	199-20	199- 8- 0	
6	96	2-7	"	100-8-7	...	291-10	291- 4- 0	
7	94	6-14	"	288-13-2	...	809-5	809- 2- 0	
8	93	8-12	"	370-10-3	...	521-0	521- 0- 0	Spoiled by pigs and stray cattle.
9	92	8-16	"	379-8-4	...	1,737-25	1,737-10-0	Best crop.
		48-3		2,071-6-0	...	5,221-5	5,221- 2- 0	

APPENDIX No. XX.

Statement showing the concentrates fed to the Dairy cattle
during the year 1924-25.

Serial No.	Name of the food-stuff.	Weight fed to Dairy cattle.		Total price.	Remarks.
		1	2	3	
		Mds.	Srs.	Rs. As. P.	
1	Cotton seed.	795	31	1,752-2-10	
2	Kormu.	742	36½	1,701-0-0	
3	Gowar.	975	13	2,226-5-10	
4	Oil cake,	478	3	1,102-7-9	
5	Gram.	151	16	318-8-7	
6	Bran.	154	6	335-6-3	
7	Salt.	48	34½	80-4-4	
8	Bajri.	158	8	423-7-0	
9	Gal. (Trickle)	10	15	70-11-7	
10	Math.	78	6	208-15-0	
11	Suva.	8	21½	39-6-6	
12	Oil.	8	30	129-15-9	
13	Tal. (Ground)	5	0	23-0-0	
14	Wheat.	6	0	21-5-9	
15	Rock salt.	4	0	21-7-8	
16	Castor oil,	0	33½	11-6-5	
17	Adad,	141	10½	460-7-8	
18	Asalio,	0	15	2-6-0	
	Total ...	3,767	39½	8,928-12-11	

APPENDIX No. XXI.

Statement showing improved seed of cotton distributed by
Mahals in Navsari District in the year 1924-25.

Serial No.	Name of Mahal.	Seed in lbs.	Remarks.
1	2	3	4
1	Mangrol.	1,47,000	
2	Navsari.	25,200	
3	Gandevi.	4,800	
4	Mahuwa.	60,000	
5	Palsana.	31,200	
6	Kamrej,	60,000	
7	Vyara.	33,600	
	Total...	3,61,800	

APPENDIX

Statement showing detailed figures of the Kapura

1	2	3	4	5	6
No. of cultivators joining.	Cotton collected for joint sale.	How much lint sold in Khandis.	Rate per Khandi.	How much premium per Khandi.	How much cotton seed.
1	Bhars mds lbs	Kh. Md. lbs.	Rs. a p.	R s. a. p.	Galli mds.
38	366 10 3	50- 0- 0	556- 0- 0	21- 0- 0	199-10
		30- 0- 0	541- 0- 0	20- 0- 0	
		54- 0- 0	491- 0- 0	...	
		134- 0- 0			

No. XXII.

Co-operative Cotton sale for the year 1924-25.

How much realised for lint.	How much realised for seed.	Total.	Sum distributed to the member per Bhar.	Sum realised by non-member.	Gain per bhar to member.	Total gain to the society.	Remarks.
7	8	9	10	11	12	13	14
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.	Rs.	Rs. a. p.	
70,457-2-0	68,032-1-0	78,489-3-6	203-0-0	197	6	2,196-0-0	The distribution to the member as shown in col. 10 came to that after deducting all expenses.

APPENDIX No. XXIII.

Statement showing results of experimental cultivation of early-colum species of rice in the
Navsari District (1924-25).

Serial No.	Name of the cultivator.	Name of village and Taluka.	Paddy, lbs.	Area in which seeds were sown.	Remarks.
1	2	3	4	5	6
1	Jinabhai Paragji.	Padgha (Navsari).	40	Bighas. Vasas. ... 14	In 14 vasas "early-colum" yield amounted to 32 maunds. While "kada" yield was equal in similar area.
2	Jagabhai Khushalbai.	Dhanori (Gandevi).	20	... 7	In 7 vasas "Early-colum" yield amounted to 13 maunds as that of "kada".
3	Kikabhai Gandabhai.	Do.	...	...	In 7 vasas "Early-colum" yield was 13 maunds, while "kada" yield was 12 maunds in similar area.
4	Rasulkhan Hayatkhan.	Khergam (Gandevi).	40	...	"Early-colum" yield amounted to 21 maunds. Figures for "kada" yield are not available.
5	Durlabhbhai Monbhai.	Gandevi.	60	... 20	Yields of "Early-colum" and "kada" were equal, viz. 42 maunds each.
6	Govindji Monbhai.	Do.	20	... 7	Figures are not kept.
7	Gajoo Vasanji.	Gandevi.	20	... 7	Record is not kept.

8	Kalabhai Dajibhai.	Desad (Gandevi).	...	...	...	"Early-colum" yield amounted to 16 maunds while "kada" yield was 15 maunds in similar area. "Early-colum yield was 3-4 days earlier than "kada."
9	Jivabhai Bhikhabhai.	...	...	...	...	Yields of "early-colum" and "kada" were equal.
10	Jinabhai Murarjee.	...	...	...	...	Yields of "early-colum" and "kada" were 14 mds. each. The former was a little earlier than the latter.
11	Ukabhai Koybhai.	Vadaangal (Gandevi).	20	...	7	Record is not kept.
12	Naranji Morarji.	Gadat (Gandevi).	40	...	...	Record is not kept.
13	Ranchhodji Lallubhai.	Ponsra. (Navsari).	40	...	12	Yield of "early-colum" and "kada" are 32 maunds each, but the former was 3-4 days earlier than the latter.
14	Dahyabhai Jogibhai.	...	20	...	6	"Early-colum" yield was 14 maunds and 3-4 days earlier.
15	Dhanka Boarding House.	Vyara.	40	...	12	"Early-colum" yield was 20 maunds and "kada" 15 maunds.
16	Jahangirji Manekji.	Anaval.	Last year's seeds 8 maunds.	6	...	300 maunds of "early-colum".
17	Do. do.	Do.	36 imported from Karjat	...	13	Yield of "early-colum" and "kada" were 36 maunds each, but the former was 5-6 days earlier.

APPENDIX No. XXIV.

Statement showing progress of crushing of sugar-cane and extraction of Gul in the

Navsari District (1924-25).

Serial No.	Name of cultivator.	Area from which sugar cane was crushed.	Juice extracted.	Crushing charges.	Quantity of Gul, prepared.	Quantity of extra juice extracted owing to better crushing.	More Gul from extra juice shown in column 7.	Price of Gul prepared from the 8 percent. More juice sold at the rate of Rupees 5.	Remarks.
1	2	3	4	5	6	7	8	9	10
		Bigbas.	Mds of 40 lbs.	Rs.	Mds of 40 lbs	Mds.	Mds	Rs.	
1	Mr. Murarbbhai Hirabbhai.	5	1,296	81	250	103	20	100	
2	Mr. Bhulabbhai Jivanji.	1½	480	30	64	38	5	25	
3	Messrs Naranji Ranchhodji and Lallubhai Nathubhai.	11	2,832	177	500	224	40	200	

APPENDIX No. XXV.

Statement showing the results of manurial experiments at Dharmaj in the year 1924-25.

Serial No.	Name of the cultivator.	Area under experiment.			Treatment given Sod. Nitr. n lbs.	Out-turn.			Remarks.
		Name of the field.	Area of comparison. Bigha.	Number of plants.		Treated.	Untreated	Excess.	
1	2	3	4	5	6	7	8	9	10
1	Lalubhai Desaibhai ...	Dharokhadiyu	‡	3,500	100	625	400	225	In the first three tests, the treatment accorded will respectively stand as below;—(7) colm (8) colm. No. 1 4 carts F.Y.M. 8 carts. + 100 S. N. F.Y.M. " 2 6 carts F.Y.M. 12 " + 100 S. N. " 3 6 carts F.Y.M. 12 " + 100 S. N. (1) Rs. 5-4-3 :-Rate per maund of 40 lbs. of sodium-nitrate. (2) The average weight of un-manured pada is taken as 1lb, while that of the manured one is calculated at 1 $\frac{1}{4}$ bs. (3) Rs. 2/-per cart-load,
2	Mathurbhai Dadubhai...	Vadiyu.	‡	5,000	100	625	450	175	
3	Vaghjeebhai Bajibhai ...	Adialawalu.	‡	3,750	100	767	560	207	
4	Jeevabhai Lalajee ...	Pagiu.	‡	3,750	100	875	600	275	
5	Manorbhai Dunganbhai	Gosaivalu.	‡	4,000	100	812	550	262	
6	Raisang Bhika...	Adialawalc.	‡	3,650	100	987	695	292	
7	Jethabhai Naranbhai ...	Theethawalu.	‡	4,000	100	875	650	225	
8	Trikambai Gokalbhai ...	Wanto.	‡	3,500	100	750	550	200	

APPENDIX No. XXVI.

Statement showing Pusa wheat produce in comparison with that of Wajia (in Kadi District,) 1924-25.

No.	Taluka.	Pusa wheat produce per bigha.	Wajia wheat produce per bigha.	Excess of Pusa over Wajia per Bigha.
1	2	3	4	5
		Mds. Srs.	Mds. Srs.	Mds. Srs.
1	Mehsana.	51 - 0	42 - 0	9 - 0
2	"	27 - 0	30 - 0	3 - 0
3	"	32 - 0	28 - 0	4 - 0
4	"	26 - 0	32 - 0	6 - 0
5	Visnagar.	10 - 0	20 - 0	10 - 0
6	"	22 - 0	10 - 0	12 - 0
7	"	45 - 0	36 - 0	9 - 0
8	Kadi.	37 - 0	30 - 0	7 - 0
9	"	24 - 0	16 - 0	8 - 0
10	"	38 - 14	30 - 0	8 - 14
11	"	40 - 0	30 - 0	10 - 0
12	Sidhpur.	44 - 0	...	...
13	"	34 - 0	...	...
14	Pattan.	32 - 0	20 - 0	12 - 0
15	"	8 - 0	20 - 0	12 - 0
16	"	28 - 0	24 - 0	4 - 0
17	"	30 - 0	24 - 0	6 - 0
18	Kheralu.	28 - 0	20 - 0	8 - 0
19	"	5 - 0	20 - 0	15 - 0
20	"	32 - 20	24 - 0	8 - 0
21	"	40 - 0	24 - 0	16 - 0

APPENDIX No. XXVII.

Statement showing details of silage stored by Co-operative Societies
in the year 1924-25.

Serial No.	Name of the Co-operative Society and village.	Taluka.	Amount of grass stored in rmds.	Quantity of grass estimated when silo was opened.	Condition of the grass when silo was opened.	Remarks.
1	2	3	4	5	6	7
1	Dhaniavi No. 2 fodder storing society.	Baroda.	250	210	good.	
2	Bil " "	Baroda.	110	...	good.	
3	Bajwa " "	Baroda.	50	...	good.	
4	Ajod " "	"	30	...	not good.	
5	Dabhoi " "	Dabhoi.	175	153	good.	
6	Wadhawana " "	"	275	...	...	Silo not opened.
7	Mangrol " "	Sankheda	125	105	good.	
8	Kali Talavadi " "	"	155	116	good.	
9	Ganpatpura " "	Karjan.	35	...	not good.	
10	Pattan Jalchok " "	Pattan.	175	103	good.	
11	Balisana " "	"	100	56	good.	
12	Sander " "	"	150	60	good.	
13	Ruvavi " "	"	175	130	good.	
14	Unawa " "	Sidhpur.	150	96	good.	
15	Dhinoj " "	Chansma.	200	...	not good.	
16	Panchot " "	Mehsana.	90	...	"	
17	Chathiarada " "	"	500	...	"	
18	Anaval " "	Mahuwa.	135	...	good.	
19	Jira " "	Dhari.	50	32	good.	
20	Savajipura Milk Supplying Society.	Baroda.	645	...	...	Silo not opened.

APPENDIX No. XXVIII.

Statement showing the list of applications received in
the year 1924-25 for Boring.

Serial No.	Name of Taluka.	Last year's balance.	Received this year.	Total.	Boring done.	Applications cancelled.	Owner un-willing.	Balance at the end of the year.	Remarks.
1	2	3	4	5	6	7	8	9	1
<i>Baroda District.</i>									
1	Baroda	3	22	25	21	...	1	3	
2	Savli	1	1	2	...	...	1	1	
3	Peplad	1	...	1	...	...	...	1	
4	Sankheda	1	1	2	1	...	...	1	
5	Padra	3	...	3	...	...	2	1	
6	Bhadran	1	1	2	...	...	1	1	
7	Vaghodia ... ..	...	1	1	1	...	...	...
8	Sinor ... ..	...	1	1	1	...	...	...
<i>Navsari District.</i>									
1	Mahuwa	3	...	3	...	...	2	1	
2	Vyara	4	1	5	1	...	1	3	
3	Navsari	1	2	3	1	...	...	2	
4	Mangrol ... ..	...	1	1	...	...	...	1	
<i>Kadi District.</i>									
1	Visnagar	3	5	8	8	...	...	...
2	Kheralu ... ..	...	1	1	1	...	...	...
3	Mehsana	1	1	2	2	...	...	...
4	Pattan	1	1	2	1	...	1	...	
5	Chanasma ... ..	...	2	2	2	...	...	...
6	Harij	1	...	1	...	...	...	1	
7	Kadi ... ..	...	25	25	24	...	1	...	
8	Kalol	1	...	1	1	...	...	...
9	Dehgam	1	...	1	...	...	1	...	
<i>Amreli District.</i>									
1	Amreli	4	3	7	3	...	...	4	

APPENDIX No. XXIX.

Statement showing the number of bore holes made during the year 1924-25.

Serial No.	Name of the Village.	Taluka.	Successful.	Un-successful.	In-complete.	Total.	Water in koses.	Remarks.
1	2	3	4	5	6	7	8	9
<i>Baroda District.</i>								
With Cawnpore sets.								
1	Gorwa	Baroda	1	...	...	1	1½	
2	Vasna... ..	"	...	...	1	1	...	
3	Sevasi	"	3	...	...	3	8	
4	Mahapura	"	1	...	...	1	2	
5	Wadiwadi	"	3	...	...	3	7	
6	Chhani	"	3	...	...	3	6	
7	Jetalpur	"	1	...	...	1	3	
8	Akota... ..	"	5	...	...	5	12	
9	Manjalpur	"	1	...	...	1	1	
10	Koyali	"	1	...	...	1	1	
11	New yard	"	1	...	...	1	2	
12	Petlad	Petlad	...	1	...	1	...	
13	Bamangam	Bhadran	...	...	...	...	...
14	Vaghodia	Vaghodia	...	...	...	...	...
15	Kadila	Sankheda	1	...	...	1	1	
16	Midhol	Sinor	1	...	...	1	3	
<i>Navsari District.</i>								
With Calyx drills.								
1	Tavadi	Navsari	...	...	...	...	...

APPENDIX No. XXIX—Concl'd.

Serial No.	Name of the village.	Taluka.	Successful.	Unsuccessful.	Incomplete.	Total.	Water in koses.	Remark.
1	2	3	4	5	6	7	8	9
2	Chhindia	Vyara	...	...	1	1	...	
	<i>Kadi District.</i>							
	With Cawnpore sets.							
1	Savala	Visnagar	1	2	...	3	2	
2	Kamana	"	1	...	...	1	2	
3	Kansarkuvi	"	2	...	...	2	4	
4	Khandosana	"	...	1	...	1	...	
5	Gunja... ..	"	...	1	...	1	...	
6	Kesampa	Kheralu	...	1	...	1	...	
7	Piludra	Mehsana	...	1	...	1	...	
8	Jagudan ... ..	"	...	...	1	1	...	
9	Diodarda	Patan	...	...	1	1	...	
10	Bechraji	Chansma	...	...	1	1	...	
11	Karansagar ... ..	"	...	...	1	1	...	
12	Suraj	Kadi	16	5	...	21	25	
13	Ganeshpura	"	1	...	...	1	1	
14	Kaiyal	"	1	1	...	2	1	
15	Ramnagar	Kalol	...	...	1	1	...	
	<i>Amreli District.</i>							
1	Amreli	Amreli	2	...	1	3	1½	
	Total...	...	46	12	8	67	84	

APPENDIX

Statement showing Boring work done

Serial No.	Name of well-owner.	Village.	Taluka.	Dia. of Bore.
1	2	3	4	5
	With Cawnpore Sets.		BARODA	
1	Sheth Maganlal Purshottam ...	Vasna	Baroda	3"
2	Abedally Miya Sayyad ...	Petlad	Petlad	3"
3	Patel Kashibhai Khushal ...	Bamangam	Bhadran	4"
4	Patel Ranchhod Khushal ...	Gorva	Baroda	3"
5	Shah Maganlal Nathji ...	Vaghodia	Vaghodia	3"
6	Manekji Hormasji ...	Vadivadi	Baroda	3"
7	Patel Shankerbhai Pragdas ...	Sewasi	"	3'
8	Patel Motibhai Prabhudas ...	"	"	3"
9	Patel Talajibhai Garbad ...	"	"	3"
10	Baria Ranchhod Jagganath ...	Mahapura	"	3"
11	Desai Chhotalal Shivdas ...	Kadila	Sankheda	2½"
12	Patel Mansukh Purshottam ...	Chhani	Baroda	3"
13	Tamboli Ranchhod Prabhudas...	Akota	"	3"
14	Patel Mansukh Purshottam ...	Chhani	"	3"
15	Patel Purshottam Desai ...	"	"	3"
16	Shankerraao Sadashiv Puranik...	Jetalpur	"	3"
17	Tamboli Govind Asharam ...	Akota	"	4"
18	Sheth Chandulal Chhaganlal ...	"	"	3"
19	Patel Harjivan Khushal...	Manjalpur	"	3"
20	Tamboli Govind Asharam ...	Akota	"	4"

No. XXX.

during the year 1924-25.

Depth of well.	Depth of Boring.	Working days.	Water before Boring.	Water after Boring.	Departmental Charges.
6	7	8	9	10	11
DISTRICT.					
48'-0"	67'- 0"	28	1	...	...
61'-0"	135'- 8"	83	1	...	133- 2- 5
40'-0"	58'- 4"	37	2	...	16- 8- 0
48'-0"	53'- 9"	18	$\frac{1}{2}$	$1\frac{1}{2}$	0- 0- 0
41'-0"	37'- 0"	23	3	...	25- 8- 0
50'-0"	0'- 0"	2	3	...	4- 8- 0
48'-0"	23'- 0"	8	1	3	18-10- 5
75'-0"	28'- 4"	9	3	4	19- 6- 5
75'-0"	35'- 0"	15	1	1	24-10- 5
90'-0"	50'- 0"	19	$\frac{1}{2}$	2	18-12- 0
27'-0"	31'- 0"	32	$1\frac{1}{2}$	1	30-10-10
50'-0"	44'-10"	12	$\frac{1}{2}$	2	14- 4- 0
45'-0"	35'- 6"	16	$\frac{1}{2}$	1	7- 0- 0
54'-0"	40'- 3"	9	3	2	7- 2- 0
45'-0"	90'- 0"	46	$\frac{1}{2}$	2	42- 0- 0
50'-0"	46'- 0"	14	$\frac{1}{2}$	3	25-12- 5
63'-0"	16'- 6"	10	1	2	...
30'-0"	32'- 0"	8	1	3	...
30'-0"	27'- 0"	5	1	1	...
63'-0"	18'- 0"	7	3	2	...

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Labour Charges.
1	2	3	4	12
	With Cawnpore Sets.			BARODA
1	Sheth Maganlal Purshottam ...	Yasna	Baroda	377- 0- 0
2	Abedally Miya Sayyad ...	Petlad	Petlad	515-14- 0
3	Patel Kashibhai Khushal ...	Bamangan	Bhadran	281- 8- 0
4	Patel Ranchhod Khushal ...	Gorva	Baroda	117- 8- 0
5	Shah Maganlal Nathji ...	Vaghodia	Vaghodia	83-12- 0
6	Manekji Hormasji ...	Vadivadi	Baroda	9- 0- 0
7	Patel Shankerbhai Pragdas ...	Sewasi	"	30- 0- 0
8	Patel Motibhai Prabhudas ...	"	"	57- 0- 0
9	Patel Talajibhai Garbad ...	"	"	105-12- 0
10	Baria Ranchhod Jagganath ...	Mahapura	"	109- 0- 0
11	Desai Chhotalal Shivdas ...	Kadila	Sankheda	153-12- 0
12	Patel Mansukh Purshottam ...	Chhani	Baroda	131- 4- 0
13	Tamboli Ranchhod Prabhudas ...	Akota	"	121- 8- 0
14	Patel Masukh Purshottam ...	Chhani	"	75- 0- 0
15	Patel Purshottam Desai...	"	"	468- 0- 0
16	Shankerrao Sadashiv Puranik ...	Jetalpur	"	144- 0- 0
17	Tamboli Govind Asharam ...	Akota	"	87- 0- 0
18	Sheth Chandulal Chhaganlal ...	"	"	99- 0- 0
19	Patel Harjivan Khushal ...	Manjalpur	"	50- 0- 0
20	Tamboli Govind Asharam,	Akota	"	65- 0- 0

No. XXX.—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.	Remark.
13	14	15	16	17
DISTRICT—Contd.				
377- 0- 0	...	Agricultural	Incomplete	
649- 0- 5	4-12-11	"	Unsuccessful	
298- 0- 0	5- 2- 2	"	Do.	Abandoned at the request of well-owner
117- 8- 0	2- 3- 6	"	Successful	
109- 4- 0	2-15- 2	"	Unsuccessful	Do.
13- 8- 0	...	"	Do.	
48-10- 5	2- 1-10	"	Successful	Do.
76- 6- 5	2-11- 7	"	"	
130- 6- 5	3-11- 7	"	"	
127-12- 0	2- 8- 8	"	"	
184- 6-10	5-15- 2	"	"	
145- 8- 0	3- 4- 8	"	"	
128- 8- 0	3- 1- 9	"	"	
82- 2- 0	2- 0-10	"	"	
510- 0- 0	5- 1- 8	"	"	
169-12- 5	3- 8- 4	"	"	
87- 0- 0	5- 7- 0	"	"	
99- 0- 0	3- 1- 6	"	"	
50- 0- 0	1-13- 7	"	"	
65- 0- 0	3- 9- 9	"	"	

10 A. D.

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Dia. of Bore.
1	2	3	4	5
				BARODA
21	Manekji Hormasji	Vadivadi	Baroda	3"
22	Vaghari Chunia Mangal... ..	Akota	"	3"
23	Manekji Hormasji	Vadivadi	"	3"
24	Patel Pragdas Ranchhod	Midhol	Sinor	3"
25	Manekji Hormasji	Vadivadi	Baroda	2½"
26	Patel Chhotalal Narsingbhai	Koyali	"	4"
27	Kala Sava	New yard	"	4"
	Total ... ..	...	...	{ 3" 4" 2½"
	With Calyx Drills.			NAVSARI
28	E. K. Paliya	Tavdi	Navsari	4"
29	Rustomji Hormasji	Chbindia	Vyara	4"
	Total ... ..	...	...	4"
	With Cawnpore sets.			KADI
1	Miya Muselkha Mitbekha	Savala	Visnagar	2½"
2	Kamalkha Alhadkha	"	"	2½"

No. XXX.—Continued.

Depth of well.	Depth of Boring.	Working Days.	Water before Boring.	Water after Boring.	Departmental Charges.
6	7	8	9	10	11
DISTRICT.—Conclud.					
50'- 0"	37'- 0"	5	8	2	10- 0- 0
60'- 0"	26'- 0"	8	1	4	...
50'- 0"	38'- 0"	10	10	2	20- 0- 0
60'- 0"	15'- 0"	7	1	3	...
50'- 0"	40'- 0"	14	12	3	28- 0- 0
45'- 0"	30'- 0"	17	3	1	34- 0- 0
60'- 0"	29'- 0"	9	1	2	...
...	861'- 4" 151'-10" 71'- 0"	335 80 46	...	47½	479-14-11 average work per day 2'-7" 1'-9" 1'-7"
DISTRICT.					
10'- 0"	55'- 0"	73½	½	...	395-10- 6
30'- 0"	8'- 0"	6	1	6	...
40'- 0"	63'- 0"	79½	...	6	395-10- 6 average work per day 0'-6"
DISTRICT.					
37'- 0"	90'- 0"	20	½	...	15- 0- 0
37'- 0"	70'- 0"	22	½	2	—

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Labour Charges.
1	2	3	4	12
				BAKODA
21	Manekji Hormasji	Vadivadi	Baroda	55- 0- 0
22	Vaghari Chunia Mangal... ..	Akota	"	83- 0- 0
23	Manekji Hormasji	Vadivadi	"	110- 0- 0
24	Patel Pragdas Ranchhod	Midhol	Sinor	36- 0- 0
25	Manekji Hormasji	Vadivadi	Baroda	144- 0- 0
26	Patel Chhotalal Narsingbhai	Koyali	"	101-12- 0
27	Kala Sava	New yard	"	113-12- 0
	Total ... ..	...	...	3724- 6- 0
				NAVSARAI
	With Calyx Drills.			
28	E. K. Paliya	Tavadi	Navsari	428- 9- 0
29	Rustomji Hormasji	Chhindia	Vyara	42- 0- 0
	Total			470- 9- 0
	With Cawnpore sets.			
				KADI
1	Miya Musekha Mithekha	Savala	Visnagar	112- 0- 0
2	*Kamalkha Alhadkha	"	"	150-14-0

No. XXX.—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.	Remark.
13	24	15	16	17
DISTRICT—Concid				
65- 0- 0	1-12- 1	Agricultural	Successful.	
83- 0- 0	3- 3- 1	"	"	
130- 0- 0	3- 6- 9	"	"	
36- 0- 0	...	"	"	
172- 0- 0	4- 4- 9	"	"	
135-12- 0	4- 8- 4	"	"	
113-12- 0	3-14- 9	"	"	
4,204- 4-11		"	"	
DISTRICT.				
824- 3- 6	14-15- 9	Drinking water	Unsuccessful	Abandoned at the request of well owner.
42- 0- 0	...	Agricultural	Incomplete.	
866- 3- 6	...	...	...
DISTRICT.				
127- 0- 0	1- 5- 5	Agricultural	Unsuccessful.	Abandoned at the request of well-owner.
160-14- 0	2- 4- 9	"	Successful.	

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Dia. of Bore.
1	2	3	4	5
3	Kadumia Nathumia	Savala	Visnagar	KADI 2½"
4	Bhavsar Jethalal Trikam	Kamana	"	2½"
5	Mohan Natha	Kasarakui	"	2½"
6	Chela Uja	"	"	2½"
7	Chodhari Dhanji Mulji	Khandosana	Visnagar	2½"
8	Umatia Abharam Jamal... ..	Kesampa	Kheralu	2½"
9	Nanashanker Mahashanker	Piludra	Mehsana	2½"
10	Model Farm	Jagudan	"	2½"
11	Waghjibhai Marghabhai	Diodarda	Pattan	4"
12	Revashanker Mahashanker	Karnasagar	Chanasma	4"
13	Amathalal Dhansha	Suraj	Kadi	2½"
14	Do.	"	"	2½"
15	Bhaichand Ganesh	"	"	2½"
16	Kalidas Nagar	"	"	2½"
17	Ambaram Ehudar	"	"	2½"
18	Mashangji Navaganaji	"	"	2½"
19	Visaji Jeshangji	"	"	2½"
20	Dwarka Narer	"	"	2½"
21	Amthaji Shavaji... ..	"	"	2½"
22	Dwarka Narer	"	"	2½"

No. XXX.—Continued.

Depth of well.	Depth of Boring.	Working days.	Water before Boring.	Water after Boring.	Departmental Charges.
6	7	8	9	10	11
DISTRICT—Contd.					
42'-0"	92'-0"	42	1	...	34- 2- 0
42'-0"	69'- 0"	21	½	2	15-12- 0
33'-0"	69'- 0"	13	½	2	9-12- 0
30'-0"	47'- 0"	31	1	2	23- 4- 0
33'-0"	69'-0"	13	½	2	9-12- 0
30'-0"	208'-0"	131	½	...	107-14- 0
40'-0"	189'-0"	107	½	...	89- 0-10
33'-0"	104'-0"	58	1	...	...
45'-0"	58'-0"	34	2	...	...
15'-0"	82'-0"	49	½	...	...
26'-0"	82'-0"	28	½	2	21- 0- 0
30'-0"	54'-0"	7	½	2	5- 4- 0
22'-0"	42'-0"	9	½	2	16-10-10
23'-0"	140'-0"	28	½	...	24- 8- 0
25'-0"	18'-0"	3	½	2	2-10- 0
20'-0"	48'-0"	10	½	1	7- 8- 0
25'-0"	107'-0"	31	½	...	23- 4- 0
13'-0"	25'-0"	6	½	1	5- 4- 0
29'-0"	47'-0"	10	½	1	8-12- 0
20'-0"	91'-0"	12	½	1	13- 2- 0

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Labour Charges.
1	2	3	4	12
3	Kadumiya Nathumia	Savala	Visnagar	KADI 139- 8- 0
4	Bhavsar Jethalal Trikam	Kamana	"	113- 0- 0
5	Mohan Natha	Kasarakui	"	70- 8- 0
6	Chela Uja	"	"	57- 8- 0
7	Ctodhari Dhanji Mulji	Khandosana	Visnagar	70- 8- 0
8	Umatia Abharam Jama... ..	Kesampa	Kheralu	454- 6- 0
9	Nanashanker Mahashanker.	Piludra	Mehsana	665- 4- 0
10	Model Farm	Jagudan	"	345- 8- 0
11	Waghjibhai Marghabhai... ..	Diodarda	Pattan	87-12- 0
12	Revashanker Mahashanker	Karnasagar	Chanasma	336- 2- 0
13	Amathalal Dhansha	Suraj	Kadi	127- 8- 0
14	Do.	"	"	32- 0- 0
15	Bhaichand Ganesh	"	"	34- 8- 0
16	Kalidas Nagar	"	"	167- 0- 0
17	Amaram Bhudar	"	"	19- 8- 0
18	Mashangji Navaganaji	"	"	35- 0- 0
19	Visaji Jeshangji	"	"	135- 8- 0
20	Dwarka Narer	"	"	28- 0- 0
21	Amthaji Shavaji... ..	"	"	59- 0- 0
22	Dwarka Narer	"	"	72- 0- 0

No. XXX.—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.	Remark.
13	14	15	16	17
DISTRICT—Contd. 173-10-0	1-14-2	Agricultural.	Unsuccessful	Abandoned at the request of wall- owner
128-12-0	1-13-10	"	Successful	
80-4-0	1-2-7	"	"	
80-12-0	1-11-5	"	"	
80-4-0	1-2-7	"	Unsuccessful	Do.
562-4-0	2-11-3	"	"	Do.
754-4-10	4-3-5	"	Incomplete.	
345-8-0	...	"	Incomplete.	
87-12-0	...	"	Incomplete.	Do.
336-2-0	...	"	Incomplete.	
148-8-0	1-12-11	"	Successful.	
37-4-0	0-11-0	"	"	
51-2-10	1-3-5	"	"	
191-8-0	1-6-5	"	Unsuccessful	Do.
22-2-0	1-3-8	"	Successful.	
42-8-0	0-14-2	"	"	
158-12-0	1-7-8	"	Unsuccessful	Do.
33-4-0	1-5-3	"	Successful.	
67-12-0	1-7-0	"	"	
85-2-0	0-14-11	"	"	

11 A. D.

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Dia. of Bore.
1	2	3	4	5
23	Bhawanda's Motidas	Suraj	Kadi	KADI 2½"
24	Bhupatsing Motiji... ..	"	"	2½"
25	Amthalal Dhansha	"	"	2½"
26	Ambalal Bhaichand	"	"	2½"
27	Mohan Keval	"	"	2½"
28	Allibhoy Umarbhoy	"	"	2½"
29	Parbhudas Ganesh	"	"	2½"
30	Khushal Umed	"	"	2½"
31	Amatha Keval	"	"	2½"
32	Prabhudas Ramdas	"	"	2½"
33	Bechar Muldas	"	"	2½"
34	Magan Savadas	Kaiyal	"	2½"
35	Revashanker Bapuram Dave	"	"	2½"
36	Umed Lakhudas	Ganeshpur	"	2½"
37	Gopal Balchand	Ramnagar	Kalol	2½"
	Total			2" 4"
	With Musto Patent Machine.			
38	Becharaji Temple	Bechraji	Chanasma	4"

No. XXX.—Continued.

Depth of well.	Depth of Boring.	Working Days.	Water before Boring.	Water after Boring.	Departmental Charges.
6	7	8	9	10	11
DISTRICT—Contd.					
28'-0"	45'-0"	14	½	2	10- 8- 0
20'-0"	148'-0"	59	½	...	49- 0- 0
27'-0"	138'-0"	39	1	...	34- 2- 0
60'-0"	80'-0"	15	½	2	13- 2- 0
23'-0"	69'-0"	9	½	1	7-14- 0
33'-0"	38'-0"	18	¾	...	15-12- 0
37'-0"	32'-0"	8	½	2	6- 0- 0
36'-0"	93'-0"	22	½	...	19- 4- 0
42'-0"	91'-0"	14	½	2	12- 4- 0
33'-0"	79'-0"	23	½	2	11- 6- 0
35'-0"	69'-0"	18	½	2	15-12- 0
37'-0"	85'-0"	36	½	...	31- 8- 0
36'-0"	90'-0"	42	½	1	36-12- 0
54'-0"	71'-0"	25	½	1	18-12- 0
35'-0"	70'-0"	13	½	...	...
	2925'-50"	1021			793-12- 6
	140'-0"	83			Average work per day. 2'-8" 1'-10"
25'-0,,	90'-0"	76	...	...	...

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Labour Charges.
1	2	3	4	12
23	Bhawandas Motidas	Suraj	Kadi	KADI 62- 8- 0
24	Bhupatsing Motiji	"	"	206- 8 -0
25	Amthalal Dhansha	"	"	178- 0- 0
26	Ambalal Bhaichand	"	"	85- 0- 0
27	Mohan Keval	"	"	52- 0- 0
28	Allibhoy Umarbhoy	"	"	104- 0- 0
29	Parbhudas Ganesh	"	"	27- 0- 0
30	Khushal Umed	"	"	95- 8- 0
31	Amatha Keval	"	"	83- 0- 0
32	Prabhudas Ramdas	"	"	78- 0- 0
33	Bechar Muldas	"	"	92- 0- 0
34	Magan Savadas	Kaiyal	"	40- 0- 0
35	Revashankar Bapuram Dave	"	"	56- 8- 0
36	Umed Lakhudas... ..	Ganeshpur	"	105- 0- 0
37	Gopal Baichand	Ramnagar	Kalol	66- 8- 0
	Total ...			<u>4,878-6-0</u>
	With Musto Patent Machine.			
38	Bechraji Temple... ..	Bechraji	Chanasma	652-14- 0

No. XXX.—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.	Remark.
13	14	15	16	17
DISTRICT—Contd				
73- 0- 0	1- 9-11	Agricultural.	Successful.	
255- 8- 0	1-11- 7	"	Unsuccessful	Abandoned at the request of well- owner.
212- 2- 0	1- 8- 7	"	"	Do.
98- 2- 0	1- 3- 7	"	Successful.	
59-14- 0	0-13-10	"	"	
119-12- 0	3- 2- 5	"	Unsuccessful	Do.
33- 0- 0	1- 0- 6	"	Successful.	
114-12- 0	1- 3- 8	"	Unsuccessful	Do.
95- 4- 0	1- 0- 8	"	Successful.	
89- 6- 0	1- 2- 1	"	"	
107-12- 0	1- 9- 0	"	"	
71- 8- 0	0-13- 5	"	Unsuccessful	Do.
93- 4- 0	1- 0- 7	"	Successful.	
123-12- 0	1-11-10	"	"	
66- 8- 0	...	"	Incomplete.	
5,672-2-6				
652-14- 0	...	Drinking water.	Incomplete.	

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Dia. of Bore.
1	2	3	4	5
39	Public Well	Gunja	Visnagar	KADI 4" 2½"
	Total			4" 2½"
AMRELI				
1	Jail Superintendent	Amreli	Amreli	3"
2	Mulji Ranchhod... ..	"	"	3"
3	Do.	"	"	3"
	Total			3"

No. XXX.—Continued.

Depth of well.	Depth of Boring.	Working days.	Water before Boring.	Water after Boring.	Departmental Charges.
6	7	8	9	10	11
DISTRICT.—Concluded.					
50'-0"	175'-0"	242	1	...	...
...	265'-0" 175'-5"	318 242			... average work par day, 0'-10" 0'- 8"
DISTRICT.					
...	150'-0"	68	...	1	78- 2-5
...	55'-0"	34	...	1	...
...	20'-0"	27	1	...	...
...	225'-0"	129			78- 2- 5 average work per day. 1'9"

APPENDIX

Serial No.	Name of well-owner.	Village.	Taluka.	Labour Charges.
1	2	3	4	12
39	Public well	Gunja	Visnagar.	KADI 2082- 4-0
	Total ...			2735- 2- 0
AMRELI				
1	Jail Superintendent	Amreli	Amreli	149- 0- 0
2	Mulji Ranchhod...	"	"	110- 0- 0
3	Do.	"	"	100- 0- 0
	Total ...			359 0- 0

No. XXX.—Continued.

Total Cost.	Cost per ft. excluding pipe.	Purpose of Boring.	Result.	Remark.
13	14	15	16	17
DISTRICT.	—Concluded.			
2,082- 4- 0	...	Drinking water.	Unsuccessful	
2,735- 2- 0				
DISTRICT.				
227- 2- 5	1-14-10	Agricultural.	Successful.	
110- 0- 0	...	"	"	
100- 0- 0	...	"	Incomplete.	
437- 2- 5				
Average work per day 1'-9"				

APPENDIX No. XXXI.

Abstract of Boring work done for the year 1924-25.

Ser. No.	Particulars.	Baroda District.	Kadi District.	Navsari District.	Amreli District.	Remark.
1	2	3	4	5	6	7
1	Bores made.	27	39	2	3	
2	Bores successful.	22	22	...	2	
3	Bores unsuccessful.	1	1	...	...
4	Bores abandoned at the request of the owner.	3	11	1	...	
5	Bores incomplete.	1	5	1	1	
6	Total depth bored.	2 $\frac{3}{4}$ " 71'-0" 3" 861'-4" 4" 151'-10"	2925'-0" ... 405'-0"	... 63'-0" ...	... 225'-0" ...	
7	Percentage of success.	95-6	95-6	...	100	
8	Water in kosés.	47 $\frac{1}{2}$	35	...	1 $\frac{1}{2}$	
9	Number of applications.	27	34	4	3	
10	Average number of working days for each bore.	17	37	10	43	
11	Number of accidents	4	15	1	...	
12	Accidents removed.	3	15	1	...	
13	Average number of feet bored in one day.	2'-3"	2'-3"	0'-9"	1'-8"	

APPENDIX No.

Statement showing number of wells bored in different

Serial No.	Name of District and Taluka.	From 1911-12 to 1923-24.					For	
		Successful.	Water in koses.	Unsuccessful.	Incomplete.	Total.	Successful.	Water in koses.
1	2	3	4	5	6	7	8	9
Baroda								
1	Petlad	192	662	19	1	212	...	...
2	Bhadran	110	472	13	1	124	...	...
3	Padra	72	210½	10	...	82	...	...
4	Baroda	69	160½	17	1	87	20	43½
5	Vaghodia	11	15	3	...	14	...	...
6	Savli	13	21	8	...	21	...	...
7	Karjan	10	27	1	...	11	...	...
8	Sinor	4	9	...	...	4	1	3
9	Dabhoi	1	1	5	...	6	...	...
10	Sankheda ... ..	...	...	...	...	...	1	1
	Total	482	1,578	76	3	561	22	47½
Kadi								
11	Visnagar	115	211	33	3	151	4	8
12	Dehgam	92	185½	19	...	111	...	...
13	Mehsana	36	65½	6	...	42	...	...
14	Vijapur	22	50½	3	...	25	...	...
15	Kalol	14	23	1	...	15	...	...
19	Sidhpur	9	20	6	...	15	...	...
17	Attarsumba	9	13	1	...	10	...	...
18	Kadi	12	16½	4	1	17	18	27
16	Chanasma	10	14½	5	2	16	...	...
20	Pattan	1	1	4	1	6	...	...
21	Kheralu	1	1	8	1	10	...	...
22	Harij ... ..	...	...	...	1	1	...	...
	Total	321	602	90	9	419	22	35
Navsari								
22	Navsari	50	67	3	...	53	...	...
23	Gandevi	25	44½	3	...	28	...	...
24	Kamrej	11	12½	2	...	13	...	...

XXXII.

Talukas till the end of 1924-25.

1924-25.			Total to the end of 1924-25.					Remarks.	
Unsuccessful.	Incomplete.	Total.	Successful.	Water loses.	Unsuccessful.	Incomplete.	Total.		
10	11	12	13	14	15	16	17		
District.									
1	...	1	192	662	20	1	213		
1	...	1	110	472	14	1	125		
...	...	...	72	210	10	...	82
1	1	22	89	204	18	2	109		
1	...	1	11	15	4	...	15		
...	...	...	13	21	8	...	21
...	...	...	10	27	1	...	11
...	...	1	5	12	...	...	5
...	...	...	1	1	5	...	6
...	...	1	1	1	...	...	1
4	1	27	504	1625	80	4	588		
District.									
4	...	8	119	219	37	3	159		
...	...	...	92	185	19	...	111
1	1	2	36	65	7	1	44		
...	...	...	22	50	3	...	25
...	1	1	14	23	1	1	16		
...	...	...	9	20	6	...	15
...	...	...	9	13	1	...	10
6	...	24	30	43	10	1	41		
...	2	2	10	14	5	4	19		
...	1	1	1	1	4	2	7		
1	...	1	1	1	9	1	11		
...	...	...	...	...	...	1	1
12	5	39	343	637	102	13	459		
District.									
1	...	1	50	67	4	...	54		
...	...	...	25	44	3	...	28
...	...	...	11	12	2	...	13

APPENDIX No.

Statement showing Number of wells bored in different

Serial No.	Name of District and Taluka.	From 1911-12 to 1923-24.					For	
		Successful.	Water in koses.	Unsuccessful.	Incomplete.	Total.	Successful.	Water in koses.
1	2	3	4	5	6	7	8	6
26	Mahuwa	8	14	2	...	10	...	...
27	Palsana	4	7	...	...	4	...	...
28	Vyara	3	8½	1	1	5	...	...
29	Kataswel, Bansda State	1	1	1	...	2	...	...
30	Mangrol- ... ..	...	...	1	...	1	...	...
	Total	102	155	13	1	116	...	...
							Amreli	
31	Okhamandal	12	8½	6	...	19	...	...
32	Amreli	4	9	...	1	4	2	1½
33	Kodinar	2	...	...	...	2	...	...
34	Bet	2	1	...	...	2	...	...
	Total	20	18½	6	1	27	2	1½
	Grand Total	925	2,353	185	13	1,123	46	84

XXXII—Concl'd.

Talukas till the end of 1924--25.

1924--25.			Total to the end of 1924--25.					Remarks.
Unsuccess- ful.	Incomplete.	Total.	Successful.	Water in koses.	Unsuccess- ful.	Incomplete.	Total.	
10	11	12	13	14	15	16	17	18
...	...	...	8	14	2	...	10	
...	...	...	4	7	...	...	4	
...	1	1	3	8½	1	2	6	
...	...	...	1	1	1	...	2	
...	...	...	...	...	1	...	1	
1	1	2	102	155	14	2	118	
District.								
...	...	...	12	8½	6	...	19	
...	1	3	6	10½	...	2	7	
...	...	...	2	...	...	...	2	
...	...	...	2	1	...	...	2	
...	1	3	22	20	6	2	30	
17	8	71	971	2,437½	202	21	1,194	

APPENDIX

Statement showing the detail of

No.	Name of tractor.	No. of tractors.	H. P.	Plough.
1	2	3	4	5
1	New International	1	15-30	3 Furrow International.
2	John Deere	1	15-27	3 Furrow John Deere.
3	New International	1	15-30	3 Furrow International.
4	John Deere.	1	15-27	3 Furrow John Deere.
5	" "	1	15-27	3 Furrow John Deere.
6	Case	1	18-32	3 Furrow Grand Detero.
7	New International	1	10-20	2 Furrow International

No. XXXIII.

tractors bought in 1924-25.

Price.	Name of person buying the tractor.	Where worked.	Remarks.
6	7	8	9
Rs. 6,400 (approx) with plough.	Mr. P. C. Patel, Baroda.	In Baroda Taluka.	Mr. Patel is the sole Agent to Macbeth Bros., Ltd. Work was satisfactory at Wada-sinor and Mangrol.
Rs. 4,500 with plough	Mr. Ambalal Tuljabhai, Itola.	In Karjan Taluka.	He ploughed his own land. Work is satisfactory at Itola.
Rs. 6,400 with plough.	Mr. Motibhai Ishwarbhai Patel, Motipura.	Motipura.	He ploughed his own land. Work is satisfactory at Motipura. Worked about 500 bighas.
Rs. 4,500 with plough.	Mr. Govardhanbhai Patel, Sharadapura.	In Savli Taluka.	Work turned out was good at Sharadapura.
Rs. 4,500 with plough.	Mr. Narayanbhai Mistri, Baroda.	Baroda.	Work satisfactory.
Rs. 6,500 with plough.	Mr. Rangaldas Laxmidas Patel, Bagumra Taluka Palsana.	Bagumra.	He ploughed his own land. Work quite satisfactory at Bagumra.
Rs. 4,500 with plough.	Mr. Jivanji Haribhai, Kukas, Taluka Mehsana.	Kukas.	He works on Pumps and ploughs his own land. Work satisfactory at Kukas. Works about 200 bighas.

APPENDIX No. XXXIV.

Statement showing Classification of animals treated at dispensaries and in the District by the Veterinary Surgeons in the year 1924-25.

Number.	Name of the Dispensary.	Last year's cases on hand.	Out-door patients.					Indoor patients.					Grand total.				
			Horses.	Cattle.	Dogs.	Others.	Total.	Horses.	Cattle.	Dogs.	Others.	Total.	Horses.	Cattle.	Dogs.	Others.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Baroda	48	615	945	305	260	2,125	29	210	1	7	247	644	1,155	306	267	2,372
2	Petlad	15	131	689	18	159	997	...	...	...	...	...	131	689	18	159	997
3	Bhadran	35	63	1,404	9	209	1,685	...	...	...	...	...	63	1,404	9	209	1,685
4	Dabhoi	44	158	964	28	219	1,369	6	2	2	10	164	966	30	219	1,379	
5	Sankheda	18	223	857	6	53	1,139	2	5	...	...	7	225	862	6	53	1,146
6	Patan	16	234	834	27	118	1,213	4	35	...	...	39	238	869	27	118	1,252
7	Mehsana	7	79	455	46	94	674	...	3	...	...	3	79	458	46	94	677
8	Sidhpur	32	210	767	24	139	1,140	...	...	...	...	...	210	767	24	139	1,140
9	Vijapur	21	125	424	9	102	660	...	8	...	...	8	125	432	9	102	668
10	Vesma	24	41	759	...	5	605	...	...	...	...	...	41	759	...	5	805
11	Kerchalia	31	124	1,031	1	319	1,515	5	5	...	...	10	129	1,076	1	319	1,525
12	Vyara	4	84	335	12	4	445	...	...	...	...	...	84	335	12	15	445
13	Kathor	15	66	550	4	20	640	...	...	...	...	...	66	550	4	20	640
	Total	310	2,153	11,054	489	1,712	1,4407	46	268	3	7	324	2,199	10,322	492	1,719	14,731

APPENDIX No. XXXIV.—Contd.

Statement showing classification of animals treated at dispensaries and in the District by the Veterinary Surgeons in the year 1924-25.

Number.	Name of the Dispensary.	Result.					Operations.			Daily average.		Mofussil cases.	Post mortum examination.	Fees charged		
		Cured.	Relieved.	Died.	Discontinued.	Remained on hand.	Major.	Minor.	Total.	Out-door.	In-door.			Rupees.	Annas.	Pies.
1	2	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1	Baroda	2,348	6	2	7	34	182	241	423	54'54	3'21	629	...	100	13	...
2	Petlad	832	32	8	133	7	26	54	80	14'57	...	468	...	...	...	...
3	Bhadran	1,632	...	11	47	30	29	26	55	35'99	...	738	...	...	...	...
4	Dabhoi	1,199	146	9	...	69	50	43	93	18	...	587	...	...	...	...
5	Sankhedn	1,084	41	10	7	22	62	61	123	18	1	790	...	16	6	...
6	Patan	1,082	84	13	59	30	129	57	186	27'8	1'5	577	...	7	14	...
7	Mehsana	562	50	7	49	16	42	47	89	17'20	'05	404	...	...	...	...
8	Sidhpur	1,051	40	31	26	24	149	40	189	20'8	...	587	...	...	...	...
9	Vijapur	387	113	16	154	19	48	62	110	16'5	1'16	348	...	...	...	...
10	Veama	637	92	6	73	21	18	188	206	20'83	...	546	...	5	1	...
11	Karchalia	1,446	6	17	63	24	72	92	164	19	1'5	1,147	...	9	6	...
12	Vyara	368	32	17	13	19	38	3	41	37'42	...	135	...	10	15	...
13	Kathor	553	14	14	65	9	61	9	70	12'77	...	377	...	5	6	...
	Total	13,181	656	161	696	324	906	923	1,829	311'98	7'52	1,333	...	155	13	...

APPENDIX No. XXXV.

Statement showing the classification of diseases of animals treated in the Dispensaries during the year 1924-25.

Serial No.	Name of the Dispensary.	Classification of diseases.													Total.	Remarks.
		Specific.	Nervous.	Circulatory.	Skeleton.	Eye and ear.	Skin.	Lymphatic.	Digestive.	Respiratory.	Urinary.	Genetal.	Miscellaneous.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	Baroda ...	64	103	189	166	217	225	69	543	190	80	51	475	2,372		
2	Petlad ...	32	7	10	39	55	422	20	113	17	12	14	256	997		
3	Bhadran ...	22	5	18	2	50	24	...	149	2	18	33	1,362	1,685		
4	Dabhoi ...	8	...	...	30	158	310	...	615	...	141	...	117	1,379	
5	Sankheda ...	...	18	40	53	52	766	2	167	7	27	...	14	1,146	
6	Patan ...	26	16	13	176	33	27	5	181	44	22	20	689	1,252		
7	Mehsana ...	76	13	...	8	20	19	3	87	11	14	8	418	677		
8	Sidhpur ...	...	26	78	162	52	84	25	220	57	17	75	344	1,140	
9	Vijapur ...	49	6	4	16	32	20	...	100	19	8	4	410	668		
10	Vesma ...	9	15	8	32	49	51	...	105	23	4	43	466	805		
11	Karchelia ...	88	7	10	56	140	38	8	240	53	19	41	825	1,525		
12	Vyara ...	18	1	2	31	30	198	5	73	40	24	11	12	445		
13	Kathor ...	6	4	34	172	32	100	23	110	8	26	3	122	640		
	Total ...	397	221	406	943	920	2,284	160	2,703	471	412	303	5,508	14,731		

APPENDIX No. XXXVI.

Statement showing the numbers of reports of out break received and attended during the year 1924-25.

Serial No.	Name of the Dispensary.	Reports received.							Reports attended.							Reports not attended					Remarks.		
		Rinder-pest.	Anthrax.	Foot and mouth-disease.	Pleuro pneumonia contagious.	Black quarter. (H.S.)	Other diseases.	Total.	Rinder-pest.	Anthrax.	Foot and mouth disease.	Pleuro pneumonia contagious.	Black quarter.	Other diseases (H.S.)	Total.	Rinderpest.	Anthrax.	Foot and mouth disease.	Pleuro pneumonia contagious.	Black quarter.		Other diseases (H.S.)	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Baroda ...	1	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
2	Petlad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Bhadran ...	...	...	4	...	...	3	7	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
4	Dabhoi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Sankheda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Patan ...	3	...	...	...	...	...	3	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...
7	Mehsana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Sidhpur ...	4	...	...	...	...	1	5	4	...	...	...	...	...	1	5	...	...	...	...	...	...	...
9	Vijapur ...	7	...	5	...	...	1	13	7	...	5	...	...	...	13	...	...	...	...	...	...	...	...
10	Vesma ...	2	...	...	...	...	1	3	1	...	...	...	...	...	1	2	1	...	...	...	...	...	1
11	Karchelia ...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
12	Vyara ...	...	...	...	...	...	7	7	...	...	...	...	...	...	6	6	...	...	...	...	...	1	1
13	Kathor ...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
	Total ..	17	...	10	...	...	14	41	16	...	9	...	...	13	38	1	...	1	...	...	...	1	3

APPENDIX

Statement showing the number of animals treated, villages

Serial No.	Name of the Dispensary.	Rinder-pest.			Anthrax.			Foot and mouth Disease.				Pleuro-pneumonia					
		Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.				
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Baroda...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Petlad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Bhadran ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Dabhoi...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Sankheda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Patan ...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...
7	Mehsana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Sidhpur ...	...	...	...	...	...	...	...	...	83	...	...	83	...	...	...	...
9	Vijapur ...	...	23	...	124	...	...	...	...	36	60	...	96	...	...	...	...
10	Vesma ...	...	5	13	10	28	...	...	...	...	...	...	...	...	...	...	...
11	Karchelia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Vyara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Kathor...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	...	28	13	11	52	...	...	...	120	60	...	180	...	...	...	...

No. XXXVII.

visited and days spent on tour in the year 1924-25.

Homorrhagic septicæmia.			Other Diseases.			Total.			Number of villages visited.	Number of days spent on tour.	Remarks.			
Cured.	Relieved.	Died.	Cured.	Relieved.	Died.	Cured.	Relieved.	Died.						
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
...
...
...	...	...	...	...	...	...	...	...	...	...	...	7	13	...
...
...	...	...	...	90	...	...	90	91	...	...	91	4	14	...
...	...	...	...	5	...	...	5	5	...	...	5	6	11	...
9	...	3	12	127	...	...	127	219	...	...	3	222	11	30
...	...	2	2	76	70	...	146	199	64	3	266	28	45	...
...	1	1	2	9	...	...	9	14	14	11	39	5	17	...
...
7	...	...	7	...	...	...	...	...	...	...	...	7	7	...
...	...	...	...	10	...	...	10	...	10	...	10	3	3	...
9	1	6	16	307	80	...	387	523	88	17	623	71	140	...

APPENDIX

Statement showing the number of animals treated, villages

Serial No.	Name of the Dispensary.	Rinder-pest.			Anthrax.			Foot and mouth Disease.			Pleuro-pneumonia						
		Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.	Cured.	Relieved.	Died.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Baroda...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Petlad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Bhadran ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Dabhoi...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Sankheda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Patan ...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...
7	Mehsana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Sidhpur ...	...	...	...	...	...	...	...	...	83	...	...	83	...	...	...	...
9	Vijapur ...	...	23	...	124	...	...	...	...	36	60	...	96	...	...	...	...
10	Vesma ...	...	5	13	10	28	...	...	...	...	...	...	...	...	...	...	...
11	Karchelia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Vyara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Kathor...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	...	28	13	11	52	...	...	...	120	60	...	180	...	...	...	...

No. XXXVII.

visited and days spent on tour in the year 1924-25.

Hæmorrhagic septicæmia.			Other Diseases.			Total.			Number of villages visited.	Number of days spent on tour.	Remarks.			
Cured.	Relieved.	Died.	Cured.	Relieved.	Died.	Cured.	Relieved.	Died.						
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
...
...
...	7	13	...
...
...	90	...	...	90	91	...	...	91	4	14	...
...	5	...	...	5	5	...	...	5	6	11	...
9	...	3	12	127	...	...	127	219	...	...	3	222	11	30
...	...	2	2	76	70	...	146	199	64	3	266	28	45	...
...	1	1	2	9	...	...	9	14	14	11	39	5	17	...
...
7	7	...	...	...	...	...	...	...	...	7	7	...
...	10	...	...	10	...	10	...	10	3	3	...
9	1	6	16	307	80	...	387	523	88	17	628	71	140	...

APPENDIX No. XXXVIII.

Statement showing the result of preventive inoculation carried out
by Veterinary Surgeons during the year 1924-25.

Serial No.	Name of the Dispensary.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of out breaks.					Number of animals inoculated.				Number of animals which died after inoculation.			Remarks.				
				Number of out breaks.	Number of animals which died uninoculated in course of out-break.			Equine.	Bovine.	Others.	Total.	Equine.	Bovine.	Others.	Total.		Equine.	Bovine.	Others.	Total.
					Equine.	Bovine.	Others.														Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
1	Baroda.	H. S.	Serum	1	2	2	50	50												
2	Petad.	...	...	...	...	...	...	...					
3	Bhadran	...	...	...	...	...	...	...					
4	Dabhoi.	...	...	...	...	...	...	...					
5	Sankheda	...	...	...	...	...	...	...					
6	Patan.	Rinder	Serum	3	270	270	168	168												
7	Mehsana	...	...	...	...	...	...	...					
8	Sidhpur.	Rinder	Serum	1	32	32	608	608	53	53										
9	Vijapur	...	...	...	...	...	...	...					
10	Vesma.	Rinder	Serum	1	49	49	102	102												
11	Karchelia	...	...	...	...	...	...	...					
12	Vyara.	H.S.	Serum	5	24	24	147	147												
13	Kathor.	...	...	1	...	...	...	...								
	Total.			12	377	377	1075	1075	53	53										

APPENDIX

Statement showing the receipt and expenditure of

No.	Name of the dispensary.	Budget				
		Pay.	Travelling allowance.	House rent.	Country medicine.	English medicine.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	2	3	4	5	6	7
1	Baroda ...	2,196 14-10	36- 2- 0	535- 2- 1	464- 9-11	411- 2-11
2	Petlad ...	1,308- 0- 7	18-10- 0	180- 0- 0	174- 1- 9	236-14-11
3	Bhadran ...	1,281- 5-10	68- 9- 0	228- 8- 0	198-15- 6	187- 7- 5
4	Dabhoi ...	1,291-13- 7	12- 6- 0	280- 0- 0	250- 0- 0	300- 0- 0
5	Sankheda ...	1,319- 3- 5	6-13- 0	180- 0- 0	250- 0- 0	225- 0- 4
6	Patan ...	1,692- 8- 8	82-10- 0	...	199-14- 9	351- 3- 8
7	Mehsana ...	1138-10- 6	51- 2- 6	...	136- 1- 3	189-13-11
8	Sidhpur ...	1584- 2- 9	97-15- 9	252- 0- 0	200- 0- 0	277- 1- 4
9	Vijapur ...	939-11-11	135-15- 0	180- 0- 0	149- 6- 6	212-11- 9
10	Vesma ...	1,753- 0- 0	52- 0- 0	156- 0- 0	232-14- 9	239- 2- 3
11	Karchelia ...	1,462- 2- 4	31- 4- 0	168- 0- 0	200- 0- 0	285- 1- 6
12	Vyara ...	1,216-15- 0	73-13- 6	180- 0- 0	95-10- 0	141-15- 4
13	Kathor ...	1,275- 8- 7	49- 7- 0	180- 0- 0	177- 3- 9	308-12- 3
	Total ...	18,460 2- 0	716-11- 9	2,519-10- 1	2,729-14- 1	23,366- 7- 7

No. XXXIX.

Veterinary Dispensaries in details in the year 1924-25.

expenditure.				Receipt during the year.	Remarks.
Instruments and dead-stock.	Contingency.	Miscella- neous.	Total.		
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
8	9	10	11	12	13
1-0-0	40-4-0		3,699-3-9	100-13-0	
10-0-0	...	...	1,927-11-3	...	
28-12-0	59-14-4	...	2,054-8-1	...	
23-5-4	57-12-0	25-0-0	2,240-4-11	...	
75-0-0	36-0-0	...	2,092-0-5	16-6-0	
43-0-0	55-0-6	40-12-0	2,465-1-7	8-14-0	
21-8-0	30-0-0	24-14-0	1,592-2-2	...	
140-8-4	60-0-0	...	2,611-12-2	45-14-3	
21-14-0	63-15-0	16-15-0	1,720-9-2	1-14-0	
4-14-6	44-10-0	4-3-0	2,486-12-6	10-5-0	
135-10-0	60-0-0	...	2,342-1-10	...	
5-4-0	48-0-0	...	1,761-9-10	10-15-0	
15-0-0	60-0-0	...	2,065-15-7	5-6-0	
539-12-2	615-7-10	111-12-0	29,059-13-7	200-7-3	

Agriculture Department,
Dewan Order No, 36/26.

REVIEW OF THE ANNUAL REPORT OF THE
AGRICULTURAL DEPARTMENT FOR 1924-25

The Department continued under the control of
Control. Mr. C. V. Sane during the year with
satisfactory results.

The resignation of the Agricultural Engineer will
Important changes. necessitate recruitment of another
qualified Engineer. The importance of
Agricultural Engineering is growing very rapidly as is
apparent from the activities reported, and the Department
should consider the advisability of securing an Engineer who
will stick to his job, and steadily work out the Engineering
policy of the Department.

The Agricultural Inspector, Navsari District, was
placed in charge the Cotton Officer's post specially with a
view to achieve better results in our experiments with the
Cotton Transport Act.

The number of second grade Veterinary Surgeons'
posts have been increased from three to five. That should
have assured satisfaction among them. The question as to
how to procure suitable candidates for these posts is
engaging the attention of Government, and the policy of
training Veterinary Surgeons by offering scholarships to
them has been adopted at present.

With regard to meetings of a Provincial or Imperial
Important activities character, there has been a comparative
of the Department. lull this year. The Director attended
as a member of the Cattle and Fodder

Improvement Committee appointed by the Government. Besides attending Revenue Conference at Navsari and Mehsana, the Co-operative Conferences at Kodiar, Kosamba and Billimora, the two departmental conferences, one Panchayat and the other Special Budget Session of the Dhara Sabha held during the year.

The principal outstanding features of the year's work were (1) the unabated extension of Tractor cultivation. It is gratifying to note that no less than thirty new tractors have been added to the previous total, nine of which were sold in the Baroda territory, (2) a beginning in the joint sale of cotton at Kapura in Vyara Taluka; (3) extensive comparative tests of Pusa wheat with the local Wajia in six Taiukas and in twenty-four fields in the Kadi District; (4) an extensive propaganda in pit siloes by co-operative societies and (5) last but not the least the find of an artesian flow at a depth of 175 feet from the ground level at Manupur. Rules have been framed for facilitating the working of the agricultural engineering section and a searching inquiry into the working of the Palace Dairy and Cattle Breeding Farm was also made.

The seasonal condition of the year has been, on the whole, satisfactory. No serious insect pest or crop disease requiring special attention was reported during the year. It is to be noted that manurial tests of cotton on the Baroda Farm gave no results owing to the heavy damage to the crop as a combined result of wilt, white ants and frosts. The results of tobacco manure have not been very satisfactory. It is hoped the Department will now endeavour to bring about satisfactory results. The results on onions have been found to be consistent for the last three years. The Department should try to introduce the system of May-sowing of cotton amongst the agriculturists as it has been found to be successful and attractive to the visitors of the farm. The ground-nut mixture along with Tur and Castor proved no better than the

cotton one of the earlier days. The results of late sowing of Bajri are very satisfactory. The guava plantation has borne fairly well. The bearing of figs was heavy but shedding also was heavy in proportion. In addition, the fruit lacked the flavour it showed last season. It is expected that the experience now gained would help the Department in showing better results next time. Grape vines have not done well owing to defective pruning. Pomegranates do not seem to make very attractive growth. The farm Superintendent should take special care, with a view to achieve better results towards the improvements of grape vines and pomegranates and fruits in general.

With the facilities afforded to the Department there is still ample scope for popularising new and profitable varieties of culture by experimentation and propaganda work, which it is expected under the guidance of the Director will be undertaken at the right time.

The principal work on the Jagudan Farm is in connection with the popularization of the Pusa wheat in the district. The other important work is in connection with the extension of fruit trees. Fruit culture work deserves to be better organised. As regards Dabhoi Wadhvana Farm, it is to be noted with great regret, that the work is to be carried out with great difficulty against popular prejudices. It is hoped however, the prejudices of the people would be met with tact and skill by showing the public actual successful results. If the flooding of the Farm was intentional as reported, the Farm Superintendent should be vigilant in taking steps to detect culprits and bring them to book. The importance of the Dabhoi farm cannot be overrated, as its successful running depends the utilisation of the waters of the Wadhvana Tank, a project undertaken at a great expenditure for improving our agricultural condition by irrigation.

The distinguishing change to be noted is the transfer of the Dairy to the Director of Commerce and Industries. The results of the transfer are awaited with interest.

Dairy and Cattle
Breeding Farm.

The main activity of the Cotton Officer is concerned with the Navsari District. The Cotton Officer's and District Inspector's work. Transport Act came into operation for the first time this year and considerable care had to be exercised in giving effect to the Act. Efforts were made to guard the entry of Navapur Cotton by opening check stations and issuing licenses.

One main activity with regard to improvement consists in aiding the spread of the improved seed. It is noted that successful efforts are made in preserving the purity of cotton which was in danger of deterioration by its admixture with inferior types. The results from the commercial point of view appear to be satisfactory though it will take some time to pronounce any definite opinion in that regard. The result is certainly encouraging in view of the beginning made during the year, by a joint sale of cotton. As a result of this movement, Rs. 2,196 more were realised. It is hoped the Department would try to establish such societies on permanent basis so as to secure solid co-operation of the agriculturists resulting in greater profits.

Propaganda work as regards manure, power crushing of cane, steeping of Jowar in copper sulphate were continued. In Baroda District, principal attention is given to the manurial problem of tobacco section. In the Kadi District, the principal propaganda work pertains to extension of Pusa wheat. Amreli District is having a run of such lean years that agriculture in the tract is becoming more and more a matter of chance. Greater the necessity therefore is to run the Amreli Farm recently started with care and caution. Proper study of the local needs is the first consideration. It is hoped the experiments on the Amreli Farm will go a great way in showing the agriculturists of that part proper means to alleviate the grievance caused by the freaks of monsoon.

Government confidently hope that the Revenue Officers in Districts will co-operate with the Officers of the

Department and help them in their efforts to create interest in the public by popularising the various tests made by the Department and showing the utility of the Department and the good it has achieved, and could yet achieve. At the same time, it should not be forgotten that the Agricultural Inspectors, should as a rule keep the Revenue Officers informed of their activities.

Although agriculturally the season was fair to normal, the difficulty of water supply in drinking wells continued. The Boring operations. Department undertook the boring of 71 wells, out of the applications made for 99. 46 were successful, 2 unsuccessful, 15 abandoned at the request of the owners, and 8 left incomplete. The total increase is calculated at 84 Koses. With a view to afford sufficient material for the guidance for these works the Department would do well to note the different causes that lead to failure and the way to overcome them.

The advance of tractor has gone on during the year unabated. It is noted with satisfaction that the use of such scientific implements is becoming popular.

Thirteen Veterinary dispensaries continued to work during the year Government paying one-third of the expenditure, the rest to be provided by Local Boards under whom these institutions have been working. Mr. S. M. Wasavada was confirmed as Veterinary Inspector during the year. The Burdizzo method of castration which was found very suitable specially in overcoming the religious sentiments of the people has been introduced during the year under review.

On the whole, the activities of the Department in various directions afford immense possibilities for the benefit of His Highness' subjects, if the energies of the District Officers are skillfully directed towards those movements which are more practical and not merely theoretical.

15 A. D.

Demonstrations and experiments should be so selected and made as would benefit the majority and are workable by the agriculturists generally. The responsibilities of the Agriculturists are no doubt great, but it is confidently hoped these can be satisfactorily met by directing the energies of the staff with tact, sympathy and co-operation with all interested in and connected with the affairs directly or otherwise.

Government note with satisfaction that Mr. Sane discharged his duties satisfactorily.

Baroda,
19th February 1926. }

GANPATRAO GAEKWAD,
Naib Dewan.

S. D. P. S Sec. 71.
(Sd.) R. V.

SHORT SUMMARY.

for

HIS HIGHNESS THE MAHARAJA SAHEB AS PER H. P.

No. 4, DATED 1ST DECEMBER 1921.

1. The Department continued to work under the direction of Mr. C. V. Sane.
 2. Necessity of training Veterinary Graduates.
 3. Necessity of providing for infusion of new blood in the graduate staff.
 4. Dabhoi Wadhawana Farm has to work under great difficulties as the object of the Farm is opposed to the popular wish.
 5. Dairy transferred to the Director of Commerce as a result of Inspection Report by this Office.
 6. Joint-sale of cotton.
 7. Pusa wheat in the Kadi District is gradually extending in cultivation.
 8. Extensive propaganda in pit siloes by co-operative societies.
 9. Popularity of tractor cultivation.
 10. Fruit Culture Work deserves to be better organized.
 11. Burdizzo method of castration found very suitable and one that will over-come the religious instinct of the people.
-

श्री.
वडोदरा राज्यना आरोग्य रक्षण अधिकारीनुं
वार्षिक निवेदन.

ANNUAL REPORT
OF THE
SANITARY COMMISSIONER
BARODA STATE.
For the year 1924-25

L:5-231824

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संवत् १९८१
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Summary of Statistics in Baroda State for the year 1924-25.

Population by the Census of 1921 excluding				
Baroda Camp	...	...	...	21,23,588
Area of the Baroda State	...	...	...	8,135'2 Sq. miles.
Average density per square mile	...	...	...	262
Number of live births registered	...	...	...	56,235
Birth rate per 1,000 living	...	...	...	26'4
Number of deaths	...	...	...	44,428
Death rate per 1,000 living	...	...	...	20'9
Number of deaths among infants (under 1 year )	...	...	...	9,729
Infant deaths per 1,000 births...	...	...	...	173
Fevers—Number of deaths from—	...	...	...	35,634
" Death rate	...	...	...	16'7
Plague—Number of deaths from—	...	...	...	3
" Death rate	...	...	...	0'001
Cholera—Number of deaths from—	...	...	...	13
" Death rate	...	...	...	0'006
Small-pox—Number of deaths from—	...	...	...	1,057
" Death rate	...	...	...	0'49
Dysentery and Diarrhoea—Nnumber of deaths from—	...	...	...	737
" Death rate...	...	...	...	0'34
Pneumonia—Nmber of deaths from—...	...	...	...	262
" Death rate	...	...	...	0'12
Tuberculosis—Number of deaths from—	...	...	...	910
" Death rate	...	...	...	0'42
Other Respiratory diseases—Number of deaths from—	...	...	...	1,390
" Death rate	...	...	...	0'65
Injuries and accidents—Number of deaths from—	...	...	...	491
" Death rate	...	...	...	0'23
All other causes—Number of deaths from—	...	...	...	3,931
" Death rate	...	...	...	1'85

**A Summary of the Report of the Sanitation Department
of the Baroda State for the year 1924-25.**



The official language of the State being Gujarati the full report is published in that language. However, the report being in demand from various places in India, a short account is given in English and some tables and charts are added with the permission of higher authorities. The official year of the State commences from the 1st August and ends in 31st July. The area of the Baroda State is 8,135.2 square miles, and the population excluding the Camp at the Census of 1921 numbered 21,23,588 as against 20,19,320 in 1911, showing an increase of 1,04,268 in 10 years.

On the assumption that the 1921 population will again increase by 1,04,268 in the next decennial, the estimated population in the middle of the official year under report works out at 21,62,690 assuming equal annual increase by arithmetical progression; and by 21,64,438 by geometrical progression. There could be a third method of estimating the population in the middle of the year by adding the number of births to the Census figure and deducting the number of deaths, commencing from the time of census to the middle of the official year. According to this method the population in the middle of the year works out at 21,73,723.

As all these methods have their own draw-backs, the old system of calculating rates of Births and Deaths on the Census figures is continued in the report.

The average density for the State is 262 per square mile. However, the distribution of population is far from uniform. The range of densities extends from 7,286 per square mile in Baroda City to 71 in Songadh.

The total number of births during the year was 56,235 against 60,223 in the previous year and the birth rate per 1,000 of population was 26·4 against 28·3 in 1923-24 whereas the average birth rate for the last 10 years was 27·5.

Out of 56,235 persons born, 29,787 were males and 26,448 were females. Thus forevery 100 females born there were 112·6.

The highest birth rate, viz. 32·9 per mille was in Amreli Prant and the lowest, viz. 22·5 in Kadi Prant. The birth-rate in urban area was 28·8 per 1,000 and in rural area was 25·9. Compared to the last year, there was slight decrease in births in Baroda City and the Prants excepting Navsari Prant which shows slight increase.

The total number of deaths during the year under report was 44,428 with a death rate per mille of population of 20·9 against 42,404 with a death rate of 19·9 in the last year whereas the average death rate per mille of population of the last ten years was 28·2.

Out of 44,428 deaths, 23,795 were amongst males and 20,633 were amongst females. Thus for every 100 deaths amongst females there were 115·3 deaths amongst males.

The highest death rate, viz. 32·2 per 1,000 was in Baroda City and the lowest, viz. 17·1 in Amreli Prant.

The death rate in urban population was 25·5 and in rural population was 19·7 per 1,000. In the whole Raj the death rate of males was 21·6 per 1,000 of male population and that of the females was 20·1 per 1,000 of male population. Compared to the last year, there was a decrease in deaths in Baroda City and Amreli Prant and a slight increase in each of the remaining 4 Prants.

The total number of deaths under 1 year was 9,729 with a death rate of 173 per 1,000 births compared to 9,252 with a death-rate of 153 per 1,000 births in the previous year; whereas the mean infant mortality of the last 10 years comes to 179·1 per 1,000 births.

The importance of the subject of child welfare is receiving increasing recognition. Shri Maharani Chimnabai Maternity and Child Welfare League has been in existence since January 1924. Their Highnesses the Maharaja and Maharani are the Honourary Patrons and H. E. the Dewan Saheb is the Patron and the Sanitary Commissioner is the Honourary Secretary. A fund of about Rs. 1,25,000 bearing an interest of about Rs. 7,000 per annum has been collected from various sources. Besides this, Government give a donation of Rs. 4,000 per annum. A staff consisting of a paid Secretary a qualified nurse mid-wife, two Sub-assistant Surgeons a clerk and 4 peons has been employed. Help to the extent of Rs. 20 is given in the form of money, food, clothes, etc., to the poor expectant mothers or to parturient women. A dispensary is also opened in the centre for giving free treatment to females and children.

A Baby Week was held successfully from 1st to 6th February 1925 together with the Health Exhibition in Baroda, and also from 24th to 31, December 1924 in Navsari. The two Sub-assistant Surgeons are doing school inspection work under the guidance of the Sanitary Commissioner (separate reports have been published for the School Inspection work and of the workings of the League.

Besides this, there is a permanent Health Museum organised in the old Palace Darbar Hall on 19th April 1923.

Out of 44,428 deaths registered, 35,634 were from fevers
 3 from plague, 13 from cholera, 1,057
 Principal causes of deaths. from small-pox, 737 from dysentery
 and diarrhoea, 262 from pneumonia, 910
 from consumption, 1390 from other respiratory diseases, 491
 from injuries and accidents and 3,931 and from all other
 causes, giving the rate per 1,000 of population of 167, 0'001,
 0'006 0'49, 0'34 0'12, 0'42, 0'65, 0'23 and 1'85 respectively.
 From these figures it would appear that deaths from "fevers"
 predominated over those from other diseases forming nearly
 80 % of the total. The term "fever" includes malaria, enteric

fever and other diseases with symptoms of fevers not classified in the list. However it is estimated that about 40 % of the total deaths were due to malaria.

Excepting small-pox there was no disease in the epidemic form. Out of 1,057 deaths due to small-pox, there were 9 in Baroda City, 142 in Baroda Prant, 725 in Kadi Prant, 74 in Navsari Prant, 83 in Amreli Prant, and 24 in Okhamandal Prant.

The total number of persons vaccinated in the State during the year under report was 69,477 against 69,377 in the previous year. Out of 69,477 65,606 were primary vaccinations and 3,871 were revaccinations. Out of the primary vaccinations, there were 18 failures and these children were again vaccinated.

Out of the total number of children vaccinated, there were 34,092 males and 31,514 females, and out of the total number of persons re-vaccinated, there were 3,256 males and 615 females. In the case of primary vaccinations where the results were known the percentage of success was 96.8 whereas in the case of revaccinations the percentage of success was 65.9. During the year under report, the number of persons successfully vaccinated per 1,000 of population was 31.1 as compared to 30.8 in the last year.

The work of vaccination shows an increase in all Prants excepting Baroda where there is a slight decrease.

During the year under report, the highest temperature in the City was 116.2 F in May 1925 and the lowest was 36.3 F in January 1925.

The highest temperature in the State was 118 F at Mehsana in May 1925 and the lowest was 35 F at Kalol in January 1925.

The Barometer reading was highest, i.e. 29.882 in December 1924 and lowest is 29.444 in June 1925.

Direction of wind was mostly SW in August 1924, W in September 1924, E in October, November and December 1924, NE in January and February 1925, WNW in March 1925 and SW in April, May, June and July 1925.

The daily velocity of wind varied from 98 miles in October 1924 to 240 miles in May 1925.

The average daily humidity was 46 against 40 in the preceding year.

The highest rain fall, viz. 63.62 inches was recorded at Billimora and the lowest, viz. 8.67 inches at Dwaark.

The sanitary Commissionet toured for 120 days during the year against 145 days in the preceding year. 25 towns and 13 villages were inspected during the year as against 36 towns and 12 villages in preceding year.

SPECIAL FEATURES.

Anti-malarial work in Navsari Prant

1. During the year under report, the Sanitary Commissioner, in consultation with the Chief Medical Officer and the Suba of Navsari Prant, drew up a scheme for anti-malarial work for Navsari Kasba and Songadh town.

The scheme was published in a booklet form, to initiate the practical work, to make a preliminary survey and to train up the local workers including the Boy Scouts, the Sanitary Commissioner paid seven visits to Navsari and spent in all 30 days there and paid 4 visits to Songhad spending there 13 days.

The Navsari Municipality has employed a special staff under a qualified medical officer. The staff is ably assisted by the Navsari Boy Scouts. Government have sanctioned half the expenses towards the work.

Also the Navsari District Local Board has engaged a Sanitary Surveyor to carry on propaganda work

against malaria in the Navsari District. Half the pay of the Sanitary Inspector is defrayed from the Sanitary Department.

The problems of anti-malarial work in Navsari and Songhad are of different types.

In Navsari there were great many mosquito breeding places and mostly anopheline mosquitoes were found whereas in Songhad there were fewer mosquito breeding places but a great number of people had enlarged spleen and parasites in blood.

In Songhad out of 242 boys and girls of Kaliparaj Boarding schools and day schools, 134 i.e. 55.4 were found with enlarged spleens. From the same Boarding schools, out of 94 persons whose blood was examined, 46 were found with parasites, i.e. 43.9%. The parasites were mostly of malignant tertian species. Further house to house examination was made in Songhad. Out of the population of 2,013 persons, 1,011 were examined for splenic index, out of 1,011 persons examined, 319, i.e. 31.5% were found with enlarged spleen. From this it will be seen that the problem at Songhad is chiefly parasite destruction and that of Navsari is chiefly mosquito reduction. Further problem for the anti-malaria work in India is to find out whether any cheaper drug can replace quinine which is so dear and which cannot be had in sufficient quantity. Hence at Songhad, the following drugs are being tried on the boys and girls of Boarding schools.

- (1) Concentrated decoction of Neem bark (Meli Azadirachta).
- (2) Extract from the parasite growing on Neem tree commonly known in India as 'Galo Satwa'.
- (3) Lemon juice (succus Lemonis).

Experiments are being made on students of the boarding with a view to find out how far these drugs can be useful as prophylactic and curative as compared to quinine.

2. During the year under report, at the request of the late Mr. Khaserao Jadhav, guardian to Prince Pratapsinhrao, a through inspection of Lalbagh and its surroundings was made by the Sanitary Commissioner with the Health officer with a view to find out mosquito breeding places. A report was subsequently submitted with necessary instructions to the Sanitary Staff at the Bagh.
3. A report was submitted to the Government on the storm water drains in Baroda City and on the water supply to the City.
4. During the year a report was submitted to Government through the Education Department on the condition of children of Songadh Kaliparaj Boarding houses and their dietaries.
5. The Medical Inspection of school children was carried out by the Sub-Assistant surgeons under the supervision and guidance of the Sanitary Commissioner.
6. As for the model villages, there was no further progress made owing to want of funds and centerprize on the part of local bodies.
7. Sites of Ukardas and manure heaps Chamarkunds, &c., were selected at several places. The problem of manure heaps is a very serious one in many villages as the farmers insist on keeping them in their compounds for the major part of the year, thinking them very precious materials for their farms. Not only do they do so, but they keep them wet to hasten the decaying process.

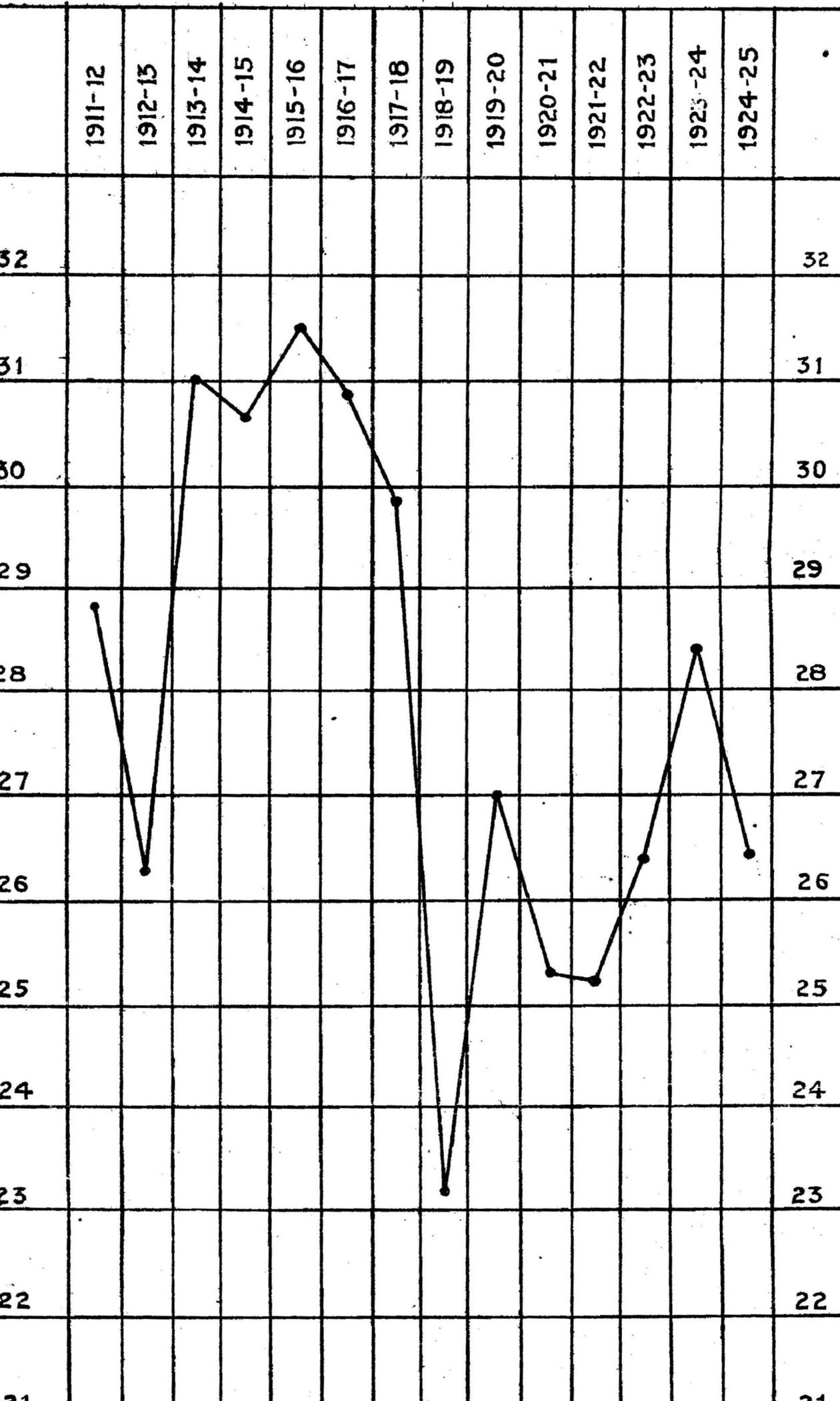
8. Several lectures were given to the public with or without magic lantern shows during the year under report.
9. The undersigned works as the Hon. Secretary of Shri Maharani Chimmabai Maternity and Child Welfare League. The work of the league has increased enormously as the Sanitary Association, Shri. Chimanabai Maternity Fund, and the other Funds have been amalgamated in the central league which also carries on the work of medical inspection of schools and school children.

Baroda,
12th December 1925.

D. C. TALATI,
Sanitary Commissioner,
Baroda State.

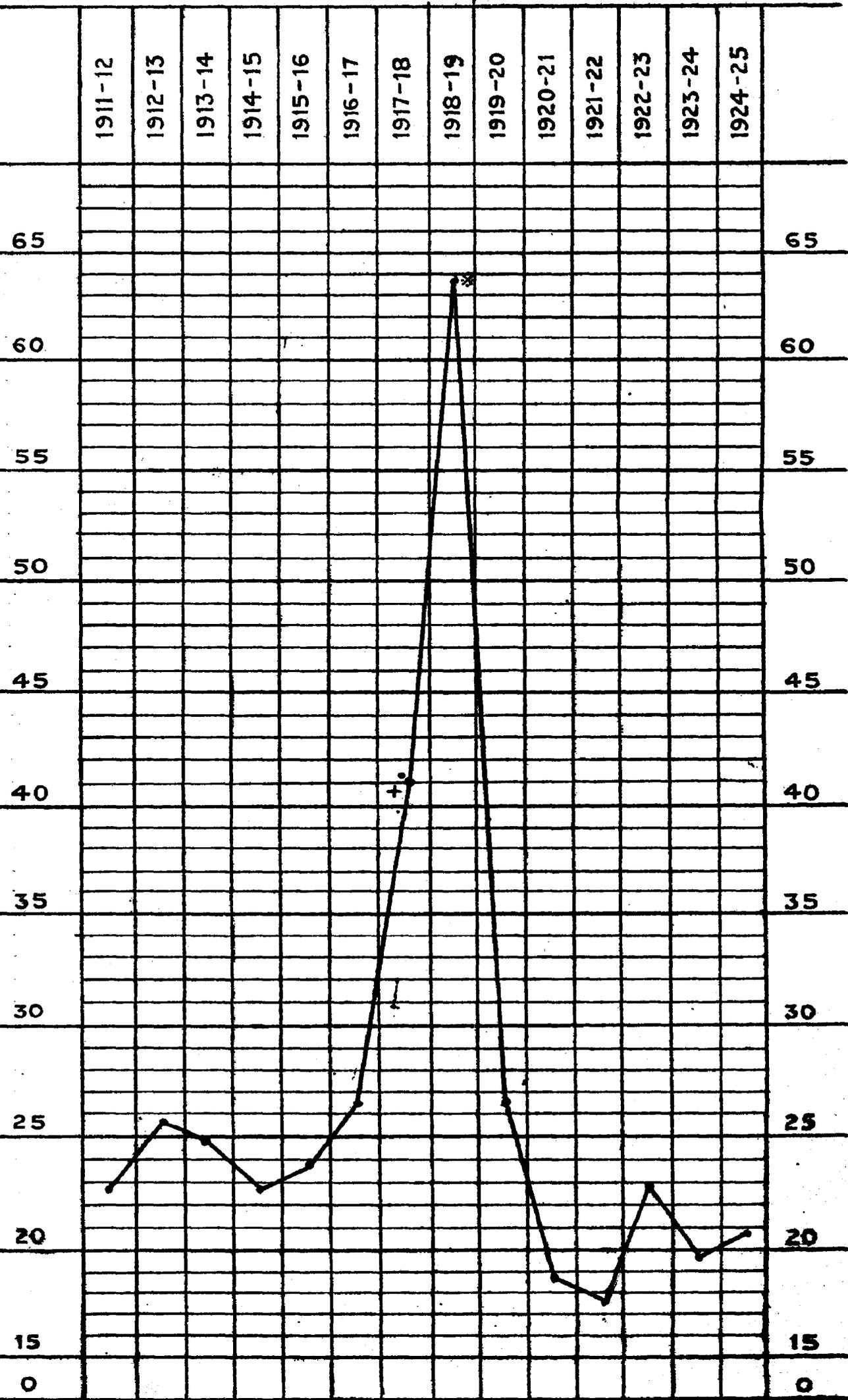
BARODA STATE

BIRTH RATE PER 1000 FROM 1911-1912 TO 1924-25.



BARODA STATE

DEATH RATE PER 1000 FROM 1911-12 TO 1924-25.



APPENDIX No. 3.

Statistics of the Births and Deaths in the five Prants (District) and in the Baroda City for year 1924-25.

No.	Name of the Prant or City.	Population of the Census of 1921.	Number of Births.	Birth rate per 1,000.	Number of Deaths.	Death rate per 1,000.
1	Baroda City	91,778	2,888	31.4	2,959	32.2
2	Baroda Prant	6,12,800	16,682	27.2	13,416	21.8
3	Kadi Prant	9,00,578	20,352	22.5	17,652	19.6
4	Navsari Prant... ..	3,40,372	10,560	31.0	7,256	21.3
5	Amreli Prant	1,52,585	5,021	32.9	2,613	17.1
6	Okhamandal Prant	25,475	732	28.7	532	20.8
	The Whole State...	21,23,582	56,235	26.4	44,428	20.9

S. R.

APPENDIX

Statistics

Name of Prant and City.	Population.			Number of Births.		
	Male.	Female.	Total.	Male.	Female.	Total.
Baroda City (excluding Camp)	49,739	42,039	91,778	1,536	1,352	2,888
Baroda Prant (without City)	3,24,887	2,87,913	6,12,800	8,808	7,874	16,682
Kadi Prant	4,61,052	4,39,526	9,00,578	10,976	9,376	20,352
Navsari Prant... ..	1,71,002	1,69,370	3,40,372	5,395	5,165	10,560
Amreli Prant	78,502	74,083	1,52,585	2,672	2,349	5,021
Okhamandal Prant ...	13,566	11,909	25,475	400	332	732
Total...	10,98,748	10,24,840	21,23,588	29,787	26,448	56,235

No. 4.

according to Sex.

Birth rate per 1,000 of population.			Number of Deaths.			Death rate per 1,000 of population of each sex and total per 1,000 population.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
30·8	32·1	31·4	1,528	1,431	2,959	30·7	34·0	32·2
27·1	27·2	27·3	7,123	6,293	1,316	21·9	21·8	21·8
23·8	21·3	22·5	9,619	8,033	17,652	20·8	18·2	19·6
31·5	30·4	31·0	3,793	3,463	7,256	22·1	20·4	21·3
34·0	31·7	32·9	1,452	1,161	2,613	18·4	15·6	17·1
29·5	27·8	28·7	280	252	532	20·6	21·1	20·8
27·1	25·8	26·4	23,795	20,633	44,428	21·6	20·1	20·9

APPENDIX

Deaths registered according to castes in the

Name of the City and Prants.	Population according to census of 1921.						
	Hindus.	Mahomedans.	Jains.	Christians.	Parsees.	Others.	Total.
Baroda City (excluding Camp).	73,519	14,637	2,292	556	444	330	99,778
Baroda Prant (excluding City).	5,32,313	50,942	8,394	5,660	124	15,363	6,12,800
Kadi Prant ...	8,18,550	54,760	26,671	187	56	354	9,00,578
Navsari Prant.	1,60,263	22,819	2,422	498	6,761	1,47,609	3,40,372
Amreli Prant...	1,35,903	13,189	3,344	1	15	133	1,52,585
Oldmandal Prant.	19,931	5,424	92	27	...	1	25,475
Total...	17,40,479	1,61,771	43,219	6,929	7,400	1,63,790	21,23,588

No. 5.

City of Baroda and five Prants of Baroda State.

Number of Deaths registered.							Rates of Deaths per 1,000 of population.						
Hindus.	Mahomedans.	Jains.	Christians.	Parsees.	Other.	Total.	Hindus.	Mahomedans.	Jains.	Christians.	Parsees.	Other.	Total.
2,550	363	36	...	8	2	2,959	34·6	24·8	15·7	...	18·0	6·0	32·2
12,238	980	70	15	...	113	13,416	22·9	19·2	8·3	2·6	...	7·3	21·8
16,162	1,135	330	1	1	23	17,652	19·7	20·7	12·3	5·3	17·8	64·9	19·6
6,525	513	15	...	111	92	7,256	40·7	22·4	6·1	...	16·4	0·6	21·3
2,390	211	6	...	...	6	2,613	17·5	15·9	1·7	...	...	45·1	17·1
392	140	...	...	...	...	532	19·6	25·8	...	...	...	...	20·8
40,257	3,342	457	16	120	236	44,428	23·1	20·6	10·5	2·3	16·2	1·4	20·9

APPENDIX No. 6.

Deaths registered according to Age in Baroda City and the five Prants of the State.

Baroda City and the five Prants.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.		15 and under 20.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Baroda City excluding Camp.	429	391	220	216	37	32	25	31	32	62
Baroda Prant, excluding City.	1,623	1,462	1,648	1,371	291	244	145	169	138	168
Kadi Prant	1,853	1,561	2,149	1,865	545	464	339	255	253	234
Navsari Prant	848	726	770	704	202	175	112	97	97	99
Amreli Prant	394	309	271	198	69	43	50	36	52	43
Okhamandal Prant... ..	67	66	63	63	10	12	1	7	7	10
Total whole Raj ...	5,214	4,515	5,121	4,417	1,154	970	672	595	579	616
Population according to census of 1921, excluding Camp.	33,864	33,897	1,02,679	1,04,135	1,55,101	1,39,390	1,34,967	1,20,066	92,984	76,956
Ratio per 1,000 living ...	153.9	133.1	49.8	42.4	7.4	6.9	4.9	4.9	6.2	8.0

Baroda City and the give Prants.	20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upward.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Baroda City, excluding Camp.	114	140	130	119	123	63	152	92	266	285
Baroda Prant excluding City.	326	509	476	450	519	421	749	478	1,208	1,021
Kadi Prant	661	582	736	681	787	550	893	598	1,403	1,243
Navsari Prant	228	286	275	294	302	241	360	218	599	623
Amreli Prant	112	105	119	77	89	70	132	99	164	181
Okhamandal Prant...	16	19	33	16	23	15	18	14	42	30
Total Whole Raj ...	1,457	1,641	1,769	1,637	1,843	1,360	2,304	1,499	3,682	3,383
Population according to census of 1921, excluding Camp.	1,71,697	1,66,934	1,66,390	1,54,257	1,16,845	1,11,825	76,369	66,352	47,843	51,025
Ratio per 1,000 living ...	8.4	9.8	10.6	10.6	15.8	14.8	30.1	22.5	76.9	66.3

APPENDIX No. 8.

Statement showing the number of males born to every 100 females born and number of deaths of males to every 100 deaths of females.

No.	Prants and the City of Baroda.	Number of males born to every 100 females born.	Number of deaths of males to every 100 deaths of females.
1	Baroda City, excluding Camp	113.6	106.7
2	Baroda Prant, excluding City	111.8	113.1
3	Kadi Prant	117.0	119.7
4	Navsari Prant	104.4	109.5
5	Amreli Prant	113.7	125.0
6	Okhamandal Prant	120.4	111.1
	The whole State ...	112.2	115.3

APPENDIX No. 9.

Birth registered. Death registered under one year and infantile mortality per 1,000 births in the City of Baroda and the five Prants.

No.	Prant and the City of Baroda.	Total Births registered.	Deaths under one year.			Infantile mortality per 1,000 Births.
			Male.	Female.	Total.	
1	Baroda City, excluding Camp.	2,888	429	391	820	283.9
2	Baroda Prant, excluding City.	16,682	1,623	1,462	3,085	184.9
3	Kadi Prant	20,352	1,853	1,561	3,414	166.2
4	Navsari Prant	10,560	848	726	1,574	149.0
5	Amreli Prant	5,021	394	309	703	140.0
6	Okhanandal Prant ...	732	67	66	133	181.6
	Total...	56,235	5,214	4,515	9,729	173.0

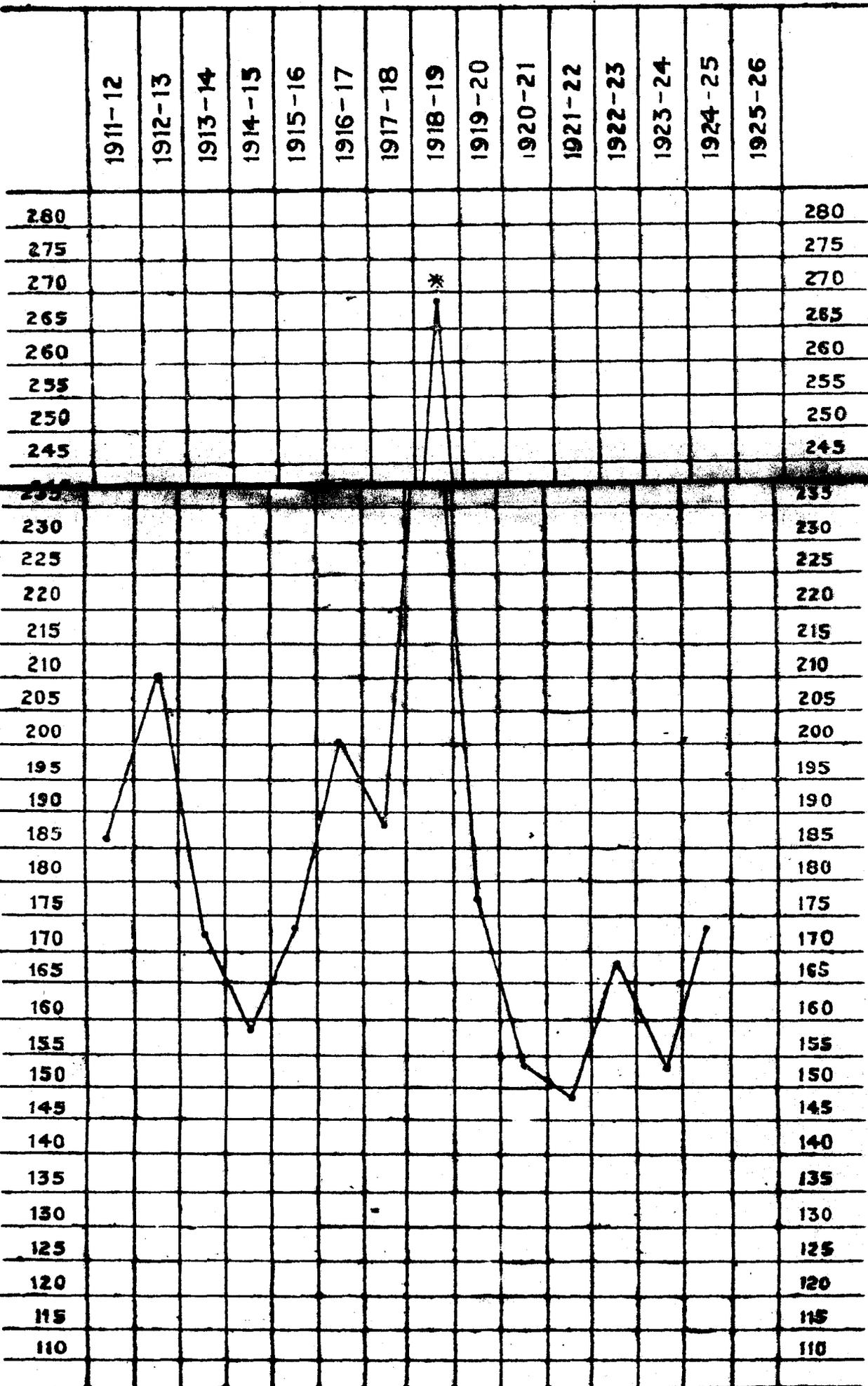
APPENDIX

Details of Deaths

Name of Prant.	Drowning.			Poisoning.			Hanging.		
	Suicidal.	Accidents.	Otherwise.	Suicidal.	Accidents.	Otherwise.	Suicidal.	Accidents.	Otherwise.
	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.
1. Baroda City (excluding Camp).	2	7	1	1					
2. Baroda Prant (excluding City).	6	5	2	3	2				
3. Kadi Prant ...	3	11	2	3	1	1	1	1	2
4. Navsari Prant ...	3	8	1	1		1	1	2	
5. Amreli Prant ...	2	4	2	1	1		1	1	
6. Okhamandal Prant ...	2	3		1					
Total ...	16	30	7	6	4	2	1	1	4

INFANT MORTALITY (UNDER ONE YEAR)

RATE PER 1000 BIRTHS FROM YEAR 1911-12 TO 1924-25
IN BARODA STATE.



* INFLUENZA

No. 11.

by Violence.

Wounding.								Total.			Remark.		
Suicidal.		Accidents.		Otherwise.		By wild beasts.		By snake bites.		Other causes.			
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Male.		Female.	Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.		F.	Total.
.....	1	.....	.....	2	.....	1	9	4	22	6	28		
1	.....	2	.....	6	2	.....	17	19	22	9	79	64	143
1	1	1	2	10	2	1	15	10	24	16	86	77	163
.....	.....	.....	5	.....	2	.....	12	7	17	6	56	33	89
1	.....	.....	3	.....	1	.....	7	7	9	6	31	27	58
.....	.....	.....	.....	.....	.....	1	.....	3	.....	8	2	10	
3	1	4	2	24	4	6	52	44	84	41	282	209	491

APPENDIX No. 12.

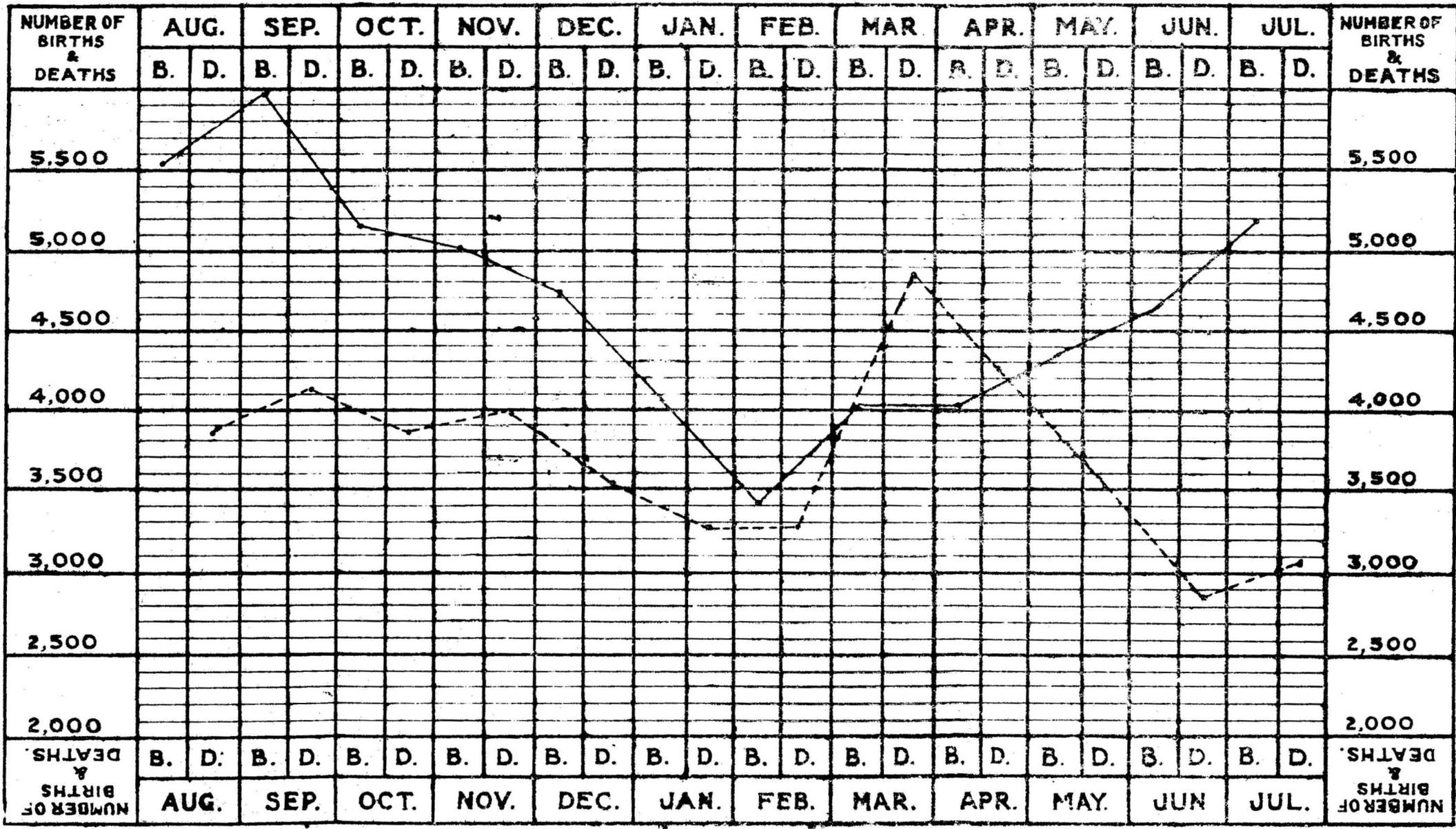
Statement showing Births and Deaths in each month during the year 1924-25 and excess of Births over Deaths 1,000 of population.

Name of City and Prant.	August.		September.		October.		November		December.		January.		February.	
	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.
Baroda City ... (excluding Camp)	297	312	293	297	248	258	273	242	267	255	224	215	197	228
Baroda Prant (excluding City)	1,668	1,301	1,855	1,363	1,643	1,229	1,453	1,215	1,288	936	1,150	934	1,053	917
Kadi Prant ...	2,158	1,328	2,226	1,575	1,838	1,516	1,795	1,567	1,864	1,380	1,491	1,211	1,201	1,304
Navsari Prant ...	888	602	997	533	938	562	972	697	861	653	760	664	609	587
Amreli Prant...	446	244	470	265	448	254	442	211	424	258	400	194	329	217
Okhamandal Prant ...	72	49	101	77	70	43	67	38	54	29	57	33	36	37
Total...	5,569	3,836	5,945	4,110	5,185	3,862	5,002	3,970	4,758	3,511	4,082	3,251	3,425	3,290

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NUMBER OF BIRTHS AND DEATHS IN EACH MONTH

BARODA STATE IN 1924-25.



APPENDIX No. 12.—Contd.

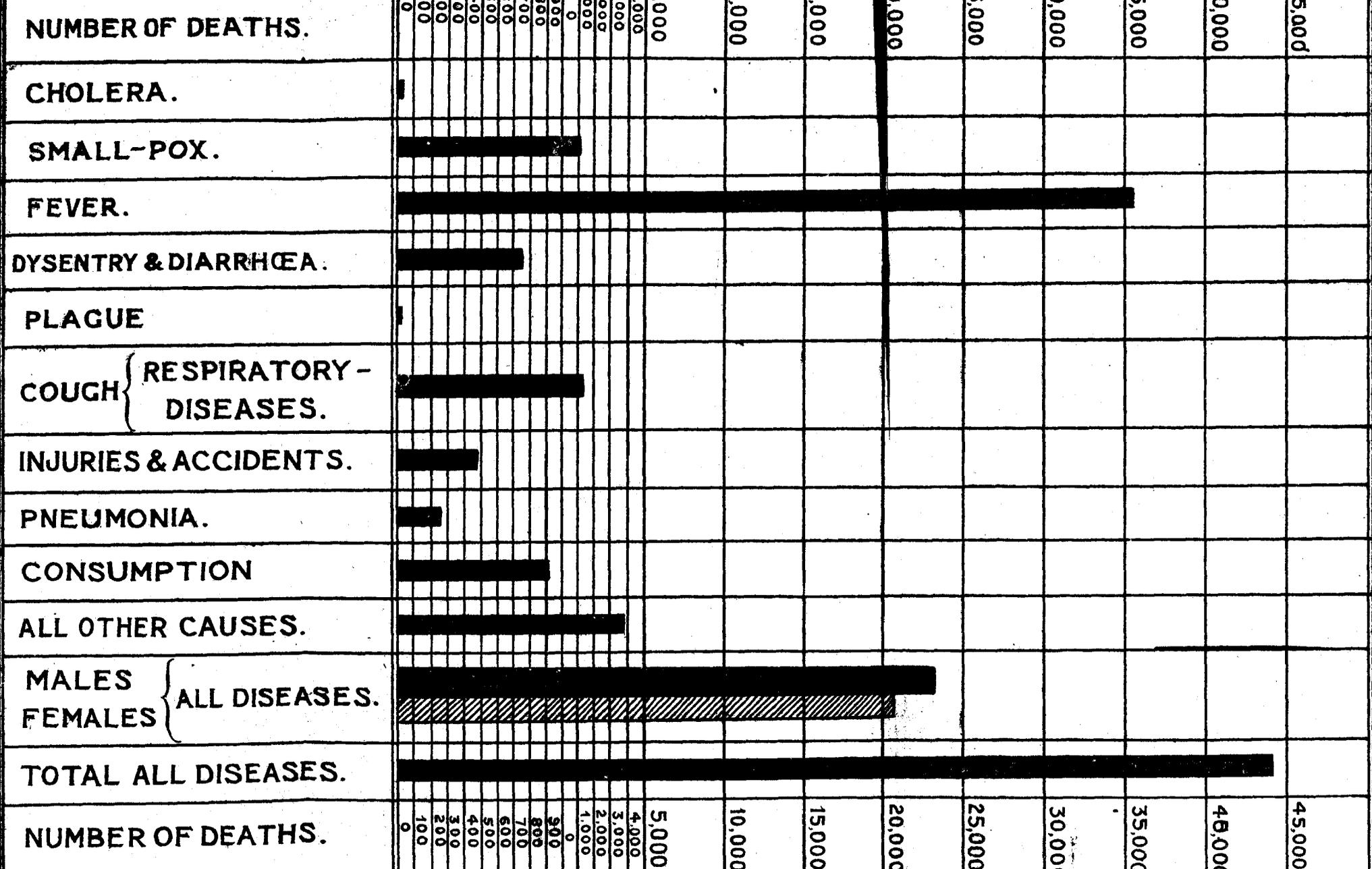
Name of City and Prant.	March.		April.		May.		June.		July.		Total.		Excess of Births over Deaths per 1,000 of population.	Remarks.
	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.		
Baroda City ... (excluding Camp) ...	217	272	193	247	206	252	225	151	245	230	2,888	2,959	...	
Baroda Prant (excluding City) ...	1,229	1,401	1,114	1,179	1,311	1,032	1,416	894	1,502	1,015	16,682	13,416	5.3	
Kadi Prant ...	1,310	2,079	1,133	1,933	1,436	1,476	1,619	1,129	2,081	1,154	20,352	17,652	2.9	
Navsari Prant ...	848	849	954	665	910	539	919	442	894	463	10,560	7,256	9.7	
Anroli Prant ...	334	210	373	179	437	200	413	194	446	187	5,021	2,613	15.7	
Okhamandal Prant ...	65	39	53	44	60	44	57	60	40	39	732	532	7.8	
Total...	4,013	4,830	4,027	4,247	4,380	3,543	4,649	2,870	5,198	3,088	56,235	44,428	5.5	

STATEMENT No. 14.

Deaths registered from different causes in the City of Baroda and the five Prants.

No.	Name of the City and Prants.	Deaths due to different causes.										
		Cholera.	Small-pox.	Fevers.	Dysentery or Diarrhoea.	Injuries.	Plague.	Other respiratory diseases.	Pneumonia.	Consumption.	All other causes.	Total Deaths.
1	Baroda City (excluding Camp) ...	1	9	1,271	144	28	...	345	...	199	962	2,959
2	Baroda Prant (excluding City) ...	7	142	10,590	201	143	1	625	135	259	1,313	13,416
3	Kadi Prant	4	725	15,547	115	163	1	203	9	217	668	17,652
4	Navsari Prant	1	74	5,901	163	89	1	169	84	136	638	7,256
5	Amreli Prant... ..	...	83	1,951	81	58	...	27	28	80	305	2,613
6	Okhamandal Prant ... ..	...	24	374	33	10	...	21	6	19	45	532
	Total ...	13	1,057	35,634	737	491	3	1,390	262	910	3,931	44,428

**NUMBER OF DEATHS FROM PRINCIPAL CAUSES
IN
BARODA STATE IN 1924-25.**



APPENDIX No. 14—Contc.

No.	Name of the City and Prants.	Ratio per 1000 of Population.										Remarks.	
		Cholera.	Small-pox.	Fevers.	Dysentery or Diarrhoea.	Injuries.	Plague.	Other respiratory diseases.	Pneumonia.	Consumption.	All other causes.		Total of all causes.
1	Baroda City (excluding Camp) ...	0.01	0.09	13.8	1.5	0.3	...	3.7	...	1.1	10.4	32.2	
2	Baroda Prant (excluding City) ...	0.1	0.2	17.2	0.3	0.2	0.001	1.1	0.2	0.4	21.4	21.8	
3	Kadi Prant	0.004	0.8	17.2	0.1	0.1	0.001	0.2	0.009	0.2	0.7	19.6	
4	Navsari Prant	0.002	0.2	17.3	0.4	0.2	0.002	0.4	0.2	0.3	1.8	21.3	
5	Amreli Prant ... ..	...	0.5	12.7	0.5	0.3	...	0.1	0.1	0.5	1.9	17.1	
6	Okharmandal Prant ... ..	...	0.9	14.6	1.2	0.3	...	0.4	0.2	0.7	1.7	20.8	
	Total...	0.006	0.4	16.8	0.34	0.23	0.001	0.65	0.12	0.42	1.8	20.9	

APPENDIX No. 16.

Births and Deaths. Birth rate and Death rate per 1,000 of urban and rural population in five Prants.

Name of Prants.	Urban.					Rural.				
	Population.	Number of Births.	Number of Deaths.	Birth rate per 1,000 of population.	Death rate per 1,000 of population.	Population.	Number of Births.	Number of Deaths.	Birth rate per 1,000 of population.	Death rate per 1,000 of population.
Baroda Prant...	1,81,945	5,334	5,175	29.3	28.4	5,22,633	14,236	11,200	27.2	21.4
Kadi Prant ...	1,42,475	3,851	3,730	27.0	26.1	7,58,103	16,501	13,922	21.7	18.3
Navsari Prant.	49,634	1,461	878	29.4	17.6	2,90,738	9,099	6,378	31.2	21.9
Amreli Prant ...	31,916	1,093	695	34.2	21.7	1,20,669	3,928	1,918	32.5	15.9
Okhamandal Prant ...	11,898	306	218	25.7	18.3	13,577	426	314	31.3	23.1
Total ...	4,17,868	12,045	10,696	28.8	25.5	17,05,720	44,190	33,732	25.9	19.7

APPENDIX No. 17.

Statement showing Births and Deaths and ratio per 1,000 of population in the Municipal and Vishisth Panchayat towns in the State in the year 1924-25.

No.	Municipal towns.	Population according to census.	Number of Births.	Birth rate per 1,000 of population.	Number of Deaths.	Death rate per 1,000 of population.
1	Baroda City ...	91,778	2,888	31.4	2,959	32.2
2	Petlad	15,159	413	27.2	378	24.9
3	Dabhoi	15,870	359	22.6	481	30.3
4	Pattan	27,017	807	29.8	775	28.6
5	Sidhpur	16,187	258	15.9	327	20.2
6	Mehesana... ..	11,888	226	19.0	224	18.0
7	Vishnagar ...	13,855	381	27.4	497	35.8
8	Navsari	19,437	480	24.6	301	15.4
9	Billimora... ..	7,321	262	37.7	97	13.2
10	Gandevi	5,721	249	49.9	154	26.8
11	Amreli	17,793	626	35.1	400	22.4
	Total ...	2,42,026	6,919	28.7	6,593	27.2
			Vishisth Panchayats.			
1	Padra	8,468	335	39.5	225	26.5
2	Shinor	5,068	102	20.1	83	16.3
3	Sojitra	8,851	294	32.2	223	25.1
4	Vaso (with Para)...	7,561	281	37.1	251	33.1

APPENDIX No. 17.—*Contd.*

No.	Municipal towns.	Population according to census.	Number of Births.	Birth rate per 1,000 of population.	Number of Deaths.	Death rate per 1,000 of population.
5	Savli	4,321	116	26·8	79	18·2
6	Makarpura	1,085	36	32·9	26	23·9
7	Bhadran	4,624	92	19·8	95	20·5
8	Sankheda... ..	4,279	125	29·2	121	28·2
9	Badharpur	3,979	98	24·6	88	22·1
10	Karjan	3,538	42	11·8	54	15·2
11	Vaghodia... ..	2,578	31	12·0	13	5·0
12	Dharmaj	4,786	122	25·4	99	20·6
13	Kadi	11,919	288	24·1	342	28·6
14	Kalol	7,054	195	27·6	175	24·8
15	Kheralu	6,866	240	34·9	229	33·3
16	Vadnagar... ..	11,671	349	29·9	334	20·0
17	Unjha	9,832	328	33·3	193	19·6
18	Chansma	7,940	304	38·2	224	28·2
19	Dhinoj	4,154	130	31·2	116	27·9
20	Vijapur	7,319	125	17·0	157	21·4
21	Dehgam	4,891	142	29·0	100	20·4
22	Attersumba	1,882	78	41·9	37	19·6
23	Kathor	3,939	129	32·7	99	25·1
24	Songhad	2,013	39	19·3	41	20·3
25	Vyara	4,932	108	21·8	64	12·9

APPENDIX No. 17.—*Concl.*

No.	Municipal towns.	Population according to census.	Number of Births.	Birth rate per 1,000 of population.	Number of Deaths.	Death rate per 1,000 of population.
26	Mahuwa	1,576	36	22.8	19	12.6
27	Variav	2,269	93	40.9	57	25.1
28	Palsana	2,426	65	26.7	46	18.9
29	Damnagar	3,450	156	45.2	91	26.3
30	Dhari	4,243	139	32.7	94	22.1
31	Dwarka	7,930	186	23.4	102	12.8
32	Bet	3,968	120	30.2	116	29.2
33	Kodinar	6,430	172	26.7	110	17.1
	Total Vishisth Panchayat	1,75,842	5,096	28.9	4,103	23.3
	Grand Total of Municipalities and Vishisth Panchayats	4,17,868	12,045	28.8	10,696	25.5

APPENDIX No. 18.

Table of Vaccination operation performed in the State.

Name of Prants.	Primary.									Vaccination.					
	Sex.			Caste.					Age.			Results.			
	Males.	Females.	Total.	Christians.	Hindu.	Mahomedans.	Parsees.	Other Castes.	Under one year.	1. to 6 years.	6 and upwards.	Successful.			
												Under one year.	1. to 6 years.	6 and upwards.	Total.
Baroda Prant ...	11,236	10,578	21,814	55	17,847	1,822	14	2,071	19,800	1,628	386	19,387	1,572	360	21,319
Kadi Prant ...	14,508	12,978	27,486	4	23,376	1,617	1	2,488	24,745	2,284	457	24,001	2,149	411	26,561
Navsari Prant ...	5,368	5,092	10,460	8	9,305	594	130	423	8,965	1,321	174	8,652	1,248	157	10,057
Amreli Prant ...	2,591	2,510	5,101	...	4,450	318	...	333	4,309	774	19	4,114	730	14	4,858
Okhamandal Prant ...	389	356	745	...	542	173	1	29	667	78	...	667	78	...	745
Total...	34,092	31,514	6,5606	67	55,520	4,529	146	5,344	58,486	6,085	1,035	56,821	5,777	942	63,540

APPENDIX No. 18.—*Concid.*

Name of Prants.	Primary vaccination.			Number of Primary operation in successful persons.	Re-vaccination.						Total number of persons vaccinated and revaccinated.	Percentage of successful vaccinations whose results were known.		Persons successfully vaccinated per 1,000 of population.	Remarks.
	Results.				Sex.		Results.			Primary.		Re-vaccinations.			
	Unsuccessful.	Unknown.	Total.		Males.	Females.	Successful.	Unsuccessful.	Unknown.				Total.		
Baroda Prant ...	107	403	21,829	15	1,603	373	1,271	430	275	1,976	23,790	97.7	64.3	32.0	
Kadi Prant ...	374	553	27,488	2	1,031	54	740	235	110	1,085	28,571	96.6	68.2	30.3	
Navsari Prant ...	61	342	10,460	...	365	112	325	72	80	477	10,937	96.1	68.1	30.5	
Amreli Prant...	53	191	5,102	1	257	76	217	90	26	333	5,434	95.2	65.1	32.2	
Okhamandal Prant ...	...	...	745	...	...	...	...	...	...	...	745	100.0	...	29.2	
Total...	595	1,489	65,624	18	3,256	615	2,553	827	491	3,871	69,477	96.8	65.9	31.1	

APPENDIX No. 19.

Statement showing the rain-fall registered at the different Medical on His Highness the Gaekwar's Territory from August 1924 to July 1925.

Places.	From August to July		Remarks.
	Inches.	Cents.	
Baroda Central Jail	39	58	
Navsari Hospital	48	80	
Kadi Do.	31	18	
Pattan Do.	17	93	
Amreli Do.	12	3	
Dwarka Do.	8	67	
Okha Battalion Do.	3	79	
Dhari Do. Do.	22	9	
Dabhoi Dispensary	50	61	
Petlad Do.	37	...	
Mehsana Do.	21	62	
Visnagar Do.	25	26	
Anusoya Leper Hospital... ..	38	36	
Songad Dispensary	63	15	
Sinore Do.	38	34	
Sankheda Do.	52	38	
Padra Do.	37	37	
Sojitra Do.	39	29	
Savli Do.	32	18	
Vaghodia Do.	49	6	

APPENDIX No. 19.—Contd.

Places.		August to July.		Remarks.
		Inches.	Cents.	
Karjan	Dispensary...	44	85	
Tilakwada	Do. ...	41	33	
Sidhapur	Do. ...	25	6	
Kalol	Do. ...	30	29	
Dehgaum	Do. ...	31	59	
Vijapur	Do. ...	25	12	
Vadnagar	Do. ...	10	64	
Becharaji	Do. ...	23	15	
Kheralu	Do. ...	28	23	
Chanasma	Do. ...	16	35	
Harij	Do. ...	15	47	
Gandevi	Do. ...	66	48	
Billimora	Do. ...	63	62	
Kathor	Do. ...	47	80	
Mahuwa	Do. ...	50	26	
Vyara	Do. ...	49	52	
Mangrol	Do. ...	49	89	
Palsana	Do. ...	53	11	
Kodinar	Do. ...	30	69	
Damnagar	Do. ...	14	34	
Dhari Town	Do. ...	15	36	
Khamba	Do. ...	15	64	
Bet	Do. ...	9	31	

APPENDIX No. 19.—*Concl.*

Place.		August to July.		Remarks.
		Inches.	Cents.	
Attersumba	Dispensary	29	88	
Bhadran	Do.	29	27	
Vaso	Do. ... ..	...	...
Vakal	Do.	49	89	
Ratanpur	Do.	20	54	
Langneg	Do. ... ..	...	...

APPENDIX No. 20.

Statement showing the Highest, Lowest and Mean Temperature in shade of each month during the year 1924-25 at the different Institutions in the Baroda State.

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	Central Jail Hospital.			Navsari Hospital.			Kadi Hospital.			Pattan Hospital.			Amreli Hospital.			Dwarka Hospital.			Dhari Battalion Hospital.		
	Highest.	Lowest.	Mean.	Highest	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.
August	96	78	87	83	74	78.5	95	78	96.5	98	74	86	98	78	88	86	75	80.5	87	68	77.5
September... ..	94	78	86	87	71	79	95	75	85.0	93	70	81.5	90	76	83	88	77	82.5	83	65	79
October	94	70	82	90	62	76	95	72	83.5	97	62	79.5	92	76	84	89	76	82.5	96	55	75.5
November	92	64	78	91	49	70	92	68	80.0	95	52	73.5	83	60	71.5	88	68	78	92	48	70
December	92	60	76	87	52	69.5	85	60	72.5	88	51	69.5	84	56	70	86	64	75	86	47	66.5
January	91	49	70	85	38	61.5	76	50	63.0	86	38	62	90	46	68	83	59	71	89	37	63
February	98	50	74	95	38	66.5	93	50	71.5	91	43	67	92	60	76	84	57	70.5	91	35	63
March	106	56	81	102	55	78.5	105	57	81.0	104	52	78	98	60	79	88	66	77	93	48	70.5
April	111	69	90	104	68	86	110	75	92.5	110	60	85	105	80	92.5	90	75	82.5	107	55	81
May	115	77	96	107	74	90.5	113	77	95.0	114	70	92	106	88	97	92	80	86	109	60	84.5
June	98	78	88	90	75	82.5	104	77	90.5	102	76	89	96	77	86.5	90	78	84	101	60	80.5
July	95	75	85	87	72	79.5	96	73	84.5	95	75	85	92	76	84	88	78	83	99	60	79.5

APPENDIX No. 20.—Contd.

	Dabhoi Dispensary.			Petlad Dispensary.			Mehsana			Visnagar			Ansoya Leper Hospital.			Songad Dispensary.			Sinore Dispensary.		
	Highest	Lowest	Mean.	Highest	Lowest	Mean.	Highest	Lowest	Mean.	Highest	Lowest	Mean.	Highest	Lowest	Mean.	Highest	Lowest	Mean.	Highest	Lowest	Mean.
August	94	75	84.5	95	75	85	99	82	90.5	92	61	76.5	92	78	85	88	73	80.5	99	70	84.5
September	93	74	83.5	95	74	84.5	98	77	87.5	93	69	81	91	77	84	85	75	80	85	68	76.5
October	96	66	81	96	60	78	98	60	79	97	61	79	90	68	79	90	70	80	90	64	77
November	95	55	75	95	49	72	95	53	74	90	59	74.5	92	56	74	89	60	74.5	90	62	76
December	93	58	75.5	94	51	72.5	86	55	70.5	88	55	71.5	88	58	73	90	62	76	80	54	67
January	90	45	67.5	90	41	65.5	87	44	65.5	83	40	61.5	86	50	68	90	50	70	80	46	63
February	98	51	74.5	97	40	68.5	88	48	68	90	42	66	63	49	66	90	60	75	90	45	67.5
March	106	55	80.5	106	50	78	106	59	82.5	102	55	78.5	105	51	78	100	70	85	102	48	75
April	111	70	90.5	111	59	85	112	76	94	111	70	90.5	110	74	92	105	77	91	110	60	85
May	115	78	96.5	114	72	93	118	78	98	115	78	96.5	108	80	94	108	80	94	112	60	86
June	100	78	89	98	76	87	103	78	90.5	100	75	87.5	98	77	87.5	90	77	83.5	100	65	82.5
July	92	77	84.5	92	75	83.5	96	78	87	92	76	84	95	78	86.5	85	75	80	90	65	77.5

APPENDIX No. 20.—Contd.

	Sankheda Dispensary.			Padra Dispensary.			Sojitra Dispensary.			Savli Dispensary.			Vaghodia Dispensary.			Karjan Dispensary.			Tilakwada Dispensary.		
	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.
August ...	91	78	84.5	91	77	84	93	75	84	95	80	87.5	98	75	86.5	96	73	84.5	92	70	81
September ...	91	75	83	89	77	83	91	74	82	98	78	88	85	78	81.5	90	72	81	94	70	82
October ...	89	68	78.5	90	69	79.5	91	70	80.5	100	62	81	98	70	84	88	70	79	95	70	82.5
November ...	88	60	74	87	60	73.5	86	59	72.5	94	50	72	98	65	81.5	94	63	78.5	96	55	75.5
December ...	84	58	71	80	60	70	84	58	71	90	50	70	94	63	78.5	91	60	75.5	92	55	73.5
January ...	85	48	66.5	80	48	64	88	45	66.5	98	55	76.5	88	55	71.5	87	55	71	92	45	68.5
February ...	96	47	71.5	90	51	70.5	89	49	69	85	53	69	92	58	75.0	95	52	73.5	95	45	70
March ...	104	66	85	102	59	80.5	102	54	78	103	60	81	103	65	84.0	102	62	82	108	50	79
April ...	108	74	91	108	64	86	107	64	85.5	110	85	97.5	108	75	91.5	109	73	91	114	58	86
May ...	112	82	97	111	76	83.5	110	77	93.5	115	85	100	110	78	94.0	112	75	93	115	65	90
June ...	98	77	87.5	96	77	86.5	96	75	85.5	105	80	92.5	101	78	89.5	102	75	88.5	104	75	89.5
July ...	92	78	85	86	77	81.5	87	77	82	101	80	90.5	89	79	84	92	73	82.5	92	75	83.5

APPENDIX No. 20—Contd.

	Sidhapur Dispensary.			Kalol Dispensary.			Dehgam Dispensary.			Vijapur Dispensary.			Vadnagar Dispensary.			Becharaji Dispensary.			Chansama Dispensary.		
	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.
August	100	70.85		95	72.83	5	101	60.80	5	93	72.82	5	93	74.83	5	92	72.82		95	75.85	
September	98	70.84		96	63.79	5	95	60.77	5	90	72.81		92	74.83		91	74.82	5	92	70.81	
October	98	70.84		94	52.73	0	95	55.75		88	65.77		93	67.80		97	61.79		97	62.79	5
November	98	53.75	5	89	51.70		90	48.69		85	52.68	5	88	62.75		92	50.71		90	50.70	
December	98	48.73		88	40.64		92	42.67		80	51.65	5	84	58.71		86	47.66	5	87	48.67	5
January	97	42.69	5	80	35.57	5	85	40.62	5	77	47.62		80	48.64		82	37.59	5	85	40.62	5
February	91	40.65	5	91	36.63	5	91	43.67		82	47.64	5	90	50.70		88	42.65		93	40.66	5
March	103	55.79		107	52.79	5	99	50.74	5	101	55.78		98	62.80		105	52.78	5	102	45.72	4
April	106	60.83		112	65.88	5	108	56.82		106	65.85	5	106	66.86		112	55.83	5	110	66.88	
May	115	68.91	5	115	66.90	5	110	74.92		112	72.92		111	70.90	5	110	69.89	5	112	72.92	
June	100	70.85		111	68.89	5	98	76.87		107	74.90	5	98	77.87	5	105	70.87	5	102	76.89	
July	101	70.85	5	94	70.82		96	74.85		90	78.84		90	77.83	2	98	70.86		95	75.85	

APPENDIX No. 20.—Contd.

	Harij Dispensary.			Kheralu Dispensary.			Billimora Dispensary.			Kathore Dispensary.			Mahuva Dispensary.			Vyara Dispensary.			Mangrol Dispensary.		
	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.
August ...	95	75.85		95	75.85		87	77.82		91	70.80		90	72.81		87	75.81		89	65.77	
Septembers ...	100	72.86		92	76.84		84	75.79.5		94	68.81		88	75.81.5		90	94.82		85	60.72.5	
October ...	100	65.82.5		96	64.80		90	65.77.5		95	55.75		90	60.75		90	65.77.5		85	89.72	
November ...	100	53.76.5		96	53.74.5		89	58.73.5		98	50.74		90	55.72.5		90	60.75		84	60.72	
December ...	100	50.75		90	50.70		85	58.71.5		98	49.73.5		90	47.68.5		89	60.74.5		84	58.71	
January ...	100	50.75		90	39.64.5		85	46.65.5		94	50.72		86	47.66.5		85	40.62.5		84	37.60.5	
February ...	101	47.74		90	47.68.5		83	52.67.5		99	49.74		100	49.74.5		95	40.67.5		86	40.63	
March ...	114	54.84		105	55.80		105	60.82.5		99	50.74		104	54.79		103	60.81.5		106	66.86	
April ...	114	70.92		111	74.82.5		105	65.85		99	55.77		106	64.85		109	60.84.5		108	65.86.5	
May ...	116	70.93		113	76.84.5		104	80.92		110	70.90		106	74.90		110	74.92		109	70.89.5	
June ...	106	78.92		99	80.89.5		85	75.80		92	70.81		99	68.83.5		92	75.83.5		94	64.79	
July ...	95	75.85		95	77.86		85	73.79		96	69.82		92	70.81		88	76.82		90	60.75	

APPENDIX No. 20—Contd.

	Gandevi Dispensary.			Palsana Dispensary.			Kodinar Dispensary.			Damnagar Dispensary.			Dhari Town Dispensary.			Khamba Dispensary.			Bet Dispensary.							
	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.					
August ...	85	75	80	100	70	85	86	78	82	90	84	87	88	70	79	88	77	82	5	86	80	83				
September ...	86	74	80	88	76	82	86	76	81	90	84	87	95	71	83	88	76	82		86	80	83				
October ...	90	60	75	93	67	80	91	72	81	5	86	78	82	100	64	82	98	80	89	90	76	83				
November ...	90	52	71	88	56	72	91	66	78	5	90	60	75	79	62	70	5	92	64	78	80	71	75			
December ...	85	53	69	87	59	73	86	64	75	85	60	72	5	79	57	68	95	61	78	80	70	75				
January ...	80	43	61	5	85	45	65	87	56	71	5	84	60	72	78	51	64	5	90	60	75	76	62	69		
February ...	95	46	70	5	92	60	75	90	56	78	90	60	75	86	43	64	5	94	60	77	72	65	68	5		
March ...	102	60	81	100	58	79	99	66	82	5	100	70	85	102	64	83	104	80	92	76	64	70				
April ...	107	70	88	5	102	64	83	97	72	84	5	108	84	96	101	71	87	5	106	80	93	92	75	83	5	
May ...	106	75	90	5	103	73	88	97	77	87	113	85	99	106	70	88	106	80	93	92	75	83	5			
June ...	86	75	80	5	91	77	84	90	80	85	108	85	96	5	100	51	75	5	95	77	86	98	80	89		
July ...	85	70	77	5	86	78	82	86	78	82	108	85	96	5	96	81	88	5	85	76	80	5	94	81	87	5

APPENDIX No. 20—Contd.

	Attersumba Dispensary.			Language Dispensary.			Vaso Dispensary.			Vakal Dispensary.			Ratanpur Dispensary.			Bhadran Dispensary.					
	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.			
August	97	77.87	85	60.72.5	96	80.88.0	}	95	73	84	85	81.83	96	74	85	}	96	73	84.5		
September	97	75.86	86	66.76	99	80.89.5					87	82.84.5	96	73	84.5						
October	98	64.81	86	70.78	92	75.83.5					86	84.85	97	56	76.5						
November	93	54.73.5	80	62.71	86	69.77.5	}	99	45	72	86	83.84.5	95	44	69.5	}	91	44	67.5		
December	88	57.72.5	80	55.67.5	81	63.72.0					87	83.85	91	44	67.5						
January	88	47.67.5	79	50.64.5	81	42.61.5					86	83.84.5	89	36	62.5						
February	95	46.70.5	75	53.64	65	44.54.5	}	105	80	92	86	83.84.5	94	43	68.5	}	107	87.97	111	56	83.5
March	104	56.80	96	60.78	103	43.73					101	87.94	105	45	75						
April	112	70.91	98	70.86	108	80.94					106	88.97	115	68	91.5						
May	116	82.99	102	70.84	112	81.96.5	}	109	62	85	106	88.97	115	68	91.5	}	95	90.92.5	97	75	86
June	101	78.89.5	96	80.88	106	76.91					95	90.92.5	97	75	86						
July	94	78.86	90	80.85	104	78.91					88	83.85.5	94	74	84						

श्री.

बडोदरा राज्यना आरोग्य संरक्षण (सेनिटरी) खातातुं

वार्षिक निवेदन.

सने १९२४-२५ साल बदल.

भाग १ लो.

१. आरोग्य संरक्षण खातातुं काम नीचे प्रमाणे छे:—

खातातुं काम.

- १ शितळा खातातानी व्यवस्था.
- २ आखा राज्यनी जन्म मरणनी नोंधपर देखरेख तथा तेतुं प्रांतवार तथा ताळुकावार एकीकरण.
- ३ सुधराई अने विशिष्ट पंचायतोनी, तपासणी तथा आखा राज्यनी आरोग्य संबंधी तपास अने सुधारा माटे सुचना तथा व्यवस्था.
- ४ हवा, बरसाद, बायु, भेज विगोरेनी नोंध (मिटीयरोलोजी.)
- ५ भाषणोद्वारा आरोग्य संबंधी ज्ञाननो प्रचार, जादुई फानस (मेजीक लेन्टर्न) ना प्रयोगो साथे.

२. आरोग्यरक्षण अधिकारीनी जग्यानो हवालो वर्षनी शरूआतथी ते साळ पुरं यतां सुपी डॉ. दा. ख. तळाटी, बी. एच. वाय डी. टी. एम; डॉ पी. एच; एफ. सी. एस; विगोरे एमनी पासे हतो.

३. निवेदनना वर्षमां तपासणीना कामे तेमज बीजा कामो माटे अमारी १२० दिवसनी फेरणी थई हतो, जो के लगभग एक मास तपासणी. बडोदरामां बाळ ससाह (नेवी बीक) माटे रोकानु पडतुं हतुं, अने एक मास माटे नवसारीमां आरोग्य प्रदर्शन तथा एन्टीमेलेरीयाना काम माटे रोकानु पडतुं हतुं. ज्यारे गई साळ १९१ दिवसनी फेरणी थई हवी. एकंदर, २५ कत्वा अने १३ गाम्हानी मुलाकाम लेशामां आवी हती. ज्यारे गई साळ ३६ कत्वा अने १२ गामोनी मुलाकाम लीधी हती.

४. वार्षिक तपासणीमा नीचे मुजब कामो करवामां आवे छे:-

तपासणीमां थतां क.मो.

- १ शितळा कामदारोनां दफतरो, शल्ल अने सामाननी तपासणी.
- २ शितळा टांकवानुं काम रुबरु जोइ ते सुधारवानी सूचना.
- ३ शितळानां पाछलां चाठां तपामवानुं काम.
- ४ आरोग्य अने शितळा तपासणी कामदारोनां काम तथा दफतरोनी तपासणी.
- ५ गामडांमां तथा कस्बाओमां जन्म मरणनी नोंध बराबर रहे छे के केम तेनी तपासणी अने ऑडिट.
- ६ गाम गामडांनां पटेछोने बोलावीने तेमना गामनी आरोग्य तथा स्वच्छता संबधी स्थितिनी पूछ परछ. दबा तथा कानाइननी मफत वेहेचणी संबधी तपास अने चेपी रोग अटकाववा विषे सूचना.
- ७ तजबीजदारो गामडांनी आरोग्य अने स्वच्छता संबधी शुं शुं काम करे छे तेनी तपासणी.
- ८ सुधराई अने विशिष्ट पंचायतोना दफतरो तेमज गाम स्वच्छता विषे विगतवार तपासणी अने सुधारा माटे सूचना तथा ते बदल उपरी अमलदार तरफ तपासणीनुं निवेदन.
- ९ सुधराइना तथा विशिष्ट पंचायतोना सभासदो जोडे सामान्य आरोग्य माटे वाटघाट अने ऑडिटनी निकाळ.
- १० अमलदार अने प्रजाना अग्रोवानो जोडे स्वच्छता विगरे विषे वाटाघाट.
- ११ भाषण मेजीक छेन्टर्न साथे अगर ते वगर अथवा लोकोने एकठा करीने समजुत.
- १२ मोटा कस्बांमां आरोग्य प्रदर्शन भरी ते द्वारा आरोग्यताना ज्ञानो प्रचार.
- १३ निशाळ तथा विद्यार्थीओना आरोग्यनी तपास अने तत्संबधी भाषण.
- १४ इस्पताल, जेल, पोलिंस लाइन, मिछिटरी लाइन, लायब्रेरी, कसरत शाळा, बसतिगृह अने राजमहेळो विगरे जाहेर कामना संस्थाआनी मुलाकात अने स्वच्छता संबधी तपास.

- ૧૧ કેટલાંક ગામડાંની તપાસ અને ત્યાંની આરોગ્યતા તથા સ્વચ્છતા અને અગવડ માટે મહાલ પંચાયતોને સૂચના.
- ૧૬ નમુનેદાર ગામ (Model Village) કેવી રીતે બનાવવું તે સંબંધી યોજના ઘડવાનું કામ અને સલાહ.
- ૧૭ મોટાં ગામોમાં જાજરૂ, ડકરડા તથા દિશાઈ જવાની જમીન તેમજ ચમાર કુંડ માટે જગ્યા સુકર કરવાનું કામ.
- ૧૮ કુશ તઝાવ મોટા જલાણયો (Water works) વિગેરે પીવાના સાધનોની તપાસ અને સૂચના.
- ૧૯ નર્સ, મીંડ વાઈફ રાખવા માટે તેમજ ડાયળોને શીલવા માટે વ્યવહારૂ સૂચના કરવામાં આવે છે.
- ૨૦ ઇ શિવાય શહેર સુધારણા (Town Planning) ગામઠાળ વધારવા સંબંધી તેમજ આરોગ્યના હિતર મોટા કામો સંબંધી સલાહ આપવામાં આવે છે.

સ્વાસ હકીકત.

નવસારી પ્રાંતમાં ટાટીઆ તાવ સામે

૧. ૧ નિવેદનની સાલે મે. રા. રા. નવસારી પ્રાંત સુવા સાહેબ અને મે. રા. રા. ચીફ મેડિકલ ઓફિસર સાહેબની સંમતિથી નવસારી પ્રાંત પૈકી નવસારી અને સોનગઢ ઇ બે કસ્વામાં ટાટીઆ તાવ સામે લડત કરવા સંબંધીની યોજના તૈયાર કરવામાં આવેલી છે. સદર યોજના એક નાનકડા પુસ્તક રૂપે છપાયેલી છે. અમોઈ નવસારી કસ્વામાં એક માસ અને સોનગઢ કસ્વામાં ૧૩ દિવસ મુકામ રાખીને સ્વયમ્ સેવકોને અને બૈય સ્કાઉટને તેમજ ફરતા દવાસ્થાનાના ડૉક્ટરોને સદર યોજના પ્રમાણે કામ કેવી રીતે કરવું, પ્રાથમિક તપાસ શું શું કરવી તે વિગેરે સંપૂર્ણ તાર્કીમ આપી સ્વસ્થમાં કેટલુંક કામ કરી બતાવ્યું હતું.

નવસારી સુધરાઈએ એક નિષ્ણાત ડૉક્ટરની દેલ્હેલ નીચે સદર કામ કરવા માટે સ્વાસ મહેકમ રાલેલું છે. આ મહેકમને નવસારીના બૈય સ્કાઉટની મદદ પણ આપવામાં આવેલી છે. સદર યોજના પ્રમાણે કામ કરવા માટે જે સ્વર્ચ ધાય તેની નીમે રકમ સરકારે સુધરાઈને આપવા ઠરાવેલું છે.

આ ઉપરાંત નવસારી પ્રાંતના તાલુકાઓમાં પણ ટાટીઆ તાવ સામે લડત ચલાવવા માટે તથા આરોગ્યના જ્ઞાનનો પ્રચાર કરવા માટે નવસારી પ્રાંત પંચાયતે એક સેનિટરી ઇન્સેક્ટરનો નિમણુક પણ કરેલો છે. સદર ઇન્સ્પેક્ટરનો નીમે પગાર આં ખાતા તરફથી આપવામાં આવે છે.

નવસારી અને સોનગઢ કસ્બામાં આ યોજનાનો જુદી જુદી રીતે અમલ કરવો પડે છે. કારણ નવસારીમાં મચ્છરને ડહોરવાની ઘણી જગ્યો જોવામાં આવેલી છે, અને ખાસ કરીને ત્યાં ઇનોફીલાઈન મચ્છર કે જે ટાટીઓ તાવ ફેલાવે છે, તેની સંખ્યા ઘણી મઢી આવે છે જ્યારે સોનગઢ કસ્બામાં મચ્છરને ડહોરવાની જગ્યો ઘણીજ જુજ છે, પણ ત્યાંના લોકોની શારીરિક તપાસ કરતાં બરોઢ વધી ગયેલો હોઈ તેમના લોહીમાં ટાટીઆ તાવના જંતુઓ માલમ પહેલા જળાયા હતા.

ત્યાંના કાઢીપરજ વસતિગૃહોના ડોકરાં અને ડોકરીઓનાં શારીરિક તપાસ કરતાં એકંદરે ૨૪૨ વિદ્યાર્થી પૈકી ૧૩૪ વિદ્યાર્થીઓનો બરોઢ ઘણી વધેલો જળાઈ હતી, આ વસતિગૃહો પૈકી ૯૪ વિદ્યાર્થીઓનું લોહી તપાસતાં ૪૬ વિદ્યાર્થીઓના લોહીમાં ટાટીઆ તાવના જંતુઓ માલમ પડ્યા હતા. આમાંના ઘળાખરા જંતુઓ વધારે હાનિકારક જળાયા હતા. આ ઉપરાંત સોનગઢ કસ્બામાં ઘેરઘેર જઈ લોકોની શારીરિક તપાસ પણ કરવામાં આવી હતી. ૨૦૧૩ માળસોની વસ્તીમાંથી ૧૦૧૧ માળસોની બરોઢની તપાસ કરવામાં આવી. તેમાંથી ૩૧૯ ઇટલે ૩૧૯ ઇસમોની બરોઢ ઘણીજ વધી ગયેલી જળાઈ આવી. સોનગઢ કસ્બાની કાઢીપરજના વસતિગૃહના ડોકરાં અને ડોકરીઓની બરોઢ વધી ગયેલી તેના માટે તથા લોહીમાં જંતુઓ જળાયા તેના માટે તેઓને ડીમઢાની ડાલનો રસ, ગઢો સત્વ, ડીબુનો રસ આપવાનો પ્રયાગ શરૂ કરવામાં આવેલો છે. આથી કરી ઘળા લોકોની શારીરિક તંદુરસ્તી સુધરતી જાય છે. કિનાઈન કરતાં ઉપર જળાવેલા ઉપચારો કરવાથી ઘળા ઓઢો ઓચ યાય છે જેથી આ ઉપચારો વધુ ફલઢાયા નીબઢે તે માટે વધુ પ્રયત્ન જારી છે.

૨. નિવેઢનની સાલે ડાલબાગ અને તેની આસપાસ મચ્છરને ડહોરવાની જગ્યોનો તપાસ સુધરાઈના આરોગ્ય અમલઢંરને સાથે રાખીને કરવામાં આવ્યો હતો, અને તે ઉપરથી જરૂરીઆત સૂચનાઓ સાથે નિવેઢન સાઢર કરવામાં આવ્યું હતું.

૩. વડોદરા શહેરનો વરસાદના પાળાં જવાની ગટરો સંબંધી તેમજ શહેરની લોકોને પાળી સ્વચ્છ મઢ્ઢે તે માટે શું તજવીજ રાખવી તે બદલ નિવેદન સરકારમાં સાદર કરવામાં આવ્યું હતું.
૪. વડોદરા શહેરમાં ફેબ્રુવારો ૧૯૨૧ ના પહેલા અઠવાડિયામાં આરોગ્ય પ્રદર્શન સાથે બાઢ સપ્તાહ ફતેહમંદયો ઉજવવામાં આવ્યું, તેમજ નાતાલના દિવસોમાં તા. ૨૪ થી તા. ૩૧ ડિસેંબર ૧૯૨૪ સુધી નવસારી કસ્વામાં પણ બાઢ સપ્તાહ સાથે આરોગ્ય પ્રદર્શન ભરવામાં આવ્યું હતું.
૫. નિવેદનની સાલે સોનગઢનો કાઢીપરજનો વસતિગૃહનાં છોકરાંઓનો શારીરિક સ્થિતિ તથા તેમને મઢ્ઢતા ઁરાક સંબંધે ઁક વિગતવાર નિવેદન શાઢા ઁલાતા મારફતે સરકારમાં રજુ કરવામાં આવ્યું હતું.
૬. શાઢાનાં છોકરાંનો વૈયકીય તપાસતું કામ અમારી દેઁરેલ નીચે બે સબ આસિસ્ટન્ટ સર્જનો તરફથી કરવામાં આવ્યું હતું.
૭. નિવેદનની સાલે નાળાંના અભાવે તેમજ લોકોની અસહકારની પ્રવૃતિના છીધે નમુનેદાર ગામ બનાવવાના કામમાં કાંઈજ વધુ પ્રગતિ થયેઢી નથી. સરકારની મદદના અભાવે લોકો આગઢ પડતા નથી. નમુનેદાર ગામોમાં શું શું કામો કરવાના તેની સવિસ્તર યોજનાં ઘડોને ઁહાના પુસ્તક રૂપે છપાવી પ્રસિદ્ધ કરવામાં આવી છે અને પ્રાંતના મે. સુવા, ના. સુવા, વહિ-વટદાર અને ઁહાઢ પંચાયતો તરફ મોઢી સંઁ્યામાં મોકલવામાં આવી છે. રા. રા. નાયબસુવા અને વહિવટદારોને સાથે રાઁલી રુબરુમાં કેવી રીતે કામ કરવું તે બતાવ્યું હતું. અને કેટલાંક ગામો પણ નમુદ કરી આપ્યાં હતાં પણ હજી તે પ્રમાણે કાંઈ અમલ થયેઢો જળાંતો નથી.
૮. ઁકરડા નાંલવા માટે, ચમાર કુંડ માટે, ગામઢાળ વધારવા માટે અને ઁવાંજ બીજાં સાર્વજનિક કામો માટે ઘળા સ્થલે જગ્યો મુકરર કરવામાં આવી હતી. ઘળા ગામોમાં ઁકરડાનો પ્રશ્ન ઘળો મહત્વનો ઁઈ પડ્યો છે, કારણ ઁલેઢુત ઢોકો વર્ષના ઘળા ઁળે ઁકરડા પોતાના આંગળામાં રાલે છે. તેઓ તેને પોતાના ઁલેતર માટે ઘળી કિંમતી વસ્તુ ગળે છે ઁટલુંજ નહીં પણ તેઓ તેને કહોંવડાવવાને માટે બીનાશ રાલે છે.
૯. નિવેદનની સાલે ઁંઢીક લેન્ટર્નના પ્રયોગ સાથે તેમજ તે વગર આરોગ્યને લગલા વિષયો ઁપર કેટલેક ઢેકાળે માધળો આપવામાં આવ્યાં હતાં.
૧૦. અમો ઁમંત મહાળળી ચિમનાવાઈ પ્રસુતિ સંબાઢ અને બાઢ સંરક્ષળ સંસ્થાના માનનીય મંત્રી (Hon Secretary) ઁરીકે કામ કરી ઁ ઁં. ઁ

સંસ્થાનું કામ ઘનું વધી પડ્યું છે કારણ સંનીટરી एसोસिएશન, શ્રી ચિ-મનાવાઈ પ્રસુતિ ફંડ અને બીજાં કેટલાંક ફંડો તેની સાથે એકત્ર કરાને એક મધ્યવર્તી સંસ્થા (Central League) સ્થાપના કરવામાં આવી છે. નિશાઢોની વૈદ્યકીય તપાસનું કામ પણ એ સંસ્થા તરફથી અમારી દેખરેખ હેઠલ યાય છે.

૧૧. દરેક પ્રાંતમાં આરોગ્ય મંડલ સ્થાપવામાં આવ્યું છે અને તેનું કામ કરવા માટે નીચે પ્રમાણે સમિતિ નીમવામાં આવેલી છે.

૧ સુવા (પ્રમુખ).

૨ પ્રાંતના વૈદ્યકીય અમલદાર

૩ શાઢા ઠાતાના ઈન્સ્પેક્ટર

૫ પ્રાંતના આરોગ્ય તપાસણી કામદાર મંત્રી

ચારે પ્રાંતના આરોગ્ય મંડલને એકએક મંજીક લેન્ટર્ન આપવામાં આવ્યું છે, તેમજ દરેકને આરોગ્ય સંબંધી જેવો કે મરકી (ડેંગ), કોગલ્ડીયું (કોલેરા), હીમજ્વર (મેલેરીયા), શિતલ્ડાં, ક્ષયરોગ વિગેરે જૂદી જૂદી જાનના રોગો સંબંધી સ્લાઈડો આપવામાં આવી છે. તેના પ્રયોગો સાથે ગામઢાંઓમાં ભાષણો આપવામાં આવે છે, તેમજ નકશા વિગેરે સાહિત્યો, જાહેરતો અને પત્રિકાઓ છપાવવાની તજવીજ જરૂરોયાત પ્રસંગે થઈ લોકોને મફત વેહેંચવામાં આવે છે. એ રીતે આરોગ્યના જ્ઞાનનો પ્રચાર કરવાનું કામ ચાલે છે.

૧૨ સ્થાનિક અમલદારો અને જૂદી જૂદી પંચાયતોના તથા મુઢરાઈના સમા-સદોને આરોગ્યતાનું મહત્વ સમજાવી સરકારની સઢાહથી કેવી રીતે કામ કરવું તે બાબતની માહિતી આપવામાં આવી હતી.

૧૩ વઢોદરા શહેરમાં જૂના સરકારવાઢાના દરવાર હોંલમાં એક કાયમનું આરોગ્ય સંપ્રહસ્થાન ગોઠવવામાં આવ્યું છે તેની વઢોદરા શહેરના તેમજ બહાર ગામના લોકોએ અને જૂદી જૂદી નિશાઢોનાં છોકરાંઓએ મઢી આસરે પાંચ હજાર ડસમોએ નિવેદમના વર્ષમાં લાંબ લીધો હતો.

ભાગ ૨ જો.

જન્મ.

નિવેદનના વર્ષમાં આઠા રાજ્યમાં કુલ જન્મ ૧૧,૨૩૧ નોંધાયા હતા જેનું દર હજાર વસ્તીએ પ્રમાણ ૨૬.૫ આવે છે, અરે ગઈ જન્મની સંખ્યા તથા પ્રમાણ. સાલમાં કુલ જન્મ ૬૦,૨૨૩ નોંધાયા હતાં જેનું દર

हजार वस्तीए प्रमाण २८-३ हतुं. गया दस वर्षनुं जन्म प्रमाण सरैरास २७-९ आवे छे. राय्यना एकंदर ४२ तालुका अने पेटामहाल पैकी बडोदर महाल पादरा करजण, धिनोर, संखेडा, नवसारी, गणदेवी, पलसाणा, महुवा, न्यारा, कामरेज, मांगरोळ, अमरेली, दामनगर, धारी, खांभा, कोडिनार, रतनपुर, भोंमकड़ा, ओखामंडळ अने बेट ए महालोमा जन्मनुं प्रमाण दस वर्षनी सरैरास करतां वधारे हतुं ए शिवायना बाकीना महालोमां जन्म प्रमाण सरैरास करतां ओखुं हतुं.

नीचेना पत्रकमां वधारे जन्मप्रमाण कया कया प्रातिमां अने ओखुं जन्मप्रमाण कया प्रातिमां हतुं तेनी अनुक्रमे गई सालना आंकडा साथे सरखामणी करवामां आवी छे.

वधारे जन्म प्रमाण कयां हतुं अने ओखुं कयां हतुं.

अनुक्रम नंबर.	प्रातिनां नाम.	सने १९२४-२५ सालमां दर हजार जन्मप्रमाण.	सने १९२३-२४ सालमां दर हजार जन्मप्रमाण.
१	२	३	४
१	अमरेली प्रांत.	३२-९	३२-९
२	बडोदरा साहेर.	३१-४	३६-७
३	नवसारी प्रांत.	३१-०	२९-५
४	ओखामंडळ प्रांत.	२८-७	३०-१
५	बडोदरा प्रांत.	२७-२	३०-६
६	कडी प्रांत.	२२-५	२४-६

ए उपरथी निवेदनना वर्षमां आगळना वर्ष करतां कांईक विशेष फेरदार घयेओ जणातो नथी. खातामांथी जन्मनी नोंध सुधारवा माटे जन्मनी नोंधमां सुधारो वधा माटे प्रयत्न. शितञ्ज टकिलां छोकरीनी नोंध उपरथी जन्मनी नोंधनी सरखामणी कराने नोप्या बगर रही गयेला छोकरी शोधो कादी कसुरदार पटेलोने शासन करी आगळ चोक्स नोंध राखवा, ताकीद आपी घणा प्रयत्न करवामां आवे छे, तेवज अमारी तपासगी बखते पण गामबांन्या पटेलोनां पत्रको तपासी नोंध सुधारवा माटे ताकीद आपवामां आवे छे, उतां नोंधमां

હજી જોઈએ તેવો સુધારો થયેલો જણાતો નથી, તેતું કારણ આ બાબતમાં ગામ તથા મહાલ પંચાયત તેમજ મુધરાઈ અને વિશિષ્ટ પંચાયત જેવી પ્રજાકીર્તિ સંસ્થાની જોઈએ તેવી મદદ કે દેખેરેખ રહેતી નથી તેમજ તાલુકાના અમલદારોની પળ ચોક્કસ દેખ રેખ રહેતી નથી, અને ઘણા પટેલો અજ્ઞાન અથવા બેદરકાર હોય છે તેથી નોંધ ધામી-વાઝી રહી જાય છે. મુલ્યત્વે કરીને કડો પ્રાંતનો નોંધ બહૂજ ધામીવાઝી જણાય છે. તે બદલ તે પ્રાંતના અને મહાલના અમલદારોનો ચોક્કસ દેખેરેખ રહે તોજ નોંધમાં સુધારો થઈ શકે તેમ છે.

આ નીચેના પત્રકમાં નિવેદનની સાલમાં તથા તેની આગલા પાંચ વર્ષના જન્મના નિવેદનની સાલના તથા તેની પાછલા પાંચ સાલના જન્મના આંકડા દર હજાર વસ્તીએ પ્રમાણ સાથે દર્શાવવામાં આવ્યા છે:—

આંકડાનું પત્રક પ્રમાણ સાથે.

क्र. सं.	प्रांत.	वर्षों में कमपनी संख्या.					दर हजारों प्रमाण.					सने १९११ ना सेन्सस प्रमाण बस्ती.			
		१९१०	१९११	१९१२	१९१३	१९१४	१९१०	१९११	१९१२	१९१३	१९१४				
१	बड़ोदरा बांटे.	११००८	२२८८	३३६९	२९६९	२९०५	२६०९	१९५५	३१४७	३६५०	३२२३	३२५४	२८५१	२४०१	९५८६०
२	बड़ोदरा प्रां.	६१३८००	१६६८३	१८८०२	१७२५६	१६४४९	१५९१६	१६६९८	२००२	३००६	२८०१	२६८८	२५५९	२८०४	५८०५५६
३	डकी प्रांत.	९००५०८	२०३५२	२२३०५	२०९९१	१८५५९	१९८१०	२१३१३	२३५५	३४०६	३३३	३००६	२२००	२५०६	८३२१६२
४	जवानी प्रांत.	३४३३७३	१०५६०	१००४४	९४६१	९७२१	९९३८	९४२४	३१००	२९०६	२७५०	२८५५	२६०१	२८०१	३३५४६०
५	अमोली प्रांत.	१५२५८५	५०९१	५०१४	४८३७	५१९१	५४५८	५४५६	३२५६	३२५६	३१०६	३१०६	३१०६	३१०६	१५२८७१
६	जोखामंडक प्रांत.	२५४०५	७३३	७६९	७०३	७५०	०	०	२८७३	३००१	२७५५	३१००	३०००	३००६	२५३९८
	कुल	२१९३५८८	५६३३५	६०३३३	५६१८२	५३७८५	५३७३०	५४८६६	२६५७	३८८३	३६५७	३५०३	३५००	३५००	२०२९३३०

टीप:-सने १९११ ना सेन्सस रिपोर्ट प्रमाण आबा राजमनी बस्ती २०३२७९८ ते पैकी बड़ोदरा कॅम्पनी बस्ती ३४७८ कारती २०२९३२० सने १९२१ ना सेन्सस रिपोर्ट प्रमाण आबा राजमनी बस्ती १२२६९२२ ते पैकी बड़ोदरा कॅम्पनी बस्ती २०३४ बाद करवाणी आनी छे.

નિવેદનના વર્ષમાં ૧૬૬૮૮ નોંધાયેલી જન્મ સંખ્યામાં ૨૯૭૮૭ પુરુષ અને ૨૬૪૪૮ સ્ત્રીઓ હતી. પુરુષજન્મનું દરહજારે પ્રમાણ ૧૪૦ અને સ્ત્રીજન્મનું પ્રમાણ ૧૨૪ હતું. સ્ત્રી અને પુરુષનું મળી કુલ જન્મપ્રમાણ દર હજાર માણસની વસ્તી ૨૬૪ હતું.

આઠા રાજ્યના જન્મની હકીકતનું અવલોકન કરતાં દરેક સો ૧૦૦ સ્ત્રી ૧૧૨.૬ પુરુષ જન્મ નોંધાયા હતા. જૂદા જૂદા પ્રાંતોમાં તેનું પ્રમાણ નીચે પ્રમાણે છે:-

૧. વહોદરા શહેર	૧૧૩.૬
૨. વહોદરા પ્રાંત.	૧૧૧.૮
૩. કાઠી પ્રાંત.	૧૧૬.૭
૪. નવસારી પ્રાંત.	૧૦૪.૪
૫. અમરેલી પ્રાંત.	૧૧૩.૭
૬. ઓલામંડલ પ્રાંત.	૧૨૦.૪
કુલ આઠારાજ્યનું	૧૧૨.૬

ઉપરના આંકડા ઉપરથી જણાય છે કે સ્ત્રીઓ કરતાં પુરુષજન્મનું પ્રમાણ ઓલામંડલમાં સૌથી વધારે હતું અને નવસારી પ્રાંતમાં સૌથી ઓછું હતું.

આઠા રાજ્યમાં સૌથી વધારે જન્મની સંખ્યા (૬૯૪૬) સપ્ટેમ્બર ૧૯૨૪ માસમાં હતી અને સૌથી ઓછા જન્મની સંખ્યા (૩૪૨૬) ફેબ્રુવારી અને ૧૯૨૬ માસમાં હતી.

ક્રમ	પ્રાંતના નામ.	વધારેમાં વધારે જન્મની સંખ્યા.	જે માસમાં વધારે જન્મ થયાં તે માસનું નામ.	ઓછામાં ઓછા જન્મની સંખ્યા	જે માસમાં ઓછા જન્મ થયાં તે માસનું નામ.
૧	૨	૩	૪	૫	૬
૧.	વહોદરા શહેર	૨૯૩	ઓગસ્ટ સને ૧૯૨૪	૧૬૩	માર્ચે એપ્રિલ સને ૧૯૨૫
૨.	વહોદરા પ્રાંત	૧૮૫૫	સપ્ટેમ્બર ૧૯૨૪	૧૦૫૩	ફેબ્રુવારી ૧૯૨૫

૩.	કઢી પ્રાંત	૨૨૨૬	„	૧૨૦૧	„
૪.	નવસારી પ્રાંત	૬૬૭	„	૬૦૬	„
૫.	અમરેલી પ્રાંત.	૪૮૬	ઑગસ્ટ ૧૯૨૪	૩૨૬	„
૭.	ઓલામંઢક પ્રાંત	૧૦૧	સપ્ટેમ્બર ૧૯૨૪	૩૬	„
	આલા રાજ્યમાં	૫૬૪૫	સપ્ટેમ્બર ૧૯૨૪	૩૪૨૫	ફેબ્રુવારી ૧૯૨૫

મૃત્યુ.

નિવેદનના વર્ષમાં આલા રાજ્યમાં એકંદર મૃત્યુ સંખ્યા ૪૪૪૨૮ હતી. જે ગઈ સાલ ૪૨૪૦૪ હતી. દરહજાર વસ્તીએ મૃત્યુ પ્રમાણ ૨૦.૯ આવે છે ગઈ સાલ ૧૯.૯ હતું આલા રાજ્યમાં ગયા દસ વર્ષનું સરેરાસ મૃત્યુ પ્રમાણ ૨૮.૨ આવે છે. રાજ્યના એકંદર ૪૨ તાલુકા અને પેટા મહાલોમાંથી વડોદરા શહેર અને વેટ પેટા-મહાલમાં મૃત્યુનું પ્રમાણ દસ વર્ષની સરેરાસ કરતાં વધારે હતું અને બાકીના મહાલોમાં મૃત્યુપ્રમાણ સરેરાસ કરતાં ઓછું હતું. મૃત્યુની નોંધ ણ વધુ કાઢ્ઢીપૂર્વેક ઘવાની જરૂર છે.

આ નીચેના પત્રકમાં નિવેદનની સાલમાં તથા તેની આગલા પાંચ વર્ષમાં કેટલાં મૃત્યુ ઘયાં તેના દરહજાર વસ્તીએ પ્રમાણ સાથે આંકડા દર્શાવવામાં આવ્યા છે:—

આ વર્ષના તથા પાછલ્ય પાંચ વર્ષના મૃત્યુના આંકડાનું પત્રક પ્રમાણ સાથે.

बडोदरा रायचना चारे प्रांतना तथा बडोदरा शहरमां सने १९२४-२५ सालमां तथा तेनी पाळ्ळनी पांच सालना भरगनी हकीकततुं पत्रक प्रमाण साथे.

क्र. सं.	वर्षां	वर्षां बरेली मयुनी संख्या.										हर हजार वस्ती उपर मयुतुं प्रमाण.					सने १९११ नी सेक्स प्र-माणे वस्ती.
		१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	
१	बडोदरा शहर.	११७०८	२१५९	३०३३	३२११	३०४१	२७२९	३०३६	३२२	३३२	३३०	३४१	३३१	३१५	३१५	३१५	९५८७८
२	बडोदरा प्रांत.	६१२८००	१३४१६	१२८९८	१५१३२	११३२३	१३२१६	१६९३७	२१२	२१०	२१०	२४६	१८४	२१५	२८८	५८७५५५	
३	कडी प्रांत.	६००५७८	१७६५२	१५४६७	१७०२८	१४२३९	१५४४८	१९९८७	१९६	१७७	१८९	१५८	१५८	२४०	२४०	८३२१६२	
४	नवसारी प्रांत.	३४०३७२	७३५६	६८३३	८४८७	४८३८	६२०२	८४४१	२१३	२००	२४५	१४२	१८२	२६१	३४५४६७		
५	अमरली प्रांत.	१५२५८५	२६१३	३६६८	४०३३	३६५०	४०३३	४०३३	१७१	२४२	२६४	२५८	२५८	२५९	१५३८७१		
६	जोखामंडव प्रांत.	२५४७५	५३२	४७५	६१२	५१२	४४००	५६९७	२०८	१८६	२४०	२००	२४०	३१०	२५३९८		
७	११११५८	४४४२८	४२४०४	४८५०६	३७८८३	४१९९५	५४०३८	२०९	१९५	२२८	१७८	१९५	२६६	२०२९३२०			

टीप:-सने १९११ ना सेक्स रिपोर्ट प्रमाण आखा राज्यनी वस्ती २०३२७९८ पैकी २४७८ कैपनी बडोदरानी वस्ती बाद करतो २०२९३२० सने १९२१ ना सेक्स रिपोर्ट प्रमाणे आखा राज्यनी वस्ती २१२६१२२ ते पैकी बडोदरा कैपनी वस्ती २९३४ बाद करवामां आनी छे.

उपरना आंकड उपरयी जणाशे के मृत्युनुं प्रमाण सौथी ववारे ३२-२ वडो-
दरा शहेरमां हतुं पछी अनुक्रमे २१-८ वडोदरा
मृत्युनुं प्रमाण सौथी बधारे २१-३, नवसारी प्रांतमां २०-८, ओखामंडळ
क्यां हतुं अने ओछु क्यां हतुं प्रातमां ३९-६, कडी प्रान्तमा अने १७-१ अमरेळी
प्रान्तमां हतुं. वडोदरा शहेरनां मृत्युनी नोध घणे अंशे चोकस घती होवाथी प्रमाण
बधारे जणाय छे. बीजा प्रान्तोमां चोकस नोध घती नहीं होवाथी प्रमाणमां फेरफार
मालुम पडे छे.

गामडाओतुं मृत्यु प्रमाण ९-७ हतुं अने कस्वाओतुं मृत्यु प्रमाण २९-९ हतुं.
एकंदर मृत्युमांथी २३७९९ पुरुष अने २०६३३
गामडाओतुं अने कस्वाओतुं स्त्रीओःहती. दर हजार पुरुष मृत्युनुं प्रमाण २१-६
मृत्यु प्रमाण. अने स्त्री मृत्युनुं प्रमाण २०-१ हतुं.

आखा राज्यमां स्त्री मृत्युना दर सेंकडे ११९-३ पुरुष मृत्युनुं प्रमाण हतुं.
निचेना पत्रकमां जुदा जुदा प्रान्तोमां पुरुष मृत्युनुं
स्त्री मृत्युना प्रमाण करतां प्रमाण स्त्रीना मृत्यु साथे सरखावतां केटळ हतुं ते
पुरुष मृत्युनुं प्रमाण बधारे होय छे. बताववामां आव्युं छे.

१	वडोदरा शहेर	१०७-४
२	वडोदरा प्रान्त	११३-१
३	कडी प्रान्त	११९-७
४	नवसारी प्रान्त	१०९-५
५	अमरेळी-प्रान्त	१३५-०
६	ओखामंडळ प्रान्त	१११-१
	आखा राज्यमां	११५-३

उपर प्रमाणे जुदा जुदा प्रान्तोमां तफावत आवे छे. एटळ तो नकांज छे के हमेशां
स्त्री मृत्युनुं प्रमाण विशेष प्रमाण करतां पुरुष मृत्युनुं
स्त्री मृत्यु करतां पुरुष मृत्युनुं प्रमाण विशेष होय छे. तेनुं कारण पुरुषोने स्त्रीओ
प्रमाण बधारे होय छे. प्रमाण विशेष होय छे. तेनुं कारण पुरुषोने स्त्रीओ
करतां कुटुंब पोषणार्थ तडका टाटमां घणी सकत हाड
मारी विगरे हरकतो सोसवी पडे छे.

આલા રાજ્યમાં વધારેમાં વધારે મૃત્યુ સંખ્યા (૪૮૧૦) માર્ચ ૧૯૨૫ માસમાં હતી, અને ઓછામાં ઓછી મૃત્યુ સંખ્યા (૩૦૯૨) જુન સને ૧૯૨૬ માસમાં નોંધવામાં આવી હતી.

વધારેમાં વધારે તથા ઓછામાં ઓછી મૃત્યુ સંખ્યા કયા માસમાં હતી.

નીચેના પત્રકમાં આલા રાજ્યના ચારે પ્રાંતમાં વધારેમાં વધારે અને ઓછામાં ઓછી મરણની સંખ્યા કયા કયા માસમાં નોંધવામાં આવી હતી તે બતાવવામાં આવે છે:—

અનુક્રમ નંબર.	પ્રાંતનું નામ.	વધારેમાં વધારે મરણની સંખ્યા.	જે માસમાં વધારેમાં વધારે મરણ થયું તે માસનું નામ.	ઓછામાં ઓછા મરણની સંખ્યા.	જે માસમાં ઓછામાં ઓછા મરણ થયા હોય તે માસનું નામ.
૧	૨	૩	૪	૫	૬
૧	વડોદરા શહેર	૩૧૨	ઑગસ્ટ ૧૯૨૪	૧૫૧	જુન ૧૯૨૫
૨	વડોદરા પ્રાંત	૧૩૬૩	સપ્ટેમ્બર ૧૯૨૪	૮૯૪	જુન ૧૯૨૫
૩	કઢી પ્રાંત	૨૦૭૯	માર્ચ ૧૯૨૫	૧૧૨૯	જુન ૧૯૨૫
૪	નવસારી પ્રાંત	૮૪૯	માર્ચ ૧૯૨૫	૪૪૨	જુન ૧૯૨૫
૫	અમરેલી પ્રાંત	૨૬૫	સપ્ટેમ્બર ૧૯૨૪	૧૭૯	એપ્રિલ ૧૯૨૫
૬	ઓલામંડલ પ્રાંત	૭૭	સપ્ટેમ્બર ૧૯૨૪	૩૩	જાનેવારી ૧૯૨૫
	આલા રાજમાં	૪૮૫૦	માર્ચ ૧૯૨૫	૩૦૯૨	જુન ૧૯૨૫

ઉમ્મરવારી પ્રમાણે મૃત્યુની હકીકત.

નીચેના પત્રકમાં વડોદરા રાજ્યમાં પ્રાંતવારે એક વર્ષ અને પાંચ વર્ષની અંદરના છોકરાંની મૃત્યુસંખ્યા ઉપર દર સેકન્ડે પ્રમાણ સાથે દર્શાવવામાં આવે છે.

એકથી પાંચ વર્ષની અંદરના છોકરાંના મરણો.

हजार वस्तीए प्रमाण २८-३ हतुं. गया दस वर्षनुं जन्म प्रमाण सरैरास २७-९ आवे छे. राय्यना एकंदर ४२ तालुका अने पेटामहाल पैकी बडोदर महाल पादरा करजण, शिनोर, संखेडा, नवसारी, गणदेवी, पलसाणा, महुवा, न्यारा, कामरेज, मांगरोळ, अमरेली, दामनगर, घारी, खाभा, कोडिनार, रतनपुर, भोंमकड़ा, ओखामंडळ अने बेट ए महालोमा जन्मनुं प्रमाण दस वर्षनी सरैरास करतां वधारे हतुं ए शिवायना बाकीना महालोमां जन्म प्रमाण सरैरास करतां ओखुं हतुं.

नीचेना पत्रकमां वधारे जन्मप्रमाण कया कया प्रातिमां अने ओखुं जन्मप्रमाण कया प्रातिमां हतुं तेनी अनुक्रमे गई सालना आंकडा साथे सरखामणी करवामां आवी छे.

वधारे जन्म प्रमाण कयां हतुं अने ओखुं कयां हतुं.

अनुक्रम नंबर.	प्रातिनां नाम.	सने १९२४-२५ सालमां दर हजार जन्मप्रमाण.	सने १९२३-२४ सालमां दर हजार जन्मप्रमाण.
१	२	३	४
१	अमरेली प्रांत.	३२-९	३२-९
२	बडोदरा साहेर.	३१-४	३६-७
३	नवसारी प्रांत.	३१-०	२९-५
४	ओखामंडळ प्रांत.	२८-७	३०-१
५	बडोदरा प्रांत.	२७-२	३०-६
६	कडी प्रांत.	२२-५	२४-६

ए उपरथी निवेदनना वर्षमां आगळना वर्ष करतां कांईक विशेष फेरदार घयेओ जणातो नथी. खातामांथी जन्मनी नोंध सुधारवा माटे जन्मनी नोंधमां सुधारो वधा शितञ्ज टकिलां छोकरीनी नोंध उपरथी जन्मनी नोंधनी सरखामणी कराने बोध्या बगर रही गयेला छोकरी शोधो कादी कसुरदार पटेलोने शासन करी आगळ चोक्स नोंध राखवा ताकीद आपी घणा प्रयत्न करवामां आवे छे, तेवज अमारी तपासगी बखते पण गामबांन पटेलोनां पत्रको तपासी नोंध सुधारवा माटे ताकीद आपवामां आवे छे, उतां नोंधमां

अनुक्रम नंबर.	प्रांतनुं नाम.	एक वर्षनी अंदरना मरण.		एक वर्षनी उपर अने पांच वर्षनी अंदरना छोकरीनां थयेलां मरण.		कुल एकंदर उमरवारीनां मरण.
		संख्या.	दर सेंकडे प्रमाण कुल मृत्यु उपर.	संख्या.	दर सेंकडे प्रमाण कुल मृत्यु उपर.	
१	२	३	४	५	६	७
१	बडोदरा शहर.	८२०	२७.७	४३६	१४.७	२९५९
२	बडोदरा प्रांत.	३०८५	२२.९	३०१९	२२.४	१३४१६
३	कडी प्रांत.	३४१४	१९.३	४०१४	२२.७	१७६५२
४	नवसारी प्रांत.	१५७४	२१.६	१४७४	१३.९	७२५६
५	अमरेली प्रांत.	७०३	२६.९	४६९	१७.९	२६१३
६	ओखामंडळ प्रांत.	१३३	२५.०	१२६	२३.६	५३२
	कुल.	९७२७	२१.८	९५३८	२१.४	४४४२८

आ नीचेना पत्रकमां दरेक प्रांतनो कुल जन्म संख्यामांथी एक वर्षनी अंदरनां तेमज पांच वर्षनी अंदरनां केडलां बाळको मरी गयां जन्म संख्या उपर दरसेकडे ते दर सेंकडे प्रमाण साधे दशांविनां आवे छे. बाळकोडे मृत्यु प्रमाण.

अनुक्रम नंबर.	प्रांतनुं नाम.	एक वर्षनी अंदरनां छोकरीनां मरणो.		अन्य वर्षथी पांच वर्षनी अंदरनां मरणो.		कुल जन्मनी संख्या.	पांच वर्षथी जन्मनी सरासरी उपर दर सें. प्रमाण.
		संख्या.	जन्मनी संख्या उपर दर सेंकडे प्रमाण.	संख्या.	पांच वर्षनी जन्मनी सरासरी उपर दर सें. प्रमाण.		
१	२	३	४	५	६	७	८
१	बडोदरा शहर.	८२०	२८.३	१२५६	४२.४	२८८८	२९६०
२	बडोदरा प्रांत.	३०८५	१८.४	६१०४	३५.८	१६६८२	१७०१९

अनुक्रम नंबर.	प्रांतनुं नाम.	एक वर्षनी अंदरना मरण.		एक वर्षनी उपर अने पांच वर्षनी अंदरना छोकरांना थयेलां मरण.		कुल एकंदर उमरवारीनां मरण.
		संख्या.	दर सेंकडे प्रमाण कुल मृत्यु उपर.	संख्या.	दर सेंकडे प्रमाण कुल मृत्यु उपर.	
१	२	३	४	५	६	७
१	बडोदरा शहर.	८२०	२७.७	४३६	१४.७	२९५९
२	बडोदरा प्रांत.	३०८५	२२.९	३०१९	२२.४	१३४१६
३	कडी प्रांत.	३४१४	१९.३	४०१४	२२.७	१७६५२
४	नवसारी प्रांत.	१५७४	२१.६	१४७४	१३.९	७२५६
५	अमरेली प्रांत.	७०३	२६.९	४६९	१७.९	२६१३
६	ओखामंडळ प्रांत.	१३३	२५.०	१२६	२३.६	५३२
	कुल.	९७२७	२१.८	९५३८	२१.४	४४४२८

आ नीचेना पत्रकमां दरेक प्रांतनो कुल जन्म संख्यामांथी एक वर्षनी अंदरनां तेमज पांच वर्षनी अंदरनां केडलां बाळको मरी गयां जन्म संख्या उपर दरसेकडे ते दर सेंकडे प्रमाण साधे दशांविवासां आवे छे. बाळकोडे मृत्यु प्रमाण.

अनुक्रम नंबर.	प्रांतनुं नाम.	एक वर्षनी अंदरनां छोकरांना मरणो.		अन्य वर्षधी पांच वर्षनी अंदरनां मरणो.		कुल जन्मनी संख्या.	पांच वर्षधी जन्मनी सरासरी उपर दर सें. प्रमाण.
		संख्या.	जन्मनी संख्या उपर दर सेंकडे प्रमाण.	संख्या.	पांच वर्षनी जन्मनी सरासरी उपर दर सें. प्रमाण.		
१	२	३	४	५	६	७	८
१	बडोदरा शहर.	८२०	२८.३	१२५६	४२.४	२८८८	२९६०
२	बडोदरा प्रांत.	३०८५	१८.४	६१०४	३५.८	१६६८२	१७०१९

३	कडी प्रांत.	३४१४	१६०	७४२८	३६०२	२०३५२	२०३८४
४	नवसारी प्रांत.	१५७४	१७०८	३०४८	३००६	१०५६०	९९४४
५	अमरेली प्रांत.	७०३	१४००	११७२	२३०३	५०२१	५०१७
६	ओखामंडळ प्रांत.	१३३	१८१	२५९	३४०६	७३२	७४८
	कुल.	९७२९	१७०३	१९२६७	३४०३	५६२३५	५६०११

ए उपरथी जणांशे के पांच वर्षनी अंदरना बाळकोनी मृत्यु संख्या १९२६७ हती, जेनुं एकंदर मृत्युना दर सेंकडे प्रमाण बालकोमां मृत्यु प्रमाण वधारे ४३.३ आवे छे, ने गई साळ ४.१६ हतुं. पांच तथा तेम थवाना कारणो. वर्षना एकंदर जन्मनी सरासरी उपर विचार करता पांच वर्षना बाळकोनुं मृत्यु प्रमाण दर हजारे ३४३. आवे छे, एटले लगभग ३ करता पण वधु मृत्यु संख्या पांच वर्षनी अंदरना बाळकोनी हती. बाळ लग्न, बच्चांओने अयोग्य खोराक, भेळसेळ वाळु दूध, अज्ञान दायण, बाळकोनी मावजतनुं अज्ञान तथा अस्वच्छता ए मुख्य कारणो छे. ए स्थिति सुधारवाने प्रजा तरफथी मदद मळवानी तथा संघटित प्रयत्न थवानो खास जरूर छे. वडोदरा शहरेमां श्री महाराणी चिमणाबाई छी अने बाळ संरक्षण संस्था स्थापन करवामां आवो छे. ते द्वारे योग्य ज्ञाननो प्रचार करवानी आशा छे.

आखा राज्यमां वधारेमां वधारे मृत्यु संख्या १९२९७ सून्यथी पांच वर्षनी अंदरना बाळकोनी हती, अने ओछामां ओछी ११९९ उमरवारी प्रमाणे वधारेमां वधारे तथा ओछामां, ओछी मृत्यु संख्या. पंदरथी बीस वर्षना माणसोनी हती.

ज्ञातिवार मृत्यु.

आखा राज्यना एकंदर ४४४२८ मृत्युमांथी ४०२९७ हिंदु. ३३४२ मुसलमान, ४९७ जैन, १६ ख्रिस्ती, १२० पारथी मृत्यु प्रमाण हिंदुमां सोथी अने २३६ इतर ज्ञातिना मृत्यु थयां हती. दोक जातनी वस्तीना भांकडा उपरे दर हजारे हिंदु लोकोनुं मृत्यु प्रमाण २३.१, मुसलमानोनुं २०.६, जैननुं १०.९, ख्रिस्तीओनुं २.३, पारथीओनुं १६.२, अने इतर ज्ञातिओनुं १.४ हतुं.

२७. नीचेना पत्रकमां ज्ञातिवार वस्ती अने तेमां मृत्तु थयां तेनी संख्या तथा
दर हजार वस्तीए तेनु प्रमाण दर्शाववामां आब्युं छेः--

प्रांतवार तथा ज्ञातिवार वस्ती
प्रमाणे थयेलां मृत्तु पत्रक प्र-
माण साये.

बडोदरा राज्यमा सने १९२१ नी सेन्सस बखते जातवार वस्ती केटखो हती ते संबन्धी पत्रक.

क्र. नंबर	प्रान्तनुं नाम.	सने १९२१ सालमां थयेली गणत्री प्रमाणे लोकेवस्ती						
		खिंडु.	सुपरलमान	कैत	खिस्ति.	पास्ती.	वीथी जात.	कुल.
१	२	३	४	५	६	७	८	९
१	बडोदरा शहर.	७३५१९	१४६३७	२२९२	५५६	४४४	३३०	११७७८
२	बडोदरा प्रान्त	५३२३१३	५०९४२	८३९८	५६६०	१२४	१५३६३	६१२८००
३	कडी प्रान्त	८१८५५०	५४७६०	२६६७१	१८७	५६	३५४	९००५७८
४	नवसारी प्रान्त.	१६०९६३	३२८१९	२४२२	४९८	६७६१	१४७६०९	३४०३७२
५	अभरली प्रान्त	१३५९०३	१३१८९	३३४४	१	१५	१३३	१५९५८५
६	ओखामंडळ.	१९९३१	५४२४	९२	२७	०	१	२५४७५
	कुल	१७४०४७९	१६१७०१	४३२१९	६९२९	७४००	१६३७९०	२१२३५६८

बहोदरा राध्यामा जातवार थपेला मरण अने ठेनु दर हजार प्रमाण केरुं छे ते बाबतनु पत्रक सने १९२४-२५.

अ. नं. १	प्रान्तु नाम.	शत्रु संख्या.							दस हजारे लोकसंख्या उपरयी प्रमाण.						
		हिन्दु.	मुसलमान	जैन.	ख्रिस्ति.	पारसी.	बीजी जात.	कुल.	हिन्दु.	मुसलमान	जैन.	ख्रिस्ति.	पारसी.	बीजी जात.	कुल.
१	बहोदरा शहर.	२५५०	३६३	३६	०	८	२	२९५६	३४-६	२४-८	१५-७	०	१८-०	५-०	३२-२
२	बहोदरा प्रान्त.	१३२३८	९८०	७०	१५	०	११३	१३४१६	२२-९	१९-२	८-३	२-६	०	७-३	२१-८
३	कडी प्रान्त.	१६१६२	११३५	३३०	१	१	२३	१७६५२	१९-७	२०-७	१२-३	५-३	१७-८	६४-९	१९-६
४	मकसाठी प्रान्त.	२५२५	५१३	१५	०	१११	९२	७२५६	४०-७	२२-४	६-१	०	१६-४	०-६	२१-३
५	अमंगली प्रान्त.	३९०	२११	६	०	०	६	२६१३	१७-५	१५-९	१-७	०	०	४५-६	१७-१
६	ओला मंडळ.	३९२	१४८	०	०	०	०	५३२	१९-६	२५-८	०	०	०	०	२०-८
	कुल	४०२५७	३३४२	४५७	१६	१२०	२३६	४४४२८	२३-१	२०-६	१०-५	२-३	१६-२	१-४	२०-९

१४

મૃત્યુનો રોગવારો.

૨૮. આજ્ઞા રાજ્યના કુલ ૪૪૪૨૮ મૃત્યુમાંથી ૩૧૬૩૪ મૃત્યુ તાવના હતા.

મૃત્યુની રોગવારી

૩ મરકીના (પ્લેગ), ૧૩ કૉલેરાના (કોગ્લીયું).

૧૦૧૭ મોટા બઝીયા, ૭૨૭ અતિસાર. હામણ,

મરહો વિગેરેના ૧૩૯૦ ધાંસીના, ૨૬૨ નવજ્વરના (ત્યુમોનીયા), ૯૧૦ ક્ષયના, ૪૯૧ અકસ્માત, અપઘાત વિગેરેથી અને ૩૯૩૧ અન્ય રોગોથી મૃત્યુ થયાં હતાં. એકંદર મૃત્યુમાં તાવનું દર સેંકડે પ્રમાણ ૮૦-૨ પ્લેગ (મરકી) નું ૦-૦૦૬ કોગ્લીયાનું ૦-૦૨ મોટા બઝીયાનું ૨-૩, અતિસાર, હામણ, મરહા વિગેરેનું ૧-૮, ધાંસીનું ૩-૧, નવજ્વરનું ૦-૧, ક્ષયનું ૨-૦, અકસ્માત અપઘાત વિગેરેનું ૧-૧, અને અન્ય રોગોનું ૮-૮ મૃત્યુ પ્રમાણ હતું.

ભાગ ત્રીજો.

મુખ્ય રોગોનો ઇતિહાસ.

તાવ.

૨૯. આગળા નિવેદનમાં જણાવ્યું છે તેજ પ્રમાણે તાવ મૃત્યુનું મુખ્ય કારણ ગળ

તાવના સદરે મૃત્યુ સંખ્યા વધારે નોંધાતી હોવાથી પટલોને તે બદલ કેલ્વળી આપવાની જરૂર.

વામાં આવે છે, કારણ તેનું એકંદર મૃત્યુની સંખ્યા અપર દર સેંકડે પ્રમાણ ૮૦-૨ આવે છે. અન્ય રોગોથી થયેલાં કેટલાંક મૃત્યુ જેવા કે ટાઇફોઇડ, ક્ષય, નવજ્વર

ઇન્ફલ્યુએન્સા વિગેરેથી થયેલાં મૃત્યુ તાવના રોગમાં

ખોટી રીતે નોંધાય છે. કારણ સદર રોગોમાં પણ તાવનો મુખ્ય અંશ હોય છેજ, પરંતુ તાવમાં થતાં મરણો પૈકી મુખ્ય ભાગે ટાઇફોઇડ તાવ (મલેરિયા) થી નિવાન ૪૦ ટકા અપરાંત મરણ થાય છે. જ્યાંમુઘી ગાંમઢાના મુઘી પટેલ અમળ જેવા રહેશે ત્યાંમુઘી જન્મ મરણનો નોંધનું કામ એજ સ્થિતિમાં ઘાટુ રહેશે. આપણા દેશની ઢાલની નબઢી આર્થિક સ્થિતિના ઢીધે સદર બાબત ઢી રીતે મુઘારો કરવો તે સૂઘવનાનું મુઘ્કેઢી મરેઢું છે. પરંતુ જન્મમરણનો નોંધ કરનાર માળસો કેલ્ઘાપેઢા ઢોંઘાં જોઈએ. કુલ ૪૪૪૨૮ મૃત્યુમાંથી ૩૧૬૩૪ મૃત્યુ ઘક્ત તાવથી નોંધાયાં હતાં.

૩૦. નોંઘેના પત્રકમાં બઢોંઘારા રાજ્યના ઘારે પ્રાંતોમાં તાવથી માસવાર કેટઢાં

તાવથી થયેલું મૃત્યુની માસવાર સંખ્યા તથા પ્રમાણ.

મૃત્યુ થયાં તેની સંખ્યા દર હજારે પ્રમાણ સાથે ઢર્શાવવામાં આવો છે:-

वडोदरा राज्यमा तावयी प्रांतवार दरक मासमा केटलां मरण थयां

अनुक्रम नंबर.	प्रांतये नाम.	प्रांतचा ताछका.	प्रातचा कुल गामोनी संख्या.	ते गामो पेकी तावयी केटलां गामोमा मृत्यु थयां.	१९२४	१९२५	१९२६	१९२७	१९२८	१९२९	१९३०	१९३१	१९३२
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४
१	वडोदरा शहेर.	१	१	१	१२२	१२४	११४	१२१	११५	८४	८९		
२	„ प्रांत.	१२	८३७	६८७	१००८	१०८४	१००८	९८२	७४८	७३९	७०७		
३	कडी प्रांत.	१२	१०५०	८११	११८१	१४२१	१४११	१४४०	१२३१	१०४६	११०९		
४	नवसारी „	८	७७२	५१६	४९३	४३१	४६६	६०३	५५१	५५८	४६५		
५	अमरेली „	७	२४६	२०८	१७८	२००	२०५	१६१	१८९	१३५	१६२		
६	ओखामंडल.	२	४३	३५	२८	५६	३२	३०	२६	२८	२४		
	कुल.	४२	२९४९	२२५८	३०२०	३३१६	३२३६	३३३७	२८६०	२५९०	२५५६		

ते बाबतनुं पत्रक. सने १९२४-२९ साल बाबत.

वर्ष	एप्रिल	मे	जून	जुलै	पुरुष.	की.	कुल.	दर हजार प्रमाणे.	क्षेत्रे.
१३	१४	१५	१६	१७	१८	१९	२०	२१	२२
१३६	१२५	१०३	५०	७८	६७२	५९९	१२७१	१३.८	
१०९०	९२४	८१४	६९९	७८७	५५२०	५०७०	१०५९०	१७.२	
१७८६	१६५८	१२७८	९८६	१८८०	८४३०	७११७	१५५४७	१७.२	
६८९	५३०	४१५	३४७	३५१	३०५१	२८५०	५९०१	१७.३	
१५५	१२८	१५०	१४८	१४०	१०७३	८७८	१९५१	१२.७	
३६	३४	२६	३९	२५	१९८	१७६	३७४	१४.६	
३८८२	३३९९	२७८८	२२६९	२३८१	१८९४४	१६६९०	३५६३४	१६.७	

३१. जो के आपणे उपर जणाव्या प्रमाणे नोधनी भूलने लीधे थोडीक संख्या

टाडीया तावथी थतु वधारे मृत्युप्रमाण तथा तेने लीधे थतु आर्थिक नुकसान.

वाद करीए तो पण हमेशां सेंकडे ४० टका करतां पण वधारे मृत्यु संख्या जे घटाडी शकाय एत्री गणवामां आवे छे ते आपणा देशने खरेखरूं आर्थिक नुकसान छे आपणा राज्यमां अनागोग्यथी थतां नुकसामने मात्र आ-

र्थिक दृष्टिथी जोतां मरनारने लीधे रखडी पडेला कुटुंबने नुकसान टाडीया तावथी मांदगीमां थतु नुकसान, काम करवाना दिवसोमां गेरहाजरी अने तेथी खेडूत कारीगर-वर्ग तेमज नोकरीथात माणसोने थतु नुकसान विगरे उमेरवामां आवे तो एकंदर नुक-सान करोडो रुपियातुं थाय छे.

३२. दरेक प्रांतना एकंदर मृत्युनी संख्या उपर तावना मृत्युनुं दर सेंकडे प्रमाण

प्रांतवार तावथी यथेला मृत्युनु प्रमाण.

वडोदरा शहेरमां ४२-९, वडोदरा प्रांतमां ४७-९, कडी प्रांतमां ८७-४, नवसारी प्रांतमां ८१-३, अमरेली प्रांतमां ७४-६, अने ओखामंडळमां ७०-६ हतुं.

ओखा राज्यमां तावना मृत्युनुं दर हजार वस्तीए प्रमाण १६-७ हतुं. वडोदरा

तावना मृत्युनुं प्रमाण.

शहेरमां १३-८, वडोदरा प्रांतमां १७-२ कडो प्रांतमां १७-२, नवसारी प्रांतमां १७-३, अमरेली प्रांतमां

१२-७, अने ओखामंडळमां १४-६ हतुं.

३४. नीचेना पत्रकमां राज्यना दरेक प्रांतमां वधारेमां वधारे अने ओछामां ओछा

तावना मृत्यु वधारेमां वधारे अने ओछामां ओछा कया मासमां थयां तेनी प्रांतवार हकीकत.

तावना मृत्यु कया कया मासमां थयां ते हकीकत बता-ववामां आवे छे:—

क्र.सं.	प्रांतना नाम.	वधारेमां व-धारे तावना मरणनी संख्या.	वधारेमां वधारे ता-वना मृत्यु कयां मा-समां थयां ते.	ओछामां ओछा तावना मृत्यु कया संख्या.	ओछामां ओछा तावना मृत्यु कया मासमां थयां ते.
१	२	३	४	५	६
१	वडोदरा शहेर.	१३६	मार्च १९२५	५०	जून १९२५
२	वडोदरा प्रांत.	१०९०	सदर.	६१९	सदर.
३	कडो प्रांत.	१७८६	सदर.	९८६	सदर.

૪	નવસારી પ્રાંત.	૬૮૧	સદર.	૧૪૭	સદર.
૫	અમરેલી પ્રાંત.	૨૦૫	ઑક્ટોબર ૧૯૨૪	૧૨૮	એપ્રિલ ૧૯૨૫
૬	ઓલામંડલ પ્રાંત.	૫૬	સપ્ટેમ્બર ૧૯૨૪	૨૪	ફેબ્રુવારી ૧૯૨૫
		૩૮૮૨	માર્ચ ૧૯૨૫	૨૨૬૯	જૂન ૧૯૨૫

કોગઝીયું (કૌલેરા.)

૩૧. નિષેદનની સાથે આજ્ઞા રાજ્યમાં (કૌલેરા) કોગઝીયાના કુલ મૃત્યુ ૧૩ થયાં હતાં, જ્યારે ગઈ સાલમાં ૧૦ થયાં હતાં. વડોદરા કોગઝીયાના ચતુર્થી સંખ્યા. શહેરમાં ૧, વડોદરા પ્રાંતમાં ૭, કઢી પ્રાંતમાં ૪, નવસારી પ્રાંતમાં ૧, અમરેલી અને ઓલામંડલમાં ૦ મૃત્યુ કોગઝીયાના રોગથી થયાં હતાં. સદરહુ રોગ રાજ્યના કુલ ૨૯૪૯ ગામોમાંથી ૭ ગામોમાં લાગૂ થયો હતો; આરે ગઈ સાલ ૨૩ ગામોમાં લાગૂ થયો હતો.

૩૬. નોંધેના પત્રકમાં રાજ્યના દરેક પ્રાંતમાં કોગઝીયાથી કેટલાં મરણ થયાં તે હકીકત દર્શાવવામાં આવે છે:—

કોગઝીયાના ચતુર્થી માસનાર
હકીકતનું પત્રક.

बडोदरा राज्यना चारे प्रांतमां देक मासे कॅलेराधी केटलां मरण थयां तेनुं प्रमाण साथे पत्रक सने १९२४-२५ साल बाबत.

अनुक्रम नंबर.	प्रांतनुं नाम.	प्रांतला तातुका.	गासोनी संख्या.	कॅलेराधी मरण थयेल गासोनी संख्या.	ऑगस्ट १९२४.	सप्टेंबर.	ऑक्टोबर.	नोव्हेंबर.	डिसेंबर.	जानेवारी. १९२५.	फेब्रुवारी.	मार्च.	एप्रिल.	मे.	जून.	जुलई.	ऑगस्ट.	सप्टेंबर.	ऑक्टोबर.	नोव्हेंबर.	डिसेंबर.	एकूण.	दर हजार प्रमाण.	टिपण्णी.
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	१७	१८	१९	२०	२१	२२	२३	२४	
१	बडोदरा शहर.	१	१	१	०	०	०	०	०	०	०	०	०	१	०	०	१	०	१				०.०१	
२	बडोदरा प्रांत.	१२	८३७	२	०	०	०	०	०	०	०	०	२	२	१	०	५	२	७				०.१	
३	कडी प्रांत.	१२	१०५०	२	०	१	०	०	०	०	१	२	०	०	०	०	२	१	४				०.०४	
४	नवमारी प्रांत.	८	७७२	१	०	०	०	०	०	०	०	१	०	०	०	०	१	०	१				०.०२	
५	अमरली प्रांत.	०	२४६	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०				०	
६	ओक्तामडक प्रांत.	२	४३	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०				०	
		४२	२९४९	७	०	१	०	०	०	१	५	२	३	१	१	१०	३	३				०.०६		

७२

मोटा बळीया.

३७.. निवेदननां वर्षमां आखा राज्यमां एकंदर मोटा बळीयाणा मृत्यु १०९७
 थयां हतां जे गई सालमां ९६६ थयां हतां ते पैकी
 मोटा बळीयाधी थयेलां मृत्युनी संख्या.
 वडोदरा शहरमां ९, वडोदरा प्रांतमां १४२, कडी प्रांतमां
 ७२९, नवसारी प्रांतमां ७४, अमरेळी प्रांतमां ८३ अने
 ओलांमंडळां २४ मृत्यु मोटा बळीयाधी थयां हतां.

३८. नीचेनां पत्रकमां मोटा बळीयाधी केडलां मृत्यु थतां तेनी प्रांतवार तथा
 मासवार हकीकत आपवामां आवी छे:---

मोटा बळीयाणा मृत्युनी मास-
 वार हकीकतनुं पत्रक.

बहीदारा राजपना चारे प्रांतांमं देरेक मासवार मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने १९२४-२५.

क्र. सं.	प्रांतुं नाम.	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने	एवकर.		मोटा बळीयाधी केटलं मरण थयां तेतुं एवक सने		तर रिमांक.	
									पुसव.	को.	कुल.	एक वर्सनी बाव वर्ष अंदरना.		
१	बहीदारा शहरा	१	१	१	१	१	१	१	१	१	१	१	१	१
२	" प्रांत	१२	२३७	२३	१०	२	३	२११	५	१६	३५	२२	२४	०.२
३	करी प्रांत	१२	१०५	६४	६	४	२३	७३	१०५	१५२	१६१	८८	१४१	०.८
४	नवसारी "	८	७७२	१३	२	२	०	१	१६	१२	२१	१०	११	०.२
५	अमंती "	७	२४६	८	१	०	११	१८	१६	८	११	५	१२	०.५
६	कोल्हापूर प्रांत	४२	२२४६	१४४	२३	१०	५	१०	०	३	५	२	१५	०.५
कुल		४२	२२४६	१४४	२३	१०	५	१०	०	३	५	२	१५	०.५

૩૯. સદર રોગો રાજ્યના એકંદર ૧૪૪ ગામોમાં દેખાવ લીધાં હતાં, જ્યારે ગઈ સાલ ૨૧૯ ગામોમાં લાગૂ થયો હતો. એક વર્ષની અંદરના ૧૯૧ અને ૧૨ વર્ષની અંદરના ૧૮૮ છોકરાં મોટા બઢીયાથી મરણ પામ્યાં હતાં. સદર મૃત્યુનું દર સેંકડે પ્રમાણ ૨-૩ હતું.

ગામોની સંખ્યા તેમજ વયનાં પ્રમાણમાં મોટા બઢીયાથી થયેલા મરણની સંખ્યા.

મરકી (પ્લેગ)

૪૦. નિવેદનના વર્ષમાં આઠા રાજ્યમાં એકંદર ૩ હસમો મરકી (પ્લેગ) થી મરણ પામ્યા હતાં, જ્યારે ગઈ સાલ ૧૪ મૃત્યુ પ્લેગથી થયાં હતાં.

૪૧. નીચેના પત્રકમાં સને ૧૮૯૬-૨૭ સાલથી એટલે પ્લેગ શરૂ થયો ત્યારથી પ્લેગ અને કોલેરાના મૃત્યુની સરખામણી કરવામાં આવેલી છે.

અનુક્રમ નંબર,	વર્ષ.	પ્લેગના મૃત્યુની સંખ્યા.	કોલેરાના મૃત્યુની સંખ્યા.
૧	૨	૩	૪
૧	૧૮૯૬-૯૭	૨૬૨૭	૩૪૧
૨	૧૮૯૭-૯૮	"	૬૫
૩	૧૮૯૮-૯૯	૩૦૮૫	૭
૪	૧૮૯૯-૧૯૦૦	૩૬૫	૨૧૯૮૬
૫	૧૯૦૦-૧૯૦૧	૩૫૦	૩૬૩૧
૬	૧૯૦૧-૧૯૦૨	૩૩૦૮	૭૨
૭	૧૯૦૨-૧૯૦૩	૧૦૧૯૬	૧૪૫
૮	૧૯૦૩-૧૯૦૪	૩૭૯૪૯	૧૫૧
૯	૧૯૦૪-૧૯૦૫	૯૩૬૦	૧૪૧
૧૦	૧૯૦૫-૧૯૦૬	૪૪૯૫	૧૪૫

११	१९०६-१९०७	१४५९८	२९१
१२	१९०७-१९०८	६३८४	८३
१३	१९०८-१९०९	३४४०	४९२
१४	१९०९-१९१०	३०३९	२०८
१५	१९१०-१९११	४२९३	२९२
१६	१९११-१९१२	८६६	१८७
१७	१९१२-१९१३	२००	८०५
१८	१९१३-१९१४	११३१	१४६
१९	१९१४-१९१५	१२२८	४०६
२०	१९१५-१९१६	१७५	२२४३
२१	१९१६-१९१७	८०३	१३१३
२२	१९१७-१९१८	२०९६१	२८१
२३	१९१८-१९१९	१०३१	२३१३
२४	१९१९-१९२०	४२	२००
२५	१९२०-१९२१	१६	६५
२६	१९२१-१९२२	१५	२४
२७	१९२२-१९२३	२५३	३०
२८	१९२३-१९२४	१४	५०
२९	१९२४-१९२५	३	१३
	कुल.	१०७२४८	३६१२६
	सारासरी.	= ३६९८	१२४५

૪૨. પ્લેગની મૃત્યુ સંખ્યાનું કુલ વસ્તી ઉપર દર હજારે પ્રમાણ ૦.૦૦૧ હતું અને એકદર મૃત્યુ સંખ્યા ઉપર દર સેકન્ડે પ્રમાણ ૦.૦૦૬ હતું. ત્યારે ગઈ સાલ અનુક્રમે ૦.૦૦૬ અને ૦.૦૦૩ હતું. ઉપરના પદ્ધતિમાં ૨૯ વર્ષની એટલે પ્લેગ શરૂ થયો ત્યારથી પ્લેગની હકીકત દર્શાવવામાં આવી છે, તે બે મુખ્ય કારણોને ઊંધે અગત્યની છે. પહેલું કારણ સને ૧૮૯૯-૧૯૦૦ તથા ૧૯૦૦-૧૯૦૧ એ બે દુઃકાળના વર્ષમાં પ્લેગની મૃત્યુ સંખ્યા ઓછી હતી અને બીજું એ બે વર્ષમાં કાલેરાના બઢીદાનમાં અનુક્રમે ૨૧૯૮૬ અને ૩૩૬૧ માણસોની આહુતીઓ પડી હતી.

૪૩. નીચેના પત્રકમાં વડોદરા રાજ્યના ચારે પ્રાંતમાં માસવાર પ્લેગથી કેટલાં મરણ થયાં તે હકીકત દર્શાવવામાં આવી છે:—

પ્લેગના મૃત્યુની હકીકતનું
પત્રક.

बडोदरा राज्यना चारे प्रांतमां दरेक मासे ड्रेगथी केटलां मरण थयां तेनुं प्रमाण साधे पत्रक सन १९२४-२५ साल बाबत.

सयुक्त नंबर.	प्रांतुं नाम.	प्रांताना तालुका.	प्रांताना गामोनी कुल संख्या.	ड्रेगथी केटलां गामोनी मरण थयां ते गामोनी संख्या.	ऑगस्ट १९२४	सप्टेंबर.	ऑक्टोबर.	नोव्हेंबर.	डिसेंबर.	जानेवारी.	फेब्रुवारी.	मार्च.	एप्रिल.	मे.	जून.	जुलाई.	एख.	की.	कुल.	दर हजारे प्रमाण.	रिमांक.
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	१७	१८	१९	२०	२१	२२
१	बडोदरा शहर.	१	१	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०
२	,, प्रांत.	१२	८३७	१	०	१	०	०	०	०	०	०	०	०	०	०	१	०	१	०	१
३	कडी प्रांत.	१२	१०५०	१	०	०	०	०	०	०	०	०	०	०	०	१	१	१	१	०	१
४	नवसारी प्रांत.	८	७७२	१	०	०	०	०	०	०	०	०	०	०	१	०	१	१	१	०	१
५	अमरेली प्रांत.	७	२४६	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०
६	ओश्यामंडळ प्रांत.	२	४३	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०	०
	कुल.	४२	२९४९	३	०	१	०	०	०	०	०	०	०	१	०	१	२	३	३	०	३

४४. आखा राज्यमा कुल ३ गामोमा मरकीए देखाव दीघो हतो, ज्यारे गई केटला गामोमा ग्रेग लागु शहेर, अमरेली प्रांत अने ओखामंडळमा विलकुल ग्रेग बयो ते. नहोतो. वडोदरा प्रांत पैकी पेटलाद तालुकामां १, कडी प्रांत पैकी विजापुरमां १, अने नवसारी प्रांत पैकी नवसारी तालुकामां १, मळी कुल ३ मृत्यु ग्रेगथी थया हता. लोको पोतानी मेळे राजीखुचीयी ग्रेगदुषित हवामांथी बहार रहेवा जाय छे अने केटलाक रसी पण मुकावे छे ए खुशी थवा जेवुं छे.

अतिसार, संग्रहणी विगोरे.

४५. सदरङ्ग रोगथी आखा राज्यमा कुल ७३७ मृत्युःथयां हता, जेनुं एकंदर मृत्यु उपर दर सेंकडे प्रमाण १-८ अने कुल वस्ती उपर दर हजारे प्रमाण ०-३ आवे छे. गया वर्षमां सदर रोगथी ७०९ मृत्यु थया हता, जेनुं सेंकडे प्रमाण १-७ अने हजारे वस्तीए प्रमाण ०-३ हतुं. सदर रोगथी थयेला मृत्यु पैकी १४४ वडोदरा शहेरमां, २०१ वडोदरा प्रांतमां, ११९ कडी प्रांतमां १६३ नवसारी प्रांतमां, ८१ अमरेली प्रांतमां अने ३३ ओखामंडळमां मृत्यु थयां हता.

४६. नोथेना पत्रकमां वडोदरा राज्यमां अतिसार, संग्रहणी विगोरेथी केटलां मृत्यु थयां ते हकोकत प्रांतवार तथा मासवार दर्शाववावमां आवी छे.
आखाना बरथोथी थयेलं मृत्युं प्रतवार तथा मासवार पत्रक.

अकस्मान, आपघात, नुकसानथी अथवा जवराईथी मृत्यु थयां तेनी हकीकत.

४७. आ सदरे आखा राज्यमां ४९१ कुल मृत्यु नोथवामां आख्या हता, जेनुं एकंदर मृत्यु उपर दर सेंकडे प्रमाण १-१ हतुं. गई सालमां अकस्मात, आपघात, नुकसानथी विगोरेथी थयेलं मृत्युनी संख्या. कुल मृत्यु ४६१ थयां हतां जेनुं दर सेंकडे प्रमाण १-०८ हतुं. सदर मृत्यु पैकी वडोदरा शहेरमां २८, वडोदरा प्रांतमां १४९, कडी प्रांतमां १६३, नवसारी प्रांतमां ८९, अमरेली प्रांतमां ९८, अने ओखामंडळमां ३९ मृत्यु अकस्मातथी थयां हता.

४८. सदरङ्ग ४९१ मृत्युमांथी १९९ मृत्यु कुवा तलाब विगोरेमां दुबवाथी थयां हता. १६ मृत्यु सेरथी, ११ आपघात, फांसी विगोरेथी, ३८ हथीयारना घाथी, ६ जंगलो जनावरना हुमलाथी, ९६ सर्पदंघथी अने १२९ मृत्यु इतर कारणमांथी थयां हता.

९ आ. र. वा. री.

ફેફસાનાં દરદો, ક્ષય, દમ, કફજ્વર, ત્યુમોનિયા વિગેરેથી મૃત્યુ થયાં તે.

૪૯. આ સદરે આઠા રાજ્યમાં કુલ ૨૧૬૨ મૃત્યુ નોંધાયાં હતાં. જેનું એકંદર મૃત્યુ ઉપર સેંકડે પ્રમાણ ૧.૭ હતું. ગઈ સાલ ૫ સદરે શ્વાસોશ્વાસથી થયેલાં મૃત્યુની સંખ્યા. કુલ ૨૬૬૧ મૃત્યુ નોંધાયાં હતાં જેનું દર સેંકડે પ્રમાણ ૬.૨ હતું. આ રોગના એકંદર મૃત્યુ પૈકી ૧૪૪ વડોદરા શહેરમાં, ૧૦૧૯ વડોદરા પ્રાંતમાં, ૪૨૯ કડી પ્રાંતમાં, ૩૮૯ નવસારી પ્રાંતમાં, ૧૩૬ અનરેલી પ્રાંતમાં અને ૪૬ મૃત્યુ ઓલામંડળમાં થયાં હતાં.

૧૦. ફેફસાના દરદોથી થયેલાં મૃત્યુનું પ્રમાણ ઘણું ઓછું આવે છે. જોતાં તે વિશેષ હોવું જોઈએ તેનું કારણ ઘણાં ઘણાં કફ ક્ષય અને નવજ્વરના મૃત્યુ તાવના સામાન્ય રોગમાં અગર તેથી પણ વિશેષ અનિયમિત પરંતુ અનુકૂળ સદરે બીજા કોઈપણ જાતના દરદોમાં નોંધાવવામાં આવે છે.

૧૧. નીચેના પત્રકમાં ફેફસાનાં દરદોથી કેટલાં મૃત્યુ થયાં તે હકીકત બતાવવામાં આવી છે.

ફેફસાનાં દરદોથી થયેલાં મૃત્યુનું પત્રક.

बहोदरा राख्यता चागे प्रांतमा कति सार भ्रष्टाचारी विगोप्यो दरक मासवार मरण भयो तैनु प्रमाण साथे पत्रक १९२४-२५ साखुनु.

क्र.सं.	नाम	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	१७	१८	१९	२०	२१	२२
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	१७	१८	१९	२०	२१	२२
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	१७	१८	१९	२०	२१	२२
१	बरोदरा संघ.	१	१	१	२०	२३१२	११	६	१३	५	८	११	१३	७	१४	७	१४	८	५६	१४४	१५
२	बरोदरा संघ.	१२	८३७	५०	३८	२२२	१२	९	८	११	१३	१२	१२	६	१६	१२	१२	७७	२०१	०३	
३	कडी प्रांत.	१२	१०५०	३५	२१	२०१२	६	१०	२	९	६	६	६	७	६	१०	७०	४५	११५	०१	
४	मथारी प्रांत.	८	७७२	५३	३३	१५१२	११	८	१२	१२	१५	१२	१५	१२	७	२३	८९	७४	१६३	०४	
५	भरतपुर प्रांत.	७	२४६	१९	८	१२	७	३	६	११	४	७	७	६	६	४	४८	३३	८१	०५	
६	भोजपुर प्रांत.	६	४३	८	५	९	३	०	०	०	०	२	१	०	६	४-१२	२१	३१	३१	१-२	
	कुल.	४३	२९५९	१६६	११५	११८६८	५२	३६	४१	४८	४०	४८	५०	४८	४८	६६	४३१	३०६	७३७	०३	

बडोदरा राज्जना देखेक प्रालतमां केफसांना रोगयी एटले न्युमोनिया, क्षय, विरोगयी मासवार केठलां मरण थयां तेलुं पक्क. सने १९२४-२५ सालनुं.

क्र. सं.	शालतुं नाम.	प्र. वि. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	प्र. वि. सं.	एकंदर.			इस ह- जोर प्र- माण.		
																		उष्य.	स्त्री.	कुल.			
१	बडोदरा शहर.	१	१	१	१	१	१	१	१	१	१	१	१	१	१	१	१	१	१	१	२१	२२	
२	"	२	२३७	१३८	१२८	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	२०	२१	
३	कडी प्राल.	१	१०५	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१	१२१
४	नवसारी प्राल.	८	७७२	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११	१११
५	अमौली प्राल.	७	२४६	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२	२२
६	औषामंडल प्राल.	२	४३	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५
	कुल.	४२	२६७६	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८	३९८

बीजां कोईपण जातनां दरदोयी घयेलां मृत्यु.

(जेनां कारणो जाणवामां आव्यां नहीं ते.)

१२. केटलांक गामडांना: पटेळो तेमज केटलाक अज्ञानी लोकोने रोगनी माहिती अगर परीक्षा नहीं होषायी तेवा दरदोयी घयेलां मृत्यु बीजां कोईपण जातनां दरदोयी आसनमां नोधवामां घयेली मृत्यु संख्या. बीजां कोईपण जातनां दरदोयी आसनमां नोधवामां आव्यां छे. एवा दरदोयी आखा राज्यमां कुल ३९३१ मृत्यु नोधवामां आव्यां हतां, जेतुं एकंदर मृत्यु उपर दर सेंकडे प्रमाण ८-८ आवे छे. तेमां बडोदरा शहरमां ९६२, बडोदरा प्रांतमां १३१३, कडी प्रांतमां ६६८, नवसारी प्रांतमां ६३८, अमरेली प्रांतमां ३०५ अने ओखामंडळमां ४५ मृत्यु ए सदरे नोधवामां आव्यां हतां.

१३. जो मृत्युनी नोध चोक्स राखवामां आवे तो बीजा कोईपण जातना दरदोयी ए सदर राखवानी जरूर रहेत नहीं. बीजां कोईपण जातनां दरदोयी आसन राखवानी जरूर रहेत नहीं.

मुधराई अने विशिष्ट पंचायतना कस्वानी

जन्ममरणनी नोध संबंदी हकोकत.

१४. सने १९०४ ना लोकल सेल्फ गवर्नमेन्ट अंकट प्रमाणे (स्थानिक स्वराज्य निबंध) बडोदरा शहर अने इतर मुधराईना कस्वानी जन्म मरणनी नोध जे ते मुधराई तरफ सोपवामां आवी छे. अने स्थानिक पंचायत निबंध प्रमाणे जे ते कस्वानी विशेष पंचायत तरफ जन्म मरणनी नोध करवानुं काम सोपवामां आव्युं छे.

१५. परिशिष्ट अंक १ मां मुधराई तथा विशिष्ट पंचायतना कस्वामां निवेदननी साले केटलां जन्म मरण घयां ते हकीकत दर हजारे प्रमाण साथे दर्शावामां आवी छे.

१६. बडोदरा शहरमां निवेदनना वर्षमां एकंदर जन्म २८८८ अने मृत्यु २९५९ नोधायीं हतां, एवो गई साल ३३६९ जन्म अने ३०३३ मृत्यु नोधायीं हतां, जेतुं दर हजारे प्रमाण अनुक्रमे ३१-४ तथा ३२-२ आवे छे. जे गई साल ३६-७ तथा ३३-० हतुं. ए उपरथी बडोदरा शहरनी नोधमां गई साल जेटलो मुधारी थयो नथी.

૧૭. ૧૬૬૨ ૧૧ વર્ગ સુધરાઈના કસ્વામાં જ્યાં સ્થાનિક સ્વરાજ્યનીદેણગી
આપવામાં આવેલી છે ત્યાં કુલ જન્મ ૬૯૪૯ અને મૃત્યુ
૬૯૯૩ નોંધવામાં આવ્યાં હતાં, જ્યારે ગઈ સાલ અનુક્રમે
૭૭૮૩ જન્મ અને ૬૬૨૨ મૃત્યુ નોંધાયાં હતાં. આ
કસ્વાઓમાં દર હજારે જન્મનું પ્રમાણ ૨૮.૭ અને મૃત્યુનું પ્રમાણ ૨૭.૨ આવે છે જે
ગઈ સાલ અનુક્રમે ૩૨.૧ અને ૨૭.૩ હતું.

૧૮. બીજી ૩૨ વિશિષ્ટ પંચાયતો સ્થાપન થયેલા કસ્વામાં કુલ જન્મ ૧૦૯૬
અને મૃત્યુ ૪૧૦૩ નોંધાયા હતાં, જેનું દર હજારે પ્રમાણ
વિશિષ્ટ પંચાયતના કસ્વામાં અનુક્રમે ૨૮.૯ તથા ૨૩.૩ આવે છે. ગઈ સાલ કુલ
જન્મ ૫૩૬૯ અને મૃત્યુ ૪૨૬૩ નોંધાયાં હતાં. જેનું
પ્રમાણ અનુક્રમે ૩૦.૮ તથા ૨૪.૬ હતું. (જુઓ પરિશિષ્ટ અંક ૧)

૧૯. હાલની પરિસ્થિતિ પ્રમાણે સેનિટરી કોડમાં દર્શાવેલી બાવતોનો જેમ બને તેમ
સેનિટરી કોડ પ્રમાણે યતી તજવીજ કરવામાં આવે છે.

૬૦. નિવેદનના વર્ષમાં આરોગ્ય રક્ષણ અધિકારીની કુલ ૧૨૦ દિવસ ફેરળી
થઈ હતી અને જગાવેલા ૨૬ કસ્વા અને ૧૩ ગામોની
આરોગ્ય રક્ષણ અધિકારીનો મુલાકાત હેવામાં આવી હતી.
ફેરળી.

વહોદરા રાજ્ય.

પેટલાદ, ધર્મજ, કાસર, મહેલાવ, ઇટોલા, પાદરા, મકરપુરા, કરજળ, ડમોઈ
સાવલી, વાધોડ્યા, આજવા, સંલેહા, બાધરપુર.

કઢી પ્રાંત.

મહેસાળા, વિસનગર, પાટળ, રણુજ, મણુદ, સિદ્ધપુર, કલોલ, કઢી અને
વિજાપુર.

નવસારી પ્રાંત.

નવસારી, વ્યારા, સોનગઢ, ત્રિલીમોરા, ગણદેવી અને વરિઆવ,

અમરેલી પ્રાંત.

અમરેલી, દામનગર, નારાયણગઢ, દહીધરા, ઠાસા, રામઢા, વરસઢા, ઈધરીયા
અને કેતીયાનાગસ.

ભાગ ૪ થો

શિતळा खाता संबंधी हकीकत.

૬૧. નિવેદનના વર્ષમાં શિતळा खातामां चर प्रांतना ४ कायमना आरोग्य अने शितळा तपासणी कामदारो (इन्स्पेक्टरो) ४० शितळा कामदारो (वेक्सिनेटरो) ७ कारकुनो, १ फरज्यात कारकुन अने ४५ सिपाईओ हता. ए शिवाय बाघोडियां तालुकानुं काम छ मास सुधी एक शितळा कारकुनयो करावी लेवामां आवे छे.

૬२. ओखामंडळ प्रांतनुं आरोग्य अने शितळा संबंधीनुं तपामणीनुं काम ओखामंडळ फरता दवाखानाना सब आसिस्टंट सरजनने सोपवामां आवेल्ले छे.

૬३. शितळा खाताना महेकमनी पायरीओ (भेडो) जे हुजूर कचेरी जाहेरात नं. १० ता. १८-१-२१ थी सुधारवामां आवी छे, तेमां निवैदननी सालमां काई फेरफार थयो नथी.

૬४. निवैदननी सालमां आखा राज्यमां कुल ६९४७७ इसमोने शितळा टांकवामां आव्यां हतां. आगळा पांच वर्षमां अनुक्रमे शितळा टांकवानी एकंदर संख्या. ६६४२२, ६९१७५, ६६४२६, ६३९९९, अने ६९३७७ जणाने शि तळा टांकवामां आव्यां हतां.

૬५. एकंदर ६९६०६ इसमो उपर पहेलीवार अने ३८७१ इसमो उपर बीजीवार शि तळा टांकवानी प्रयोगो करवामां आव्या हना. पहेलीवार अने बीजीवारना गई साल करतां पहेलीवारना प्रयोगोमां ६०९ इसमोनी प्रवाणानी संख्या. संख्या बधारे हतीं अने बीजीवारना प्रयोगोमां ९०९ नी संख्या ओछी हती. बने मळी एकंदर १०० इसमोनी संख्या बधारे हती. (जुओ परिशिष्ट अंक २)

૬६. पहेलीवारना प्रयोगोमां १८ जणाने दाणा बिलकूल नहीं उपडवाथी फरो शिळी टांकवी पडी हती एटले प्रयववारनो एकंदर संख्या ६९६२४ नी थई हता. बीजीवारना प्रयोगोमां फरीथी

शिळी टांकवानो प्रसंग आव्यो नथो. पहेलीवारना प्रयोगोमां ६३९४० फतेहमंद निवड्या हता अने बीजीवारना प्रयोगोमां २९९३ फतेहमंद निवड्या हता एटले आखा राज्यनी बस्ती उपर दर हजारो ३२.७ इसमोने रक्षण मळवानुं प्रमाण आव्युं हुतुं. आगळा पांच वर्षाने प्रमाण अनुक्रमे २९.०, २८.२, ३०.०, ३०.०, अने ३०.८ हुतुं.

૬૭. નીચેના પત્રકમાં જુદા જુદા પ્રાંતોમાં પ્રથમવારના અને બીજીવારના મઠ્ઠી એકંદર શીઝીના પ્રયોગો નિવેદનની સાલે અને તેના પ્રથમવાર અને બીજીવારના મઠ્ઠી પ્રાંતવાર શિતઢ્યાના પ્રયોગોનું પત્રક. આગલા વર્ષમાં કેટલા કરવામાં આવ્યા તેની સરલામળી

અનુક્રમ અંક.	પ્રાંતનાં નામ.	કુલ શિતઢ્યાના પ્રયોગોની સંખ્યા.		જાસ્તી.	કમી.
		૧૯૨૪-૨૫	૧૯૨૩-૨૪		
૧	૨	૩	૪	૫	૬
૧	વડોદરા પ્રાંત.	૨૩૭૯૦	૨૫૬૫૭	૦	૧૮૬૭
૨	કઢી પ્રાંત.	૨૮૫૭૧	૨૮૨૭૧	૩૦૨	૦
૩	નવસારી પ્રાંત.	૧૦૯૩૭	૯૬૫૨	૧૨૮૫	૦
૪	અમરેલી પ્રાંત.	૫૪૩૪	૫૧૨૪	૩૧૦	૦
૫	ઓલામંઢઢ પ્રાંત.	૭૪૫	૬૭૫	૭૦	૦
કુલ.		૬૯૪૭૭	૬૯૩૭૭	૧૯૬૭	૧૮૬૭

૬૮. ઉપરના આંકઢા ઉપરથી જળાશોકે આલા રાજ્યમાં ગઈ સાલ કરતાં ૧૦૦ ગઈ સાલ કરતાં જાસ્તી કામ થયું તે. ઇસમોનું કામ વધારે થયું હતું.

૬૯. નીચેના પત્રકમાં દરેક પ્રાંતમાં કેટલા શિતઢ્યા કામદારો છે અને તે દરેક શિતઢ્યા કામદારોની સંખ્યા સરેરાસ કેટલું કામ કર્યું તે હકીકત દર્શાવવામાં આવી તથા તેમના કામની સરાસરી છે.

અનુક્રમ અંક.	પ્રાંત નામ.	શિતઢ્યા કામદારોની સંખ્યા.	દરેક શિતઢ્યા કામદારે સરેરાસ કેટલું કામ કર્યું તે સંખ્યા.		જાસ્તી.	કમી.
			૧૯૨૪-૨૫	૧૯૨૩-૨૪		
૧	૨	૩	૪	૫	૬	૭
૧	વડોદરા પ્રાંત.	૧૩	૧૮૩૦	૧૯૭૨	૦	૧૪૩

૨	કઢી પ્રાંત.	૧૫	૧૧૦૪	૧૮૮૪	૨૦	૦
૩	નવસારી પ્રાંત.	૭	૧૫૬૨	૧૩૭૯	૧૮૩	૦
૪	અમરેલી પ્રાંત.	૪	૧૩૫૮	૧૨૮૧	૭૭	૦
૫	બોલામંડલ પ્રાંત	૧	૭૪૦	૬૭૫	૭૦	૦
	કુલ.	૧૦૩૬	૫૦૩૬	૧૦૩૪	૨	૦

૭૦. પ્રથમવાર શિઢી ટાંકેલાં પૈકી ૩૪૦૯૨ છોકરાં તથા ૩૧૧૧૪ છોકરીઓ હતી અને બીજીવારના કાઢેલામાં ૩૨૧૬ પુરુષ અને ૬૧૧ છોકરીઓ હતાં. ૫ પ્રમાણે બંને મઢીને કુલ છોકરાંની સંખ્યા ૩૭૩૪૮ અને છોકરીઓની સંખ્યા ૩૨૧૨૯ હતી. જેનુ ઢર સેંકઢે પ્રમાણ અનુક્રમે ૧૩.૭ અને ૪૬.૬ હતું. જે ગઈ સાલ પળ ૫૫ પ્રમાણે હતુ. ૫કલા શિઢી ટાંકેલાં છોકરાંનુ પ્રમાણ ઢર સેંકઢે ૧૧.૯ અને છોકરીઓનું ૪૮.૧ હતુ, જે ગઈ સાલ અનુક્રમે ૧૨.૯ અને ૪૭.૯ હતું. તેમજ બીજીવાર ટાંકેલામાં ઢર સેંકઢે પ્રમાણ અનુક્રમે ૮૪.૧ અને ૧૧.૯ હતું, જે ગઈ સાલ ૭૬.૯ અને ૨૩.૧ હતુ.

૭૧. પ્રથમવાર ટાંકેલાં ૫કંઢર ઇસમો પૈકી ૧૧૧૨૦ હિંદુ, ૪૧૨૯ મુસલમાન ૧૪૬ પારસી, ૬૭ સિસ્તી અને ૧૩૪૪બીજી જાતનાં જાતવારી શિઢી ટાંકેલાંની સંખ્યા. હતાં. ગઈ સાલ ૧૪૭૧૯ હિંદુ, ૪૪૮૯ મુસલમાન, ૧૪૩ પારસી, ૧૧૪ સિસ્તી અને ૧૧૪૦ બીજી જાતનાં હતાં. ૫કંઢર ટાંકેલાં ઇસમો ડપર જાતવાર ઢર સેંકઢે પ્રમાણ અનુક્રમે ૮૪.૧, ૬.૯ ૦.૨ ૦.૧ અને ૮.૧ આલે છે, જે ગઈ સાલ ૮૪.૧, ૬.૮, ૦ ૦.૧, અને ૮.૧, હતુ.

૭૨. ડુઢી ડુઢો જાતનો ૫કંઢર ષસ્તી ડપર શિઢી ટાંકેલાં ઇસમોનુ ઢર સેંકઢે પ્રમાણ કેટલું આલે છે તે નીચેના પત્રકમાં બતાવવામાં જાતવાર ષસ્તી ડપર સેંકઢે પ્રમાણ આલ્યુ છે:—

અનુક્રમ અંક	જાત	સને ૧૧૨૧ ની સેન્સર પ્રમાણે ષસ્તી.	પ્રથમવાર ટાંકેલાંની સંખ્યા.	ઢર સેંકઢે પ્રમાણ.	છેરો.
૧	૨	૩	૪	૫	૬

૧ હિંદુ. ૧૦૪૦૪૫૧ ૫૫૫૧૦ ૧.૧
૬ આ. ર. વા. રી.

२	मुसल्मान.	१६१७७१	४५२९	२.८
३	पारसी.	७४००	१४६	१.९
४	ख्रिस्तो.	६९२९	६७	०.९
५	बीजी जात.	२०७००९	५३४४	२.६
	कुल.	२१२३५८८	६५६०६	३.०

७३. नीचेना पत्रकमां पहेलीवार टाकेला इसमोनी उमरवारी प्रमाणे निवेदननी सालना तथा तेनी आगळो सालना आंकडानो सरखामणी उमरवारी प्रमाणे वे सालना आंकडानी सरखामणी.

वर्ष.	पहेलीवार टाकेला कुल इसमोनी संख्या.	उमर,			दर सेंकडे प्रमाण-		
		एक वर्षेनी अंदरना.	१ बी ६ वर्षे सुधीना.	छ वर्षे उपरना,	एक वर्षेनी अंदरना.	१ ६ थी वर्षे सुधीना.	छ वर्षे उपरंतना.
१	२	३	४	५	६	७	८
१२२३-२४	६५००१	५७३५४	६३४१	१३०६	८८.२	९.८	२.०
१९२४-२५	६५६०६	५८४८६	६०८५	१०३५	८९.१	९.६	१.५

७४. एकंदर प्रथमवार शिळी टाकेलां ६९६०६ तथा १८ वधु वेक्सिनेशनस मळी कुल ६९६२४ प्रयोगो पैकी ६३९४० ने देवी सारी आवा ९९६ निष्फळ थया अने १४८९ इसमोतुं परिणाम जणायुं नही तेमज बीजीवार अंकेलां एकंदर ३८७१ इसमो पैकी २९१३ ने देवी सारी आवी, ८२७ निष्फळ गया अने ४९१ तुं परिणाम जणायुं नही पहेलीवार टाकेलां पैकी देवी सारी आवी तेतुं दर सेंकडे प्रमाण अनुक्रमे ९६.८ अने ६९.० हतुं.

७५. पहेलीवार टाकेलां जे ९९० निष्फळ गया तेतुं दर सेंकडे प्रमाण ०.९ आवे छे, जे गई साल ०.८ हतुं ते अने बीजीवार टाकेलां निष्फळ गयेलतुं प्रमाण जे ८२७ निष्फळ गयां तेतुं दर सेंकडे प्रमाण २१.३ आवे छे, जे गई साल ३४.० हतुं.

७६. पहलीवार टांकेलांमां परिणाम नहीं जणायेलां १४८९ इसमोतुं बर सैकडे परिणाम नहीं जणायेलांतुं प्रमाण २.२ अने बीजीवार टांकेलांमां ४९१ नहीं जणायेलांतुं प्रमाण १२.६ आवे छे, जे गई साल अनुक्रमे २.१ अने ११.४ हतुं.

७७. निवेदननो साले शितळा कामदारोने घेर बोलावीने शितळा टंकाव्या बदल फीनु उत्पन्न आखा राज्यमां कुल १,०१७-८-० थयुं फीनु उत्पन्न. हतुं, जे गई साल रु. १,१२५-४-० थयुं हतुं. सदरहु उत्पन्नमांथी नोमे रकम रु. ९०८-१२-० सरकारमां जमा करवामां आवी तेऽखोज रकम शितळा कामदारोने मळी हती.

७८. बडोदरा शहरमां शितळानो फरज्याल कायदो सने १९२४ थो लागु करवामां आव्यो छे. नीचेना पत्रकमां छेह्ठा त्रण वर्षमां केऽलां बाळकोनुं संरक्षण थयुं ते आंकडा बताववामां आव्या छे:—

वर्ष.	बडोदरा शहरमां जन्म नो-धायो ते.	एक वर्षनी अंदरना बाळकोना मत्युं यथां ते.	देवी काठवाने मळी शक ते छोकरानी संख्या.		एक वर्षनी अंदरना बाळकोने देवी सारी निकळी छे	
			जन्ममांथी मत्युंवर हजारे ३१ बाद करती बाका संख्या.	मानभ्रमाणे काम करवानुं ते.	संख्या	आसन उपरथी सैकडे,
१	२	३	४	५	६	७
१९२२-२३.	२,८५९	८३३	२,१२६	१,८४५	१९५६	२०
१९२१-२४	३,३६९	९०३	२,४६६	२,८४५	३,३३३	१-५
१९२४-२५.	२,८८८	८२०	२,०६८	२,८४५	२२६२	८३-५

आरोग्य अने शितळा तपासणी कामदारो.

(इन्स्पेक्टर) ना काम संबधी हंकीकत.

७९. आरोग्य अने शितळा तपासणी कामदारोए निवेदनना वर्षमां एकंदर मुसाफरी ८७७३ माईलनी करो हतां, ते गई साल आरोग्य अने शितळा तपासणी कामदारोए मुसाफरी करी ते. ८७४० माईलनी थई हती.

૮૦. આ વર્ષમાં ચિત્તલા તપાસણી કામદારોએ એકંદર ૨૪૨ ગામોની તપાસણી કરી હતી, તેનું સરેરાશ પ્રમાણ ૨૩૬ દરેક કેટલાં ગામોની તપાસણી કરી તથા તેનું સરેરાશ પ્રમાણ- ૨૩૬ ગામોની તપાસણી કરી હતી અને સરેરાશ પ્રમાણ ૨૮૬ હતું.

૮૧. સદરહૂ ઇન્સ્પેક્ટરોએ નિવેદનના વર્ષમાં એકંદર ૧૩૮૮૨ છોકરાં તપાસ્યાં, જેનું એકંદર ટકિલા છોકરાં ઉપર દર સેકંડે પ્રમાણ ૧૯-૯ આવે છે તે-ગઈ સાલ ૧૮'૪ હતું.

૮૨. વડોદરા પ્રાંત ઇન્સ્પેક્ટરે કુલ ૩૯૪ ગામો તપાસ્યા, કઢા પ્રાંત ઇન્સ્પેક્ટરે ૩૬૮, નવસારી પ્રાંત ઇન્સ્પેક્ટરે ૧૧૪ અને અમરેલી પ્રાંત ઇન્સ્પેક્ટરે ૩૪૬ ગામો નિવેદનના વર્ષમાં તપાસ્યાં હતાં.

૮૩. નીચેનાં પત્રકમાં આજ્ઞા રાજ્યમાં મોટા બઝીયાથી કેટલાં મૃત્યુ થયાં તે બદલની હકીકત દર્શાવવામાં આવી છે.

અનુક્રમ નંબર.	પ્રાંતનાં નામ.	મોટા બઝીયાના મૃત્યુની સંખ્યા.	
		૧૯૨૩-૨૪.	૧૯૨૪-૨૫.
૧	૨	૩	૪
૧	વડોદરા શહેર.	૮	૯
૨	વડોદરા પ્રાંત.	૨૯૮	૧૪૨
૩	કઢી પ્રાંત.	૨૭૦	૭૨૫
૪	નવસારી પ્રાંત.	૧૧૨	૭૪
૫	અમરેલી પ્રાંત.	૨૬૯	૮૩
૬	ઓસ્માંડલ પ્રાંત.	૯	૨૪
	કુલ ...	૯૬૬	૧,૦૫૭

૮૪. નિવેદનના વર્ષમાં ચિતલા ળાતા માટે કેટલો ળર્ચ ળયો તેની પાછલી સાલના આંકડા સાથે નિચેના પત્રકમાં સરલામળી કરવામાં આવી છે.

લાલત.	કુલ ળર્ચ.		જાલ્તી.	કમી.
	૧૯૯૩-૨૪	૧૯૨૪-૨૫		
પગાર.	૨૨૪૭૫-૮૦૦	૨૩૫૬૭-૧૦૯	૧૦૯૨-૨૭	૦
કંન્ટ્રીન્ટ કીરકોલ ળધ્યુળાડુ વીગેરે.	૧૨૦૪૧-૨૦	૧૬૯૦૨-૫-૨	૪૩૬૧-૨-૨	૦
શીલકી સામાન.	૦	૦	૦	૦
હંગામી.	૦	૦	૦	૦
કુલ.	૩૫૦૧૬-૧૧-૨	૪૦૪૬૯-૧૫-૧૧	૫૪૫૩-૪-૯	૦
લેક્સીનેટરોની ફીનું ઉલ્પણ સરકારમાં જમા ળયું તે લાલ.	૫૬૨-૧૦-૦	૫૦૮-૧૨-૦	૦	૫૩-૧૪-૦
નિલ્લલ ળર્ચ.	૩૪૪૫૪-૧-૨	૩૯૯૬૧-૩-૧૧	૫૫૦૭-૨-૯	૦

૮૫. સલરહૂ આંકડા ઉપરથી જગાણે કે ગઈ સાલ કરતાં નિલેલનની સાલે રૂપિયા ૯૯૦૭-૨-૯ નો ળર્ચ લધારે ળયો હતો, તેનું ત્લા લર્ષ કરતાં ળર્ચમાં લધારો. કારણ કેટલાક ચિતલા કામલારોને પગારમાં લલતી ત્લા ળધ્યા ળાડામાં લધારો નેમજ ગ્લીલરીનેલેલ ળિમ્પનો કિમલ લધલાથી ળર્ચમાં લધારો ળયો છે.

૮૬. અજ્ળાન કે લહેમી લોકો તેમજ સૂડીને લળગી રહેલા કેટલાક લોકો ચિતલા ટંકાલતા નથી. તેથી આપળા લેશમાંથી લળીયાનો રોળ નાલુલ કરી શકાલો નથી, જેથી જેલલાં ગામોમાં ચિતલા ટંકલામાં મુલકેલ્ડી નલે છે તેલાં ગામોમાં આરોમ્બ રલ્લ-પળા નિલમની કલમો ૯૯-૬૦ અને ૭૪ લાગુ કરલામાં આલે છે. કલા કલા ગામોમાં

ઉપરની કલમાં લાગુ કરવામાં આવી તે પાછલી સાલોના નિવેદનમાં જણાવેલું છેજ તે શિવાય બીજાં કેટલાંક ગામોને સદર કલમો લાગુ કરવાની તજજીજ ચાહે છે. આથી કરીને વહેમ અને અજ્ઞાનતા દૂર થઈ ચિત્તલા ટંકાવવા તરફ લોકોનું વલણ વિશેષ યશે એમ લાગે છે.

૮૭. નિવેદનના વર્ષમાં કચેરીના મહેકમે કામ સારો રીતે કર્યું છે.

મહેકમના કામ સંબંધી હકીકત.

ભાગ ૫ મો.

હવામાન, વરસાદ, વાયુ, મેજ વિગેરે સંબંધી હકીકત.

૮૮. અત્રે ત્રહોદરા મહાવિદ્યાલય (College) ના મકાનમાં બીજા વર્ગની હવામાન, વાયુ, મેજ વિગેરે સંબંધી હકીકત જોવાની ઓબશ્ન-વધારેમાં વધારે અને ઓછામાં-રવેટરી છે. નિવેદનના વર્ષમાં વધારેમાં વધારે ટેમ્પેરચર ઓછું હવામાન.

૧૧૬.૨ F મે ૧૯૨૯ માસમાં હતું અને ઓછામાં ઓછું

૩૬.૩ F જાનેવારી ૧૯૨૯ માસમાં નોંધવામાં આવ્યું હતું.

૮૯. વાયુમાપક યંત્ર (Barometer) નો માસિક સરાસરા નોંધ વધારેમાં વધારે ૨૯.૮૮૨ ડિસેમ્બર સને ૧૯૨૪ માસમાં હતી. વેરોમેટરની નોંધ. અને ઓછામાં ઓછાં ૨૯.૪૪૪ જૂન ૧૯૨૯ માસમાં હતી.

૯૦. વાયુનો ગતિ વર્ષના ઘણા ભાગે નૈઋત્ય કોણ તરફ વિશેષ હતો.

વાયુની ગતિ.

વાયુની ગતિનો વેગ દરરોજનાં સરાસરી કાઢતાં ઑક્ટોબર સને ૧૯૨૪ માં ૯૮ માઈલ હતો, ને તે મે ૧૯૨૯ માસમાં ૨૪૦ માઈલનો વાયુની ગતિનો વેગ. થયો હતો. વર્ષના એકંદર સરાસરી વાયુની ગતિ દર ચોવીસ કલાકમાં ૧૪૮ માઈલનો હતો.

૯૧. હવામાં દૈનિક સરાસરી મેજ ૪૬ હતો, જે ગઈ સાલ ૪૦ હતો.

હવામાં મેજ.

૯૨. વધારેમાં વધારે ટેમ્પેરચર (ઉષ્ણમાન) ૧૧૮ F મહેસાણા દવાખાનામાં મે ૧૯૨૯ માસમાં નોંધવામાં આવ્યું હતું અને ઓછામાં ઓછું વધારેમાં વધારે અને ઓછામાં ઓછું ટેમ્પેરચર ત્યાં હતું. ૩૯ F કલોઠ દવાખાનામાં જાનેવારી ૧૯૨૯ માસમાં નોંધાયું હતું.

९३. परिशिष्ट ३ अंकमां आखा राज्यना देरेक दवाखानामां निवेदननी सालमां
 केटकेटलां वरसाद नोधवामां आव्यो हतो ते बताववामां
 वरसाद संबंधो हकीकत. आव्यु छे. ते उपरथी जणाशे के वधारेमां वधारे वरसाद
 ६३ चई अने ६२ दोकडा बिल्टीमोरा दवाखानामां अने ओछामां ओछो ८ इंच अने
 ६७ दोकडा व्दारकां दवाखानामां नोधवामां आव्यो हतो.
 बडोदरा, ता. १० डिसेम्बर १९२९.

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પરિશિષ્ટ બંક ૧

વડોદરા રાજ્યના સુધરાઈ અને વિશિષ્ટ પંચાયતવાળા કસ્તામાં બાર માસમાં કેટલા જન્મ-મરણ થયા તે પત્રક સને ૧૯૨૪--૨૬ સાલ બાબત.

ક્ર. નં.	સુધરાઈનાં નામ.	લોક સંખ્યા, ૧૯૨૧	કુલ જન્મ.	કુલ મરણ.	જન્મ પ્રમાણ.	મરણ પ્રમાણ.
૧	વડોદરા સિટી.	૧૧૭૭૮	૨૮૮૮	૨૬૫૬	૩૧-૪	૩૨-૧
૨	પેટલાદ.	૧૫૧૫૬	૪૧૩	૩૭૮	૨૭-૨	૨૪-૬
૩	જુઓઈ.	૧૫૮૭૦	૩૫૬	૪૮૧	૨૨-૬	૩૦-૩
૪	પાટળ.	૨૭૦૧૭	૮૦૭	૭૭૫	૨૬-૮	૨૮-૬
૫	સિદ્ધપુર.	૧૬૧૮૭	૨૫૮	૩૨૭	૧૫-૬	૨૦-૨
૬	વિસનગર.	૧૩૮૫૫	૩૮૧	૪૬૭	૨૭-૪	૩૫-૮
૭	નવસારી.	૧૬૪૩૭	૪૮૦	૩૦૧	૨૪-૬	૧૫-૪
૮	મીસ્ત્રીમોરા.	૭૩૨૧	૨૬૨	૧૭	૩૫-૭	૧૩-૨
૯	ગળદેવી.	૫૭૨૧	૨૪૬	૧૫૪	૪૬-૬	૨૬-૮
૧૦	અમરલી.	૧૭૭૬૩	૬૨૬	૪૦૦	૩૫-૧	૨૨-૪
૧૧	મહેસાણા.	૧૧૮૮૮	૨૨૬	૨૨૪	૦-૧૦-૦	૧૮-૦
	વિ. પંચાયતો.					
૧	પાદરા.	૮૪૬૮	૩૩૫	૨૨૫	૩૬-૫	૨૬-૫
૨	શિનોર.	૫૦૬૮	૧૦૨	૮૩	૨૦-૧	૧૬-૩
૩	સોજીત્રા.	૮૮૫૧	૨૧૪	૨૨૩	૩૨-૨	૨૫-૧
૪	કતોપુરા સાથે.	૭૫૬૧	૨૮૧	૨૫૦	૩૭-૧	૩૩-૧
૫	સાવલ્યી	૪૩૨૧	૧૧૬	૭૬	૨૬-૮	૧૮-૨

६	भादरण.	४६२४	९२	९५	१९०८	२०५
७	संवेडा.	४२७९	१२५	१२१	२९०२	२८०२
८	बहादरपुर.	३९७९	९८	८८	२४०६	२२०१
९	मकरपुरा.	१०८५	३६	२६	३२०९	२३०९
१०	करजण.	३५३८	४२	५४	११०८	१५०२
११	बाघोडिया.	२५७८	३१	१३	१२००	५०
१२	धर्मज.	४७८६	१२२	९९	२५०४	२००६
१३	कडी.	११९१९	२८८	३४२	२४०१	२८०६
१४	कल्लोल.	७०५४	१९५	१७५	२७०६	२४०८
१५	खेराळु.	६८६६	२४०	२२९	३३०९	३३०३
१६	वढनगर.	११६७१	३४९	३३४	२९०९	२८००
१७	उंझा.	९८३२	३२८	१९३	३३०३	१९०६
१८	वाणत्सा.	७९४०	३०४	२२४	३८०२	२८०२
१९	धीणोज.	४१५४	१३०	११६	३१०२	२७०९
२०	विजापुर.	७३१९	१२५	१७७	१७००	२१०४
२१	दहेगाम.	४८९१	१४२	१००	२९००	२००४
२२	आतखुंबा.	१८८२	७८	३७	४१०९	१९०६
२३	पलसाणा.	२४२६	६५	४६	२६०७	१८०९
२४	कटोर.	३९३९	१२९	९९	३२०७	२५०१
२५	सोनगड.	२०१३	३९	४१	१९०३	२००३
२६	व्यारा.	४९३२	१०८	६४	२१०८	१२०९
२७	बरीयाब.	२२६९	९३	५७	४००९	२५०१
२८	दामनगर.	३४५०	१५६	९१	४५०२	२६०३

२९	भारी.	४२४३	१३९	९४	३२.७	२२.१
३०	कोठिनार.	६४३०	१७२	११०	२६.७	१७.१
३१	द्वारकां.	७९३०	१८६	१०२	२३.४	१२.८
३२	बेट.	३९६८	१२०	११६	३०.२	२९.२
३३	महुवा.	१५७६	३६	१९	२२.८	१२.६
	एकंदर.	१७५८४२	५०९६	४१०३	२८.९	२३.३
	बे मत्ती एकंदर.	४१७८६८	१२०४५	१०६९६	२८.८	२५.५

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परिशिष्ट

बडादरा राज्यमां चारे प्रांतमां शितळा खाता माटे केटलो खर्च थाय छे केटलुं

१	इन्सेक्टोरोनी संख्या.	२	वेक्सीनेटोरोनी संख्या.	३	उमेद्वारोनी संख्या.	४	प्रथमवार अने बीजीवार केटला अणने शितळा टांकवामां आवी तेनी कुल संख्या.		५	राज्यनी कुल वल्ली.	६	क्षेत्रफल.	७	प्रांतनां नाम.
							सने १९२३-२४	सने १९२४-२५						
१	१३	२	१५	२५६५७	२३७९०	७०४५७८	१८९७	बडोदरा.						
१	१५	२	१६	२८२६९	२८५७१	९००१७८	३०४६	कडी.						
१	७	१	८	९६५२	१०९३७	३४०३७२	१८०७	नवसारी.						
१	४	१	५	५१२४	५४३४	१५२५८५	१०७२	अमरेली.						
०	१	०	१	६७५	७४५	२५४७५	२७५	ओस्मानाबद.						
४४०+१ फ. का.	७	४५	६९३७७	६९४७७	२१२३५८८	८१२६								

अंक २.

महेश्वर छे, तथा सने १९२४-२५ सालमा केवल काम थयुं ते बंताबनाक पत्रक.

प्रथम वार शितब्दा टांकवामा									
लिग.		जात.					उमर.		
पुरुष.	स्त्री.	किशोर.	हिंदु.	मुसलमान.	पारसी.	बीसी जात.	एक बर्ष अंदला बाळको.	एक बर्ष थी ६ बर्षनी अंदला.	छ बर्ष उपरति.
१०	११	१२	१३	१४	१५	१६	१७	१८	१९
११२३६	१०५७८	५५	१७८४७	१८२७	१४	२०७१	१९८००	१६२८	३८६
१४५०८	१२९७८	४	१३३७६	१६१७	१	२४८८	२४७४५	२२८४	४५७.
५३६८	५०९३	८	९३०५	५९४	१३०	४२३	८९६५	१३२१	१७४
२५९१	२५१०	०	४४५०	३१८	०	३३३	४३०९	७७४	१८
३८९	३५६	०	५४२	१०३	१	२९	६६७	७८	०
३४०९२	३१५१४	६७	५५५३०	४५२९	१४६	५३४४	५८४८६	६०८५	१०३५

आवी तेनी हकीकत.

परिणाम.							
एक वर्षना अंदरना.	एक मी छ वर्ष अंदरना.	छ वर्ष एपरना.	देवी सारी आवां से.	नहीं आती से.	नहीं दीठां.	शु.	बहु बेसिसमेथान.
१०	१५	२२	२३	२४	२५	२६	२७
१९३८७	१५७२	३६०	२१३१९	१०७	४०३	२१८२९	१५
२४००१	२१४९	४११	२६८६१	३७४	५५३	२७४८८	२
८६५२	१२४८	१५७	१००५७	६१	३४२	१०४६०	०
४११४	७३०	१४	४८५८	५३	१९१	५१०२	१
६६७	७८	०	७४५	०	०	७४५	०
५६८२१	५७७७	९४२	६३५४०	५९५	१४८९	६५६२४	१८

बीजीवार टाकवामां आनी ते.							
लिं.		परिणाम.					
पुरब.	ऑ.	बेवी सारी आनी ते.	नहीं आनी ते.	नहीं दीठ ते.	ऑ.	अ/बाधु बेकानिसन	खितल्य खातानो अ. खा.
२४	२९	३०	३१	३२	३३	३४	
१६०३	३७३	१२७१	४३०	२७५	१९७६	०	६. ४०४६९-१५-११
१०३१	५४	७४०	३३५	११०	१०७५	०	
३६५	११२	३२५	७२	६०	४७७	०	
२५५	७६	२१७	९०	३६	३३३	०	
०	०	०	०	०	०	०	
३२५६	६१५	२५५३	८२७	४९१	३८७१	०	
६. ०-९-९							
		९७७	६४३	१८३०			बेवी सारी आनी तेये दर सिकडे प्रमाण.
		९६-६	६८-३	१९०४			प्रथम बाए टांकवांचे.
		९६-१	६८-२	१५६२			बीजी वार टांकवांचे.
		९५-२	६५-१	१३५८			दरोक बेकिसनेटो सरंगस केवळे काम कर्तुं ते.
		१००	५	७४५			
		९६४	६५१	१०३६			

परिशिष्ट अंक ३.

बडोदरा राज्यना जूदां-जूदां ठेकाणांनां दवाखानांनां वरसादनी नोंध लेवामां आवेलो ते बदलनुं पत्रक माहे ऑगस्ट १९२४ थी जुलई १९२५ भाखर.

अनुक्रम नंबर.	दवाखानांनां नाम.	ऑगस्ट १९२४ थी जुलई १९२५ भाखर.		शेरो.
		इंच.	सेट.	
१	बडोदरा सेन्ट्रल जेल	३९	५८	
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१७	पात्रा	"	३७	३७
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१९	सावळी	"	३२	१८
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२२	तिलकवाडा	"	४१	३३
२३	सिद्धपुर	"	२५	६
२४	कलोल	"	३०	२९
२५	दहेगाम	"	३१	५९
२६	विजापुर	डिस्पेन्सरी	२५	१२
२७	बेचराजी	"	२३	१५
२८	खेराडु	"	२८	२३
२९	बाणस्मा	"	१६	३५
३०	हारीज	"	१५	४७
३१	गणदेवी	"	६१	४८
३२	भिन्नीमोरा	"	६३	६२
३३	कडोर	"	४७	८०
३४	महुवा	"	५०	२६
३५	म्बारा	"	४९	५२
३६	मांगरोळ	"	४९	८९
३७	पत्तनावा	"	५३	११
३८	कोडिनार	"	३०	६९
३९	दामनगर	"	१४	३४

८ आ. र. वा री.

४०	धारी शहेर	१५	३६	} यंत्र मोटववाने जम्या नयी.
४१	खांभा	१५	१४	
४२	वेट	९	३१	
४३	आत्तरसुंवा	२९	८८	
४४	भाद्रण	२९	२७	
४५	वांकळ	४९	८९	
४६	रतनपुर	३०	५४	
४७	लांगणेज	०	०	
४८	वसो	०	०	
४९	वडनगर	१०	६४	

श्री.

आरोग्य संरक्षण खातुं.
वडोदरा, ता. २१ मे १९२६.

वार्षिक निवेदन—

आरोग्य रक्षण खातुं.

संवत १९८१ नी साळतुं.

दिवान अधिकार हुकम नंबर १०८ सन १९२६.

चीफ मेडिकल ऑफिसर तरफयी टिपण नंबर १३ ता. १० फेब्रुवारी १९२६—
आरोग्य खातानो संवत १९८१ नी सालना वार्षिक रिपोर्टे उपर अवलोकन घवा रज्जु करी जणावे छे के अवलोकन यई आवे ते निवेदनना छेवटना भागे छापवानी तजवीज करवामां आवशे.

ठरावः—निवेदन उपर सिहावलोकन नीचे प्रमाणे छेः—

१. आरोग्य रक्षण अधिकारीनी जग्यानो हवाळो निवेदननी साले डॉ. दा. ख. तलाटी एमनी पास हतो. आरोग्य रक्षण अधिकारीने निवेदननी सालमां बाळ सताह माटे वडोडारामां एक मास सुधी अने नवसारीमां आरोग्य प्रदर्शन अने मलेरिया ताबनी अटकायत माटेना काम सारु जाते देखेख राखवा एक मास सुधी रहेतुं पडतुं हुं. तेमने न्हानां न्हानां गामडांभोमां जाते तपास माटे फरतुं पडेलुं. तपासणी दर-म्यान शितळाप्रवृत्ति तेमज गामडांभोमां अने कस्वाभोमां स्वच्छता जाळववा माटे शुं शुं पगलां लेवामां आवे छे ते बाबत जे ते. गामना आगेवान गृहस्यो जोडे वाटा-घाट करी योग्य सूचनाओ करवामां आवी हती, अने ते बाबतमां मॅजिक लेन्टने साथे भाषणो ठेर ठेर आपवामां आव्यां हतां. आ उपरांत नमूनेदार गाम केतुं होतुं जोईए ते बाबतमां एक योजना घडवामां आवी छे, अने ते योजनाने अमलमां मूकवा माटे अखतराओ, भाषणो अने प्रदर्शनोद्वारा लोकोमां स्वच्छताना उपयोगीतानी बाबतमां छाप पाडवाना प्रयत्नो करवामां आव्या हता. आरोग्य रक्षण खाताए आ बाबतनो खास प्रचार करवानी जरर छे.

२. नवसारी प्रांतमां ट.दिया ताबनो फेलावो असाधारण हतो ते अटकाववा माटे लोकोमां ते र्हामे चळवळ करवा एक योजना घडवामां आवी हती अने ते योजना न्हाना पुस्तकमां छापी तेनी नकळो लोकोमां मफत वहेचवामां आवी हती.

३. आ उपरांत दरेक प्रांतमां आरोग्यमंडळ स्थापवामां आव्युं छे. प्रांतना मुच मंडळना प्रमुख होई, प्रांतना वैचकाय अमलदार, शाळ्य खाताना जे ते विभागना इन्स्पेक्टर अने प्रांतना आरोग्य तपासणी कामशर एमने मंडळना सम्यो तरिके निम-वामां आव्या छे. जेयी भाशा छे के, आ समीतिओद्वारा आरोग्य रक्षण अने स्वच्छता बाबतनी चळवळनी असर राज्यना न्हानामां न्हानां गामडांभोमां पडोवज्ञे. आ बाब-
९ आ. र. बा. री.

तमां मुलकी तेमज शाळा खातांना अमलदारो अने सुधराई तथा पंचायतना लोकज्ञ समासदोना अन्योन्य सहकारनी खास जरूर छे, अने तेओए मळी घेर घेर आरोग्य रक्षणनो मंत्र लोकोने काने पहोंचाडवानुं काम उपाडी लेवुं जोईए.

४. गई सालनी सरखामणीमां निवेदननी साले जन्मनुं घटी गयेले अने मरणनुं वधी गयेले प्रमाण नीचेना आंकडा उपरथी जणाय छे.

साल.	जन्म.		मरण.	
	कुल.	वस्तीना दर हजारे आवतुं प्रमाण.	कुल.	वस्तीना दर हजारे आवतुं प्रमाण.
१९२३-२४	६०,२२३	२८.३	४२,४०४	१९.९
१९२४-२५	५६,२३६	२६.४	४४,४२८	२०.९

दस वर्षमां दर हजारे आवतुं जन्मनुं प्रमाण २७.९ अने मरणनुं प्रमाण २८.२ हतुं ते साथे सरखावतां उपरना आंकडा संतोषकारक लागे छे. निवेदननी साले वधुमेमां वधारे जन्मनुं प्रमाण अमरली प्रांतमां (३२.९) हतुं अने वधुमां वधु मरणनुं प्रमाण वडोदरा शहरमां (३२.२) हतुं.

५. आखा राज्यमां पुरुष स्त्रीना जन्ममां रहैता तफावतनुं अवलोकन करतां दरेक सो स्त्रीए ११२.६ पुरुष जन्म नोंभाया हता. ते उपरथी जणाय छे के छेकराओ करतां छेकराओना जन्मनुं प्रमाण वधारे हतुं अने दर सो स्त्रीए ११९.३ पुरुष मृत्युनुं प्रमाण हतुं, ते जोतां स्त्रीओ करतां पुरुषोमां मृत्युनुं प्रमाण विशेष हतुं.

६. निवेदननां सालमां बाल मरणोनुं प्रमाण नीचे मुजब हतुं:—

एक वर्षनी अंदरना.		एक वर्षनी उपर अने पांच वर्षनी अंदर.		एकंदर उमरवारीना कुल मरणो.	एकंदर बाल मरण.	
संख्या.	दर सेंकडे प्रमाण कुल मृत्यु उपर.	संख्या.	दर सेंकडे प्रमाण मृत्यु उपर.		संख्या.	टका पांच वर्षनी जन्मनी सरासरी उपर.
९,७२९	२९.८	९,५३८	२९.४	४४,४२८	१९,२६७	३४.३

उपरना आंकडायी जणाय छे के पांच वर्षनी अंदरना बाळकोनी मृत्यु संख्या १९,२६७ हतो ते एकंदर मृत्युना दर सेंकडे ४३.३ घाय छे जे प्रमाण गई साले ४१.६ हतु.

७. नीचेनी रोगवार मरणनी संख्या ध्यान खेचे तेवी छे:—

• मृत्युनी रोगवारी.

ताव.	३९,६३४
खांसी.	१,३९०
मोटा बळीया.	१,०९७
क्षय.	९१०
अतिसार.	७३७
म्युमोनिया (त्रिदोष.)	२६२

क्षय जेवा नाशकारक रोगने नाबूद करवा माटे हालमांज श्री. महाराजा साहेबे डॅा. चंद्रचूडना प्रमुखपणा नीचे एक समीति निमी छे. आशा छे के ते समीति आ भयंकर रोगनी बाबतमां बारीक तपास करी तेने नाबूद करवाना चोक्कस अने व्यवहारू इलाजो सूचवरो.

८. गामडाभोमां मरणना कारणो बाबत लोकोने माहिती होती नथी. तेथी गमे ते जातना मरणोने तावना मरणो तरीके नीचे छे, ते बाबतनी खाताए तपास करी गामपटेलोने आ बाबतमां केळवणीनी तजवीज करवा जोईए. आखा राज्यमां ४४,४२८ मरणो निपजेळां ते पैकी ३९,६३४ जेटुळी मोटी संख्या फक्त तावना कारणेज नीचायलां हतां.

९. बाळ उछेरनी बाबतमां लोकोने केळवणीनी खास जरूर छे. ध्यांसुजो लोको बाळ उछेरनी अगत्य समजता घया नथी त्यां मुधी बाळ मरणनुं प्रमाण ओडुं आवे ए बनवा जोग नथी. तेथी खाताए खास काळजीपूर्वक लोकोमां बाळ उछेर शिक्षणनो प्रसार गामडांणोमां तेमज शहेरमां वधारे प्रमाणमां प्रदर्शनो अने बाळसंपताहो उजवी करखे जोईए. आ काम माटे श्री. चिमनाबाई प्रसुति अने बाळसंरक्षण संस्था घणीज उपयोमी निवडरो.

१०. शितळप्रवृत्तिनी फत्तेहमंद रोते चाले छे, ए संतोषनो बात छे. बळीयानुं जेह हजी चालुज छे, परंतु तेथी आरोग्यने नुकसान पहोंच्यु नथी एटले शितळ प्रवृत्तिनी फत्तेहमंदी संतोषकारक निवडी छे.

११. निवेदनी साले आखा राज्यमां कोगळिया (Cholera) थी मात्र १३ अने पुगयी मात्र ३ ज मरण निपज्यां हतां, जे संख्या नजीवी छे.

१२ ज-ममरणनी नोधमां हजु जोईए तेवो सुधारो थयो नथी. तेमां पण खास क-रीने वडोदरा शहरेनी नोध माटे खाताने फरियाद करवी पडे छे ए दिङगीरीनी वात छे.

१३. निवेदननी साल दरमियान डॉ. तलाटीए प्रसंशापात्र करेला कामनी नोध लई आरोग्य रक्षणना क्षेत्रमां हजी वणुं कार्य करवा अवकाश छे ते तरफ खातानुं ध्यान खेचवामां आवे छे.

१४. आ निवेदन तथा अवलोकन छपावी हमेश प्रमाणे तजविज करवी.

P. R. KAPADIA,

चीफ सेक्रेटरी.

निस्वत श्रीमंत सरकार,

वडोदरा.

रवाना

मे. रा. रा. चीफ मेडिकल ऑफिसर.

„ संनीटरी कमिश्नर.

„ सरसुवा.

„ सुवा वडोदरा.

„ नवसारी.

„ अमरेली.

„ कडी.

„ ओखामडळ कमिश्नर.

„ वडोदरा शहर सुधराई कामदार.

„ डॉ. दा. ख. तलाटी, एल. एम. एन्ड एम, डी. पी. एच., विंगेरे

ANNUAL REPORT
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FOR THE YEAR 1923--24
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1925

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ANNUAL REPORT

OF THE

DEPARTMENT OF COMMERCE AND INDUSTRY

BARODA STATE.

FOR

THE YEAR 1923-24,

Ending 31st July 1924.

1. ADMINISTRATION. STAFF AND TOURS.

1. Mr. S. M. Pagar held the office of the Director of Commerce, Industries and Statistics and also of the Registrar of Joint Stock Companies throughout the year under report. He also worked as a Member of the City Improvement Trust, Empire Exhibition Committee, Indian Central Cotton Committee and its Local Sub-committee, Finance Committee, Railway Traffic Investigation Committee, Electricity Board, Committee for the selection of Industrial sites, Committee for the Acquisition of Land for Industries, and the Baroda State Legislative Council and had to attend 63 meetings during the year as against 37 in the previous year.

The Director is also a Member of the State Railways Stores Purchase Committee and attended 8 meetings in that behalf. He also worked as a Member of the Travelling Allowances Committee.

Mr. K. R. Dotivala continued as General Assistant till September 1923 when he proceeded to England as a State scholar to study Higher Economics and Industrial Technology, while Mr. T. P. Adalja worked as the Weaving Assistant throughout the year.

2. The Director of Commerce and Industries spent 85 days in tour and the Weaving Assistant 71 days in tour.

Touring.

3. As usual inquiries, and appeals from persons engaged in or desirous of starting new Industries were numerous. In this connection, the Director has had no less than 300 interviews during the year under report and the Director is pleased to note the warm recognition by the public of the useful services of the Department.

Interviews.

II. IMPORTANT ACTIVITIES AND EVENTS.

4. Though the year under report saw the opening of three Mills and two Electric Supply Works as the direct result of the Industrial Policy of the State, the attention and activities throughout the major portion of the year were so much engrossed with the Exhibition work that the year under report may fittingly be called the "Exhibition Year".

Exhibition year.

5. Since the Industrial and Agricultural Exhibition held in the year 1917 there was no exhibition held at Baroda during the last seven years. The industrial depression and abnormal slump in trade coupled with financial stringency made the holding of the exhibition an almost impossible task even for the big countries all over the world.

The Baroda Exhibition.

However, when the Government definitely undertook to take part in the Empire Exhibition and the Department of Commerce and Industry was entrusted to collect the best samples and exhibits that would worthily keep up the reputation of the State in the Empire Exhibition, His Highness expressly desired that these exhibits before being despatched to London should be exposed to the view of the general public and a small Industrial Exhibition may fittingly be arranged along with this. In accordance with this express desire of His Highness, the Government directed the Department of Commerce and Industry to organise the Exhibition and a sum of Rs. 2,000 was placed at its disposal for the purpose. The sum placed at the disposal of the Department was inadequate for the undertaking and the period within which to organize the Exhibition was extremely short.

Under these circumstances, the Indian Industries and Trade Developing Syndicate, Ltd., of Karachi, a concern which had successfully organised the Industrial Exhibitions lately held at Karachi and Surat, was asked to undertake the organisation of an Industrial Exhibition at Baroda.

6. The Syndicate, on the strength of the Government concessions, undertook the work in co-operation with the Department and a small Committee to advise the Syndicate in its work was appointed with the Commissioner of Education as President and the Directors of Commerce and of Agriculture as Secretaries.

7. The Exhibition was located on the Native Guests Camp Ground behind the old Kala-Bhavan Building and was originally arranged to be opened at the hands of His Highness the Maharaja Saheb. But to the disappointment of all, His Highness could not do so owing to illness and the Exhibition was opened by Prince Pratapsinh Raje on the 16th December 1923.

8. There were 92 stalls in all. Fifteen stalls were occupied by the State Departmental exhibits. There were 16 general stalls in which were exposed articles of art and craftsmanship that were received from all parts of India. There were 61 independent stalls, out of which 15 were occupied by Baroda Industries. In all, the number of exhibits was well over 25,000 which represented almost all the old and new Industries of India. The greatest progress in Baroda Industries was shown by the Textile Mills. On the whole, the exhibition was predominantly industrial.

9. Among the special features in connection with the exhibition may be mentioned the Picture Gallery, the Wax Models and the fine historical Clay Models. The Kolhatkar Studio of Baroda had specially sent their Bronze Castings to the Picture Gallery. So also the Painters and the Photographers of Ahmedabad, Baroda and Bombay had sent in their works of art. All these attracted a large crowd.

10. The Imperial Stall organized by the Department of Commerce and Industry was also another source of attraction and drew large crowds of spectators from morning till late at night every day during the Exhibition period.

11. In addition to the usual demonstrations of the processes of weaving, the famous Pattan Silk Patolas and the making of the Sankheda lacquer ware, at the suggestion of this Department, the Bhowani Engineering Company of Calcutta had specially sent its match-making machinery for demonstrations in Gujarat for the first time. As a result of this experiment, the Vyara Dhanka Boarding House has taken up the manufacture of matches on a very modest scale under the direction of the Education Department.

12. The Exhibition in all lasted for 17 days and on the last two days it was free to all. Closing of the Exhibition. Nearly 65,000 people visited the Exhibition. On the closing day Rao Bahadur Govindbhai H. Desai, the Chief Justice, presided over the function and declared the names of the prize winners. In all, 131 gold medals, 103 silver medals and 297 certificates of merits were awarded.

13. The following cash prizes and medals were kept—
Important cash prizes and medals.

1. His Highness the Maharaja Saheb's cash prize of Rs. 150 for the best Oil Painting.
2. His Highness the Maharaja Saheb's cash prize of Rs. 50 for the best Water Colour Picture.
3. H. E. Sir Manubhai Saheb's prize of Rs. 50 for the best Bronze Castings.
4. H. E. Sir Manubhai Saheb's prize of Rs. 50 for the best Photoes.
5. Mr. E. H. Kealy's Cash prize of Rs. 25 for the best Water Colour Picture.
6. Mrs. C. N. Seddon's cash prize of Rs. 15 for the best Embroidery Work.
7. Mrs. Bhagirathibai Dev's cash prize of Rs. 25 for the best embroidery work (Karnatic style).
8. The Syndicate's five cash prizes each worth Rs. 25.
9. Rajratna Seth Chimanlal Zaver Laxmichandwala's Gold Medal for the best Cotton Cloth Spun and Woven from Indian Cottons.

14. In organizing and arranging the Exhibition, the Syndicate incurred expenses to the extent of Rs. 22,290, and received by way of income from stall money and entrance fees a sum of Rs. 9,900. The Government also offered a sum of Rs. 10,600 as financial relief. Thus in all the Syndicate realized a sum of Rs. 20,500 in this enterprise. Government, on the other hand incurred, on the whole, expenses to the total aggregate sum of Rs. 18,540-2-6 including the sum of Rs. 10,600 given to the Syndicate.

15. Thanks of the Government are specially due to the Syndicate in undertaking the heavy task of organizing the Exhibition and making it an entire success; to the donors of the various prizes; and finally to the City Municipality for their help and co-operation and the Baroda Prant Panchayat and Sidhpur Municipality for their readiness in donating sums of Rs. 500 and Rs. 100 respectively out of their fund to meet the Exhibition expenses, and also to the Baroda Boy-Scouts for their splendid help to the Exhibition.

16. Another Exhibition that has heavily taxed the energies of this Department during the year was the Imperial Exhibition which was declared open by His Imperial Majesty the King-Emperor on 23rd April 1924 at Wembley.

When the Baroda Government decided to participate in this Exhibition it was fully conscious of the heavy responsibility entailed in the commitment. And consequently a special Committee was appointed for collecting the materials and samples for this Exhibition with R. B. Govindbhai H. Desai as President and the Director of Commerce as Secretary. As a necessary corollary this Department was made directly responsible for worthily

representing the reputation of the State. The best articles have been selected and sent to the Exhibition in January 1924 which reached in good time before the Exhibition was opened.

17. Mr. Dotivala, who was deputed to England to take a course of Economics at the London University was specially entrusted with the work of equipping and erecting our Court, with the display of our exhibits and with the general management of the Baroda Court under the able and sympathetic supervision and guidance of Mr. Jardine, at one time the Baroda Resident.

18. The Exhibition is to last for six months, that is to the end of October 1924. A detailed report therefore, is not possible. However, it has cost us a little over Rs. 28,000 so far.

19. It was for the first time that the Baroda State was officially requested to send some of its artistic articles along with agricultural and forest products to the Padua Fair. The Curator of the Museum, Mr. Ganguli, has sent some articles to the Fair.

There were also for the first time held two Exhibitions of Women's work in Baroda by two Women's Organisations, viz. Shri Chimanabai Samaj and the Bhagini Samaj. The success of these two Exhibitions is entirely due to the personalities of Princess Kumla Devi and Lady Dhanvantaguri.

III. INDUSTRIES.

20. Industrial Depression that is threatening the whole of the world for the last four years continued unabated during the

whole year and the financial stringency, that was the direct outcome of the serious slump in trade and unbalanced state of finance all over the world has aggravated the situation. The complex problem of relieving the present serious position and restoring the days of normal prosperity is proving very acute to tackle. It is no wonder then if our State has made no marked progress in promoting new Industries during the year under report.

21. The Industrial policy so wisely chalked out by His Highness's Government aims at stabilizing and side by side promoting new Industries. Thus, on the one hand, it consolidates the old Industries and, on the other, attracts new Industries by offering special concessions and facilities and making widely known the Industrial utilities to which the natural resources of the State be profitably put. As a direct result of the Policy, Government have realized a revenue of Rs. 2,59,926-9-6 in the form of cotton excise duty and Rs. 4,766-10-7 as royalty on cement making a total of Rs. 2,64,693-2-1 during the year under report as against Rs. 2,00,405-5-10 in the previous year. Our Industrial Policy is all along so consistent and our desire to help capitalists is so keen that promoters and investors alike do not hesitate to take interest in any sound proposition in this State.

22. In spite of the menacing Industrial situation our old and well established industries did fairly good work during the year. Their profits have somewhat dwindled but most of them have declared dividends from 4% to 25%.

23. Out of the five Mills that were under construction during the last year, three have actually commenced work. The opening ceremony of the Kadi Laxmi Cotton Mills was

performed by Sheth Hararwala of Sidhpur on 31st March 1924, while the Sidhpur Mills were formally declared open at the beginning of the current year. The New Baroda Mills under the efficient management of Messrs. Zaverchand Laxmichand Brothers & Co. have commenced the working during the year under report and it has a very bright future before it. All these Mills are Spinning Mills and have added 45,000 spindles to the Textile Industry of the State. The Agents of the Kalol Cotton Mills, Limited, are erecting a Spinning Shed by adding 10,000 spindles in addition to their Weaving shed. The Kalol Spinning and Weaving Mill is still under construction. The construction work of the Billimora Khatau Mill is now completely over, but the Agents have not been able to take delivery of the machinery and equip the same through paucity of sufficient funds. However, it is hoped the Mill would be in a working condition during the course of the current year. It is gratifying to note that of the new Mills that have started work, the two Petlad Spinning Mills are the first to declare dividends.

24. The Modern Chemical Works for which working capital was provided last year Chemical Industries. continues to manufacture Sulphuric and other allied Acids and it is thought that the removal of the heavy Import Duty on Sulphur would afford the concern an opportunity to work on a profitable basis. Besides, Dr. Naik's services were made available to the concern in advising them on technical matters. But it is to be regretted that the concern is not able to make both ends meet owing to the ruinous competition. Unless, therefore, the prospects improve and the management becomes more efficient, Modern Chemical Works have little chance of working successfully.

The concessionaires of Dwarka and Kodinar Alkali projects have not been able so far to launch their

schemes into operation and it is feared under the present financial stringency the schemes are not likely to materialise in the near future.

25. The Dwarka Cement Company manufactured during the year 1923, 25,422 Tons of cement and has paid Government during the period Rs. 4,766-10-7 as royalty. The factory is not as yet working to its full capacity ; and though prospects for Cement Industry are very bright, the Company is not able to run the factory on a profit earning basis owing partly to the absence of adequate working capital and the efficient and economical management.

The project of the Kodinar Cement Works has not materialized as yet.

The Ransipur China Clay Works have not been started, but there is every possibility of completing the preliminary arrangements during the current year.

26. Owing to the unfavourable conditions of trade as detailed above, no large company was promoted during the period but the year was not altogether barren of results. Three Ginning factories at Dabhoi and one Ginning factory and a Cotton Press at Vyara and Ginning factories at Amroli and Tankhala, one Cotton Press at Bodeli were promoted during the year. A small Brass Utensil Press factory at Visnagar has also been started.

The Bone Mill that has been recently started at Baroda deserves, however, special mention. It is a unique factory of its own kind on this side and now freed from the terminal tax, it should be capable of producing good manures besides Bone meal.

Shree Ghanshyam Pharmacy, Limited, also started its operations during the year. It manufactures Ayurvedic medicines on a large scale and considering the keen interest created among the public as to the efficacy of the Ayurvedic medicines prepared under the expert directions, the concern has an assured prosperity before it.

27. With the growth of the Cinema Film Industry in India, the importance of Baroda Cinema Industry. with its palatial buildings, extensive parks and other facilities is being gradually realized by the Cinema Film producing concerns of Bombay and other places. In other words all the essential facilities for film taking are available here ; and during the year under report such facilities were made available to the Saraswati Film Company; the Swastika Film Company and to the Asoka Cinema Pictures, all of Bombay, in the production of their photo-plays. The Eastern Film Company, recently started at Baroda for producing Cinema films and photo-plays, was also helped in this respect.

28. At the end of the previous year one application for a loan of twenty lacs of rupees Loans to Industries. was pending. During the year under report, three new applications for loans to the total amount of Rs. 40,000, were received. Out of these four applications, two for the total amount of Rs. 27,500 were sanctioned and availed of. The application for a loan of twenty lacs, that was under the consideration of the Government, was not sanctioned and the one for a sum of Rs. 10,000 was rejected by the Finance Committee. No application for loans for industrial purposes was pending at the end of the year.

29. The Departmental scheme for giving loans to State officers for building houses of Building loans. their own was tentatively sanctioned

by the Government in 1917 for two years only. This scheme thus became inoperative in the year 1919. During the year under report, the scheme was again revived on the representation of this Department and it is to remain in force for a period of three years. Two applications were received soliciting the monetary help afforded by the scheme. Of these two applications, one for a loan of Rs. 6,000 was sanctioned but the party did not avail himself of it. The other for a loan of Rs. 5,000 was pending at the end of the year.

30. Besides the applications for loans, 8 applications for various kinds of concessions and facilities under Section 15 of the Rules for the Development of Commerce and Industries were received. The last year's balance was 4. Of these 12 applications, 4 were sanctioned with modifications, 6 were rejected and 2 were pending at the end of the year. The concessions granted consisted of (1) Extension of the preliminary period for concessions already granted; and (2) purchase of woollen articles manufactured by the Maharani Woollen Mills for a period of ten years by the State Departments.

31. Cities of Ahmedabad and Surat enjoy the facility of having a Public Telephone Call Office directly connected with Bombay. The Director, Telegraph Engineering, Western Circle, was addressed with a view to have a Call Office opened at Baroda. After a protracted correspondence he, at last, agreed to open a Call Office here and the undersigned is pleased to learn that the said facility has been made available to the public of Baroda from 6th September 1924.

32. Much difficulty is usually experienced in requisitioning coal direct from the collieries owing to the shortage of waggons. The Government of India have in-

Facilities for the supply of coal.

roduced the so called Priority Certificate Scheme. It is not quite satisfactory but in the absence of a better one, during the year under report waggon facilities for the transport of coal were made available to 27 concerns with the help of the Coal Transportation Officer, Calcutta.

33. This Department usually receives a large number of periodicals of commereial interest and besides has a magnificent collection of books of references specially useful to persons interested in trade and commerce. That the public may utilize to advantage these materials, a commercial Bureau with a reading room has been recently opened by the Department wherein all the periodicals and news-papers received in the Department as well as reference books, catalogues and directories are placed for the benefit of the public. It is hoped to publish a complete catalogue of books in the library of this Department at the earliest opportunity.

“Patents and Trademarks Act” which the Government has ordered the Legal Remembrancer to prepare is not as yet ready and hence the Department was unable to entertain applications, which were received in this respect.

To bring the Arts and Crafts of Baroda State to the attention of the public, a profusely illustrated pamphlet was prepared and published during the year under report. It has been very much appreciated by the public. The pamphlet will help the small artisans in pushing their products in the market and creating an increased demand for their artistic wares.

With a view to further encourage the arts and crafts of the State, a number of articles are collected by this Department and kept at the Baroda Museum for sale. Articles worth Rs. 845-15-0 were sold during the year under report as against Rs. 68-10-0 in the last year.

34. During the year under report, one application was received for the acquisition of land for factory under the Special Rules for Acquisition of Lands for Factories. Last year's balance was nil. The application was not sanctioned.

35. Six applications were received during the year under report for approval of Factory Sites. All of them were sanctioned by the local Officers concerned. None of them came within the powers of the permanent Committee for Approval of Factory Sites.

INVESTIGATION OF INDUSTRIES.

36. During the year under report, no party availed himself of the facilities afforded under this Departmental Notification for Co-operative Investigation of Industries.

37. As reported in the last annual report, the phenomenon of the occurrence of the natural gas and the analysis of the cores of the borings made on the Bhimnath ground by the Director of the Geological Survey, India, suggested the strong possibility of striking a large coal or gas field and on the strength of his recommendations further boring was continued to the total depth of 622 feet when the Deccan trap was struck. As further boring was consequently useless, the boring work has been now finally stopped.

The gas from the well in the Dewan Saheb's compound continues to appear now and again. It is contemplated to lease this area to a capitalist for prospecting.

38. According to the arrangements made with the Badische Aniline and Soda Fabrick of Germany, Prof. Shroff of the Kala Bhavan was deputed to receive practical training in dyeing and bleaching in their laboratories. Prof. Shroff has completed his course and is shortly expected back. Mr. Patel of the Kala-Bhavan has been also deputed to Research Institute, Bangalore, for prosecuting studies in Soap and Oil Technology. Arrangements have been made for his admission into the Mysore Government Soap Factory for practical training after he has finished his theoretical training in the Research Institute. Mr. Korde, who was given a loan scholarship to study Oils and Fats in Germany, has completed his course and is shortly expected back in Baroda.

39. Persons connected with commercial enterprize usually approach this Department with various problems and to offer proper advice to them in the absence of sound Techno-Chemical knowledge often proves hazardous. Dr. K. G. Naik, Prof. of Chemistry at the Baroda College, acted as the Consulting Chemist to the Department and with his willing co-operation we were able to supply detailed information on many technical points to interested parties and the efforts made in this direction have been much appreciated. As years go by, our chemical problems and inquiries are bound to increase and to do them adequate justice a well equipped Research Laboratory is essential. Dr. Naik's report is appended herewith. (Appendix I.)

40. Two applications for approval certificates were received during the year under report as against three in the previous year and they were granted. Two approval certificates were renewed during the year as against one in the previous year. No application for a Prospecting License or a Mining Lease was received.

41. As usual. Mr. S. R. Gupte's services were utilized in restocking the Oyster Beds at Gopi, Hamusar and Beyt. He was on this duty for nearly 3 weeks and has relaid about 12 lacs of Oysters. If these operations are renewed every year for a few more years and provided sufficient rest is given to the new beds, they would prove an assured source of substantial annual income to the State. The old Poshitra beds which were not auctioned for the last three years have been auctioned this year and through the indefatigable efforts of Mr. Gupte the State has realized a large sum of Rs. 16,000 for one year alone.

Mr. Gupte has also noticed a Window Pane Oyster habitat off Kodinar Coast. If his investigations are able to disclose the location of these species, we shall have trapped another source of income. Mr. Gupte's report is given in Appedix II.

42. As a result of the successful fish canning experiments carried on by this Department Fish Canning at Velan. at Velan, a party expressed his willingness to start a small Canning Factory at Velan provided the services of Mr. Dotivala were made available to him during the initial period of the factory. As however, Mr. Dotivala proceeded to London as a State scholar, no progress could be made in this behalf.

43. A series of experiments were made with Tad-palm nuts growing in our forests by Button Industry. Mr. I. Mustafi, late Button Expert, Bombay Government, with a view to manufacturing solid buttons from them. His results have been successful and very fine buttons have been prepared out of the palm nuts. Efforts are being made to ascertain the available quantity of the nuts and induce some one to start button manufacture as a Cottage Industry.

44. Investigations were undertaken to find out whether some trees in our forests
Match Industry. would supply us suitable veneer and splints for matches. Successful demonstration of the match-making machinery at the recent Baroda Industrial Exhibition has proved that some of the forest trees could be successfully utilized for the above purpose. Efforts, therefore, of introducing match-making as a Cottage Industry in the Songadh and Vyara Talukas are being made.

45. At the instance of this Department, Prof. Shevade of the Baroda College has undertaken the Botanical Survey of the State. He has just begun his work and his report on the medicinal and industrial value of the herbs and plants found in the State is anxiously awaited.

46. The question of the Baroda City Terminal Tax was engaging the attention of the Terminal Tax. Department which had to submit its views to Government. As the rates of the schedules passed in 1921 by Government were weighing down heavily upon the traders and merchants, on the representation of this Department, a new schedule of low rates was sanctioned by Government and came into effect from 1-1-24. The Municipality contended that the revenue from the Terminal Tax would be reduced to about Rs. 90,000. On the contrary, even after the exemption was allowed in the case of goods imported by the Government, the revenue for the seven months ending July for which figures are available has amounted to over Rs. 1,21,000. The figures for Goya Gate are not yet available. It is quite true, therefore, that with the decrease of rates and a concentration on a few articles the revenue is bound to increase and it is hoped

that with the advent of the Broad Gauge siding near Goya Gate by making the bonded ware-houses free from the Terminal Tax, Baroda as a distributing trade centre may be revived once more.

HAND LOOM DEMONSTRATIONS.

47. The staff of this branch consisted of a Weaving Assistant, two Demonstrators, and three Weaving teachers.
 Personnel.

48. Demonstration of the working of the improved Fly-shuttle Pit as well as Frame-loom was given at Baroda and Amreli throughout the year and at Dwarka during the latter half of the year. The Vanza weavers of Amreli have invariably adopted the Fly-shuttle Pit looms in large numbers and now very few of them have a liking for the old Pit-loom. The Baroda class was mostly used as a training school for boys and other people of the City, some of whom have taken to hand-loom weaving as an independent profession.

The Weaving Assistant supervised the Demonstration Classes and advised and helped the weavers and factory owners. He was also entrusted with the inspection of Cotton Excise under the Abkari Department.

49. The Hand-loom factory started at Sokhda was given free help of a Demonstrator for a fortnight.
 Weaving Factories.

A Power-loom factory started at Damnagar with power-looms, 12 of which are actually working with the necessary preparatory machines, was also given free help and advice and a Demonstrator was sent for a month to help the factory-owner in putting the factory in working order.

50. During the year under report, the Department introduced 18 Fly-shuttle hand-
 Looms and Warping machines introduced. looms, besides those that were independently bought and worked by weavers and others. About 12 looms were introduced by Vanza weavers of Amreli without applying to this Department. The contractor at Baroda, who supplies improved hand-looms and other weaving implements under the supervision of this Department, sold direct to the subjects of this State as well as outsiders 18 sleys, 3 Fly-shuttle Pit-looms, 19 Fly-shuttle Frame-looms and 8 Warping machines, out of which 8 sleys, 2 Pit-looms, 15 Frame looms and 7 Warping machines were supplied to the people of the Baroda State.

The Department lends free help and advice to any weaver or factory owner whether the looms are introduced through the Department or are privately bought.

Out of the above looms, only 3 were given on the hire-purchase system. There were some more applications, but as the period of sanction expired, Government has been approached for the purpose.

A Warping machine on the principal of Vertical Warping Mill was prepared and demonstrated at Amreli.

The work of the double shuttle sley was also demonstrated, as a result of which a Vanza weaver of Amreli has introduced one double shuttle sley for weaving "Sifis".

Experiments in wool weaving with finer woollen yarn were continued at Amreli. Some of the Vanza weavers have decided to introduce wool weaving and have applied for supply of good woollen yarn.

51. With a view to demonstrate improved hand-looms and other machines to the weavers, Demonstration at Vaghers and other subjects of Dwarka. Okhamandal, a Demonstration class

has been recently opened at Dwarka. Two applications for loan on hire-purchase system were received. A co-operative society among the weavers of Varvala was successfully organised.

52. Instruction in hosiery work was continued at Baroda and Government sanction was obtained for supplying Knitting machines on hire-purchase system, as a result of which one machine has been given to an applicant on hire-purchase system by the Department and another machine has been directly bought by a student.

Hosiery instruction and Knitting machines introduced.

53. The hand-spinning machines, which were sent by H. H. the Maharani Saheb from Germany and which were obtained from the Khangī Department, were demonstrated at Baroda, Amreli and Dwarka. They were also demonstrated at the special Exhibition of Women's work held in the Female Training College.

Hand-Spinning.

54. The Weaving Assistant was asked, under Government orders, to inspect the Cotton Mills under the supervision of the Excise Department. He inspected all the Cotton Weaving Mills once a month and submitted reports. He submitted several useful suggestions, some of which were put in force by the Excise Department during the year under report. As a result of his inspection and suggestions, there was an approximate increase of about Rs. 7310 in the Cotton Excise.

Cotton Excise Inspection.

IV. BOILER AND FACTORY INSPECTION.

55. Mr. S. M. Dighe, on 1st March 1924, took over charge of the post of the Inspector of Factories and Boilers from Mr. S. H. Thakar, who was officiating for him for the last two years. Mr. Dighe continued to hold the post till the end of the year under report.

Personnel.

56. *Boiler Inspection* :—The Department was, for a long time, contemplating to introduce of new Forms and Rules. revise the old forms regarding the calculation of strength and history of Boilers. Government of India have now introduced some new forms. Mr. Dighe has, therefore, been instructed to avail himself of the above material and to submit simple and inexpensive forms suited to our local requirements. In view of the new system of rating by Heating Surface of Boilers having been adopted by the Indian Government, the same system has been adopted here also. The new rating comes into effect from 1st of August 1924.

57. The number of private factories using steam boilers was 209 as against 198 in the preceding year, while the number of Private Factories. of boilers was 263 as against 240 in the preceding year. Of these 263 boilers, there were 190 in use. The following table shows the total number of boilers on the register in the last two years :—

Statement of the total number of Boilers on the Register in the year 1923-24.

Year.	No. of Boilers on Register.	To be deducted.			Private Boilers.	Private Boilers			Remarks.
		Government Boilers.	Removed or discontinued.	Total.		Working.	Idle.	Total.	
1	2	3	4	5	6	7	8	9	10
1922-23.	378	10	128	138	240	190	50	240	
1923-24.	403	10	130	140	263	190	73	263	

A comparative statement of private mills, factories, etc., worked by steam-power is shown in Appendix III.

58. The total income from inspection and transfer certificate fees, etc., amounted to Rs. 7,015 as against Rs. 6,740-6-7 in the previous year. The total expenditure on Boiler and Factory Inspection Establishment amounted to Rs. 6,818-12-6 inclusive of Mr. Dighe's pay not drawn since 1st March 1924 as against Rs. 5,777-5-9 of the previous year.

59. There was a serious explosion of the Disinfectant Boiler of the Bone Mills at Baroda on 9-3-1924 causing serious injuries to workmen. This was the first accident of its kind during the last 21 years. Enquiries showed that this disaster would have been averted if a safety valve and a pressure gauge had been attached to the boiler.

There were no prosecution under the Boiler Act during the year under report.

60. *Factory Inspection*:—During the year under report, the number of factories subject to control under the Act was 127 as against 120 in the previous year.

Of these, 7 were entirely new as given below:—

Name of the Factory.	Situation.
1 Spinning Mill	Kadi.
1 Cotton Press	Vyara.
3 Gins	Dabhoi.
1 Spinning Mill	Sidhpur.
1 Bone Mill	Baroda.

61. The total number of operatives employed in the registered factories was 14,981 as
 Operatives. against 14,346 in the preceding year
 and of these, 12,742 were employed in cotton industry as
 against 12,107 in the previous year. The number of persons
 employed in factories other than those connected
 with cotton industry was 2,299 as against 2,239 in the
 previous year.

There were 2,887 women and 1,529 children at work
 as against 2,732 and 1,449 respectively in the last year.

A statement of wages for skilled and unskilled
 labour in the Baroda City is given in Appendix IV.

All the perennial factories were inspected more than
 four times, the seasonal once and in few cases twice or
 more.

Periodical stoppage of work and four holidays in a
 month according to Sec. 22 were duly observed.

Sanitary arrangements, light and ventilation in factoris
 and water supply were tolerably well. Schools and
 dispensaries have been maintained by almost all Mills.

62. The number of accidents amounted to 75, there
 being 15 minor, 56 serious and 4
 Accidents and Prosecutions. fatal. Of these, 41 occurred in the
 G. B. S. Railway Workshops, of
 which 8 were serious. The rate of accidents in the Rail-
 way Workshops seems very high. It was expected last
 year that with the completion of the construction and
 erection works the causes for such accidents would be
 very few, but unfortunately that hope was not realized.

There were no prosecutions for violation or infringe-
 ment of the provisions of the Factory Act during the year
 under report.

63. It is indeed pleasure to note that the employers of labour are really keen about the welfare of their labour. They have now realized that the interests of the employers and employees go hand in hand. They are, therefore, really anxious to learn of the needs and difficulties of the labourers and are facing the problem with sympathy and indulgence. Though nothing substantial could be done in introducing further ameliorative measures owing to serious slump in trade, employees continue, on the whole, to have the advantages of these measures already in existence. Signs are visible of the efforts being made by the employers to house their labourers in spacious Chawls built near their Mills and factories and to provide them with Libraries, Dispensaries and Cheap Grain Shops. Loans are also given to employees. Still it would take a long time for Industrialists to realize that their interests would be well served by happy and thriving labouring classes.

V. ELECTRICITY ACT.

64. Mr. T. C. Muzumdar resumed his duties as the Electric Inspector from the 1st of October 1923 and he continued to hold the post till the end of the year under report. During his absence, Mr. M. H. Bhatt acted as Electric Inspector. The Naosari Electric Supply was inspected five times, Dabhoi Electric Supply twice and Sidhpur and Kadi Supply once during the year under report. Naosari Electric Supply began to supply energy to the public during the current year and the arrangements for supplying energy at Dabhoi have been now complete and the opening ceremony of the factory was performed on 9th August 1924 by H. E. Sir Manubhai.

65. In his inspection, the Electric Inspector found some defects in distributing system and Power Houses of the Naosari,

Dabhoi and Sidhpur Supply and they have been practically remedied now. The Kadi Licensee has begun to supply energy on a small scale and it is hoped the arrangements for starting the laying of mains and distributing lines would be completed during the current year. The annual returns of the Installations as also of the State Electric Works are given in Appendix V. It will be seen therefrom that the total load connected up to 31st July 1924 was 2,179½ K. W.

66. During the year under report no new application under Electricity Act was received. However, a party has come forward to start Electric Works at Pattan and it is very likely the project may materialise during the current year.

67. A draft to revise the Electricity Act was prepared and sent to the Legal Remembrancer. The same is still under his consideration. Now that almost all contemplated Electric Installations have started supplying energy to consumers, the necessity of preparing Rules under the New Act (as and when passed) with a view to enforce uniform procedure in preparing annual statements and keeping accounts, etc., is highly imperative.

VI. JOINT STOCK COMPANIES AND BENEVOLENT SOCIETIES.

68. In the beginning of the year under report, there were 92 Joint Stock Companies on the Register while 6 new companies were registered during the year under report, making a total of 98 companies. Of these, 10 companies were cancelled thus leaving 88 companies on the Register at the end of the year. vide Appendix VI. (A). Of these, 87 were public companies and the remaining one was a private company. Appendix VI. (B) gives a list of the companies cancelled during the year under report.

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69. The new companies may be classified as under :-

Classification of new Companies.

I. Banking, Loan and Insurance.	
(b). Insurance	4
III. Trading and Manufacturing.	
(b). Printing, publishing and Stationery	2

Total ... 6

Of the 88 companies on the Register at the end of the year, 10 companies went into liquidation during the year under report. The total number of companies under liquidation was 20 during the year under report. The list of the companies under liquidation is given in Appendix VI. (C).

70. The following table gives a comparative statement of the authorized, subscribed and paid-up capital of the companies at the end of the previous year and the

Capital of the Companies.
year under report :-

At the end of the year.	No. of Companies on the Register.	Capital. (Rs.)		
		Authorised.	Subscribed.	Paid-up.
1	2	3	4	5
1922-23 ...	92	10,21,23,900	4,47,53,310	2,97,97,889
1923-24 ...	88	9,99,03,900	5,41,09,050	3,74,81,214
Net increase (+) or decrease (-) during the year under report.	} -4	-22,20,000	+93,55,740	+76,83,325

It is evident from the above figures that in spite of the decrease in the number of companies and the authorized capital owing to the winding up of new and unsound concerns, there has been a considerable increase in both the paid-up and subscribed capital. The increase in the paid-up capital of nearly 77 lacs of rupees is quite worthy of notice. It perfectly demonstrates that the increasing confidence of the public in sound and well established concerns is certainly due to the benevolent commercial policy of the State and hence the established industries in the State do not find it difficult to collect fresh calls. A classified abstract statement of these 88 companies is given in Appendix VI. (D).

71. Nine mortgages to the total value of Rs. 22,57,000 were registered under Section 118 of the Act during the year under report.

Registration of Mortgages.

72. There are seven foreign companies which have their Head Offices outside Baroda State and have their established places of business in the Baroda State and file documents under Section 284 of the Act. These were (1) The Ahmedabad Advance Mills, Ltd., (2) The Dwarka Cement Company, Ltd., (3) The Tata Construction Company, Ltd., (4) The Bombay Hume Pipe Company, Ltd., (5) The Virgin Mills, Ltd., (6) The Kadi Ginning Pressing and Oil Mill Company, Ltd., and (7) The Karoli Ginning and Pressing Company, Ltd.

Foreign Companies.

73. The total number of documents registered during the year under report was 230 as against 223 in the previous year. A list of these documents is given in Appendix VI. (E).

Number of Documents registered.

74. The total receipts for the year from the Joint Stock Companies amounted to Rs. 671-13-0 as against Rs. 908-12-0 in the previous year. Appendix VI. (F) gives the amounts received under different heads.

75. There were seven prosecutions during the year under report under the Companies Act for not filing the Balance Sheets etc., in time for registration. Two cases were pending at the close of the previous year. Of these nine prosecutions, in three cases the parties concerned were fined for their failure to submit the documents in time for registration, while six cases were pending before the Court.

76. At the close of the previous year, there were 19 Certified Auditors on the register. Of these, 16 were given permanent certificates and 3 were given temporary certificates. During the year under report, one permanent certificate was granted and the period of a temporary certificate was extended in one case. Thus there were 17 permanent Auditors and 3 temporary Auditors on the register at the close of the year.

77. There were 25 Societies registered under the Benevolent Societies Act at the end of the previous year. No new Society was registered during the year. One Society had submitted its papers for registration but the Rules and Bye-laws of the said Society were sent to the Legal Remembrancer to have them properly examined and amended, if necessary, under Dewan Order No. 75/34, dated 5-12-23 but these papers are still under the consideration of the Legal Remembrancer and hence the Society has not been registered.

Of these 25 Societies, three were cancelled thus leaving 22 Societies on the register. Appendix VI. (G) gives a list of these Societies.

Of these 22 Societies, 14 were Caste Institutions for regulating social customs; 1 for the promotion of Industry among Women; 3 for Encouragement of Education and Prevention of Child Marriage; 2 for Procuring Land and Estate for Christian Parsonages, Mission Premises, Medical Homes, etc., while 2 are Homes for the Destitute

78. The total number of documents registered during the year under report was 15 as against 10 in the previous year. A list of these is included in Appendix VI. (E).

79. There were no receipts for the year from Benevolent Societies as against Rs. 10 in the previous year.

80. During the last two years several new companies, started on Joint Stock basis, have been registered in the Baroda State. They are not commercial concerns but they are promoted with the laudable object of helping their members at such auspicious occasions as marriage, etc., by way of financial relief. Strictly speaking, such companies do not come under Joint Stock concerns. Under the existing Act, the Registrar is unable to safeguard the interests of those members who join such concerns with an eye on the offered financial help. Some special Rules ought to be prescribed for preparing accounts, etc., of these concerns and entailing on them the necessity of investing their funds with the Government. However, this question is being considered from all its aspects with a view to preparing some specific Rules for these concerns. It is also found that the Joint Stock Companies do not submit their Accounts in time for registration and apparently try to ignore their responsibilities. A great vigilance is, therefore, being exercised and in some cases prosecutions have been

launched against the parties. It is hoped such drastic actions will have some effect in checking the formation of concerns with the invidious object of cheating the poor and ignorant public. These prosecutions are proving protracted affairs as excessive delay is caused in serving summons on the Directors who usually reside in the British Territories. Many cases are, therefore, pending. It is, therefore, advisable to make it binding on the concerns to elect on the Board of Directorate at least one-third the number of Directors who live in the Baroda State Territory and have vested interests therein. Under the present Act, no such restriction can be imposed.

VII. PRESS AND STATIONERY.

81. Mr. K. R. Dotivala worked as Assistant Director of Commerce and Industries, Press and Stationery Branch, till 21-9-23 after that Mr. B. T. Kale was looking after the work.

Mr. M. H. Bhatt returned from the Electrical Department on 2-10-1923, and began to attend to organising the new State Press in collaboration with Mr. Kale. When the new Press started on 1-4-1924, he began to work as Works Manager and Mr. Kale continued to work as Office Manager.

82. Printing for all the Departments was as usual done by the Contractor upto 31st March 1924. The new State Press started on 1st. April 1924 and all Government printing is being done there.

83. The bills of the printing Contractor for the period upto 31st. March amounted to Rs. 1,03,498-3-7 and those for the work done at the State Press since then upto the end of the year amount-

The amount of the bills upto the end of July 1924.

ed to Rs. 3,400-7-5. The total comes to Rs. 1,06,898-11-0 as against Rs. 83,712 for the last year. The total value of works completed at the State Press during the year, bills whereof are yet to be made, comes to Rs. 22,924-5-3 including paper.

84. The increase in the work as shown in the subsequent paragraphs well accounts for the increase in expenditure over that of the last preceding year. Work increased by about 50 p.c., while the increase in expenditure is only 20 p.c., All the form work was completed and bills paid off in the year well accounts for this increase.

85. Work done from outside Presses by various Departments comes to about 426 Cost of work done from outside Presses. forms at a total cost of Rs. 5,754-15-4, which at our scheduled rates would come to Rs. 4,463-9-2.

86. Total number of books and forms printed during the year comes to 1,37,98,792 as Total number of Books and Forms printed. against 92,01,245 in the previous year.

87. The Printing Contractor was as usual given Rs. 34,000 advance, i.e., about 75 p.c. Facilities to the Contractor. of the total face value of his bills pending the checking of these bills. No other concession was given to him during this year.

88. This year Messrs. Trivedi Brothers secured the Stationery Contract. contract to supply stationery to all the Offices in the City at a discount of $\frac{1}{2}$ p. c. With a view to see how the supply of stationery to all the districts can be worked, a special condition has been made in the next year's contract making it compulsory on the Contractor to supply stationery and other articles at

scheduled rates plus packing and freight on requisitions from district offices who have, however, the option to purchase elsewhere.

89. The small Secretariat Press which had evolved into a modest little Printing House by the end of the last year with a staff of 1 Supervisor, 15 Compositors, 1 Pressman, 2 Bawlers, 1 Clerk and 1 Peon was removed from the Secretariat basement to the New State Press Building and steadily grew into this big concern (The State Press) employing a staff of 2 Supervisors, 45 Compositors, 8 Machine minders, 4 Binders, 2 Proof Pressmen, 1 Mechanical Fitter, 1 Mistri (Carpenter), 1 Die-Stamping Operator, 1 Rubber Stamp Maker and 43 Miscellaneous service staff, including a waterman and a sweeper, with a monthly wages bill for Rs. 2,363 for this staff and Supervision (Clerical) charges Rs. 699 (including the pay of the Works Manager).

90. Total foolscap pages set up from April to end of July in the State Press are 4,276½, total number of impressions on the various machines for the same period is 13,04,370, and the total books and pamphlets, etc., bound are 6,727 excluding the Adnya Patrika.

91. It is too early yet to arrive at any definite unit cost for the various operations at the Press, properly allocating rent, light and power, supervision charges and sundries, which need a full year's working.

92. The Type-Foundry has been very busy casting types for use at the Press and the total weight of all sizes of types and other type setting accessories comes to 262½ Cwts. Only recently Dr. Naik, Professor of Chemistry at the College,

was consulted about the best method of mixing the various metals for the type metal alloy and it is expected a very serviceable and practical suggestion would come forth reducing the cost of wastage in the mixing.

93. Government had under their Order No. 11/3 dated 24-1-23, sanctioned a total sum of Rupees two lacs, to organize the Press, out of which Rs. 49,656-9-4 have been spent on Type Casting and Type Casting Accessories, Rs. 26,143-0-6 on furnishing the Type setting room, Rs. 61,443-10-6 on Printing Machines and Furnishings, Rs. 20,404-14-0 on paper cutting machines and binding accessories thus leaving a balance of Rs. 42,351-13-8 on hand for further equipment which is very essential and imminent. (Appendix VII.)

94. Except the big and very complicated machines which, however, cost nearly Rs. 80,000. all minor machines, equipments and furnishings were got made from either Bombay or local manufacturers; in certain cases models were imported from abroad which were improved upon here to suit our requirements.

95. No scheme would be successful without some kind of standardization of articles to be used by the various Departments. Government were approached for orders so as to enable this Department to start a small Stores Department by starting on a small scale the purchase of stationery articles including paper. All along there was no idea of competing with the local traders but simply to purchase the best articles with minimum cost. The whole question has now been referred by Government to the Accountant General for final submission so as to enable Government to know if the scheme would be a financial success.

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In the meanwhile, this Department secured the sanction of Government to standardize type-writers and cycles to be used by Government Departments so as to secure good quality and protect the Departments against wide fluctuations of prices. During the year under report, the number of cycles and of type-writers bought, under this arrangement, came to 7 and 12 respectively.

96. Both Messrs. Bhatt and Kale have, as usual, worked hard and intelligently and Good work of the staff. made themselves useful in organizing and running the Press ; so also Mr. Narayanrao the Head Clerk, and the other staff have done good work. Under present arrangements Mr. E. E. Coombes of the Bombay Government Printing and Stationary Department inspects the Press every six months. This arrangement may have to be continued for a year or so.

VIII. REPAIR OF TYPE—WRITERS.

97. Upto the end of the last official year, oiling, cleaning, and repairing of the type-writers in Government Offices was being done by Messrs. Warden and Company of Bombay. This involved much expenditure to Government and consequently a proposal was submitted to Government to have the repair work done under the supervision of the Kala-Bhavan Workshop Superintendent. This proposal was sanctioned and the work of oiling, cleaning, etc., was entrusted to the Kala-Bhavan Workshop. On the whole, the work has been satisfactorily done. The earnings and expenditure, during the year under report, are Rs. 3,315 and 1,884 respectively.

98. It is, however, found that some Departments do not favour the idea of cleaning and oiling all their machines four times in the year. They allow a few of Oiling and cleaning must be compulsory.

their machines to be oiled and cleaned, perhaps with a view to effect economy. But this practice defeats the very object for which oiling and cleaning is to be made. Oiling and cleaning of machines usually lengthens the age of the machines and besides keep them in proper working order. So the beneficial practice of having all the machines oiled and cleaned once every three months must be strictly enforced. The Report of the Workshop Superintendent is appended herewith. (*Vide* Appendix VIII.)

IX. STATISTICS AND MISCELLANEOUS.

99 The following work of statistical nature was done during the year under report :—
Work done.

- (1) The Statistical Abstract of the State for the year 1921-22 was published and the same for the year 1922-23 was compiled and sent to the Press.
- (2) Rail-borne Trade Statistics received from the various Railway Companies were compiled and kept in Office for reference.
- (3) An Educational Survey of Karjan was made and the results published in a special bulletin.
- (4) A bulletin in Gujarati on the Arts and Crafts of the State was prepared and published.
- (5) A Wages Census of the Textile Workers was taken in co-operation with the Bombay Labour Officer. The figures for Baroda will be shown separately in the Bombay Presidency Report to be issued by the Labour Office.

- (6) An Economic Survey of Sankheda is under preparation.
- (7) A Survey of the Cotton Spinning and Weaving Mills and also of the Tanning Industry are under compilation.

100. Mr. R. S. Mane Patil who was deputed to England and other continental countries to study the problem of Agricultural Holdings in its various aspects, submitted a report, on his return, with definite suggestions to the Government for remedying the evil of small and scattered unproductive holdings. The report has been published and the whole question was submitted to Government for final orders.

101. Realizing that the economic salvation of agricultural classes lies in some such prohibitive measures but apprehending perverse opposition to the idea in the absence of practical demonstration to persons with some stake in the country, of the good effects the system of consolidation is having on the agricultural classes in the Punjab, the Baroda Government deputed along with Messrs. Mane Patil and Sevaklal Parikh, three influential persons, conversant with the unsatisfactory conditions of the cultivators in the Raj and having good influence over them, to Punjab to study the problem in its application there with a direction to formulate their own proposals afterwards on the strength of the materials supplied by these members, Government has drafted very recently a bill for putting a stop to fragmentation of lands and public criticism on it has been invited.

102. The proposals of the Committee appointed to devise a workable scheme for insuring the lives of Government servants have been approved by His Highness State Insure.

the Maharaja Saheb. Rules and Regulations and Premium tables relating to the scheme were published, under Government Orders, in the Adnya Patrika and the suggestions from the Government servants were invited. All the papers have been forwarded to the Legal Remembrancer for approving the final draft.

103. The whole technical education is controlled by the Education Department. Only Technical Education. the peripatetic demonstrations of Hand-loom Weaving are given by this Department. It is hoped to publish a list of the various institutions imparting technical instruction of some kind or other in the State.

104. During the year under report, following Acts and Rules were drafted and sent to Drafts of Rules and Acts. the Legal Remembrancer :—

- (1) Boiler Act.
- (2) Commerce Department Rules.
- (3) Provident Societies Act.
- (4) Rules under Companies Act, and
- (5) State Insurance Rules.

In addition to these, the Legal Remembrancer has under his consideration the "Cycle Rules" and the "Electricity Act" drafted and sent to him in the previous year.

105. Leaving aside the sums realised on account of the Excise duties on Cotton cloth and royalties, the income of the Department of Commerce and In-
Income and Ex-
penditure.

industries on account of miscellaneous items and sales of the products of the Weaving Demonstrations, as well as the expenditure for the last three years is given below :—

Items.	1921-22.	1922-23.	1923-24.
1	2	3	4
	Rs.	Rs.	Rs.
Income... ..	1,877	1,431	1,581
Expenditure ...	65,758	61,402	76,586

The abnormal increase in expenditure in the year under review can be explained away by stating that as much as Rs. 28,334 were claimed by bills on account of exhibits to be sent to the British Empire Exhibition, London, while Rs. 10,600 had to be spent on the Industrial Exhibition, Baroda, 1924. Thus the net expenditure comes to Rs. 37,652.

106. *Conclusion* :—The staff has worked well and loyally. The previous incumbents of the post had the advantage of tried and trusted services of the General Assistant, Mr. Dotivala, now on deputation to England, and hence the undersigned feels bound to note with pleasure the excellent work done by Mr. P. M. Vin, the Head Clerk, but for whose prompt despatch and thorough understanding of the problems and questions to be tackled the undersigned would have been very much handicapped. Mr. T. P. Adalja, as usual, worked with enthusiasm and vigour. The Director also takes the

Good work of the staff.

opportunity of tendering his most respectful thanks to H. E. Sir Manubhai and R. B. G. B. Ambegaokar for the unfailing support and useful suggestions given from time to time in facilitating the work of this Department.

BARODA,

dated 14th October 1924.

S. M. PAGAR.

Director of Commerce & Industry.

Appendix I.

To

The Director of Commerce and Industry,

Baroda State,

Baroda.

Sir,

In reply to your letter No. 424 of 1924 dated Baroda, 29th July 1924, I have the honour to supply in detail the report of the work done during the official year 1923-24 at the instance of the Department of Commerce and Industry only, in our College Chemical Laboratories.

During the official year under report, all types of work, consultations and inquiries embracing oils (mineral and vegetable), soaps, candles, tinctures, pure chemicals, Reh (Soda) deposits, imitation gems, boiler water, resins, varnishes, ores and minerals, metals and alloys (type metal,) manufacture of ferina (white starch) for manufacturing and other industrial purposes—were sent on to the College Laboratory. All attempts to meet the demands were made by our Laboratory, which mainly provides for work in pure Chemistry. This necessitated heavy pressure on the Chemistry Department, its material and staff, specially when I had to face all the problems single-handed, the solutions of which would have been unduly much delayed but for the willing co-operation of my demonstrators and advanced students.

Four samples of type-metal were sent for analysis in the beginning of the year, when as usual, we overhaul and rearrange our plans of work. The report on this analysis was soon submitted.

Mr. D. K. Karkhannis of Baroda approached me in connection with the gold and silver thread Industry, in the beginning of December. He wanted information in connection with the management of his gilding bath, specially as regards temperature, concentration and uniform deposition of the metal on silver wires. He was supplied with the desired information as far as possible. But later on it was discovered that he opened his works at Porbunder with a head office at Rajkot.

In the middle of the same month, an examination of a large number of substances had to be undertaken at the instance of the Industry Department in connection with the Baroda Industrial Exhibition, with a view to judge the relative merits of, and pronounce an opinion on the following :—

7	Samples of	(1)	Toilet Soaps.
7	"	"	(2) Washing Soaps.
3	"	"	(3) Hair removing Soaps.
2	"	"	(4) Candles.
2	"	"	(5) Glues.
11	"	"	(6) Oils.
3	"	"	(7) Disinfecting fluids.
16	"	"	(8) Chemicals.
2	"	"	(9) Varnishes & polishes.
2	"	"	(10) Tinctures.
3	"	"	(11) Turpentine.
14	"	"	(12) Resins.
3	"	"	(13) Pomades & Hair oils.
5	"	"	(14) Chemical apparatus (standardisation, durability, etc.).
2	"	"	(15) Attars.

This work taxed the Department and its staff heavily. To finish this, consultation of original literature and institution of a large number of experiment, had to be carried on day and night, for a number of days. Latterly, a few more samples were sent up for re-examination. Both the reports were submitted in due course of time. The whole work keeping us busy, almost to the middle of February.

The possibilities of working the Reh deposits of Zind, for the manufacture of Sodium Carbonate and Sodium Sulphate (with a view to utilize them in glass manufacture), were reported upon, in the month of March. The question of the preparation of imitation gems was also examined, and a report was submitted at the same time. This involved the examination of a number of specimens and samples sent with the inquiry.

An inquiry was made by the Somabhai Ginning Works at Miyagam in connection with boiler water, sometime in January. We replied to it asking them to send their water for analysis when we are ready to undertake the work which will be done now.

At the end of January, a sample of type-metal was sent for report. It was analysed and the report was submitted soon.

Early in February, the Commissioner of Education asked me, through the Principal of the Kala-Bhavan to record my opinion in the direction of future studies in oil technology by Prof. C. M. Shroff who was sent to Germany, through the Department of Commerce and Industry, after arrangements for his work at Badische Anilin Sodafabrik (Germany) were made by me. A report on the above was submitted after consultation with Principal Vora.

In the beginning of April, the Gaekwar's Baroda State Railway inquired about the analysis of the water they

use in their boilers. This was done with a view to improve the water so as to minimise the boiler scales and render it fit for drinking purpose. This work will be undertaken now as we propose to fit up our Laboratory for water analysis.

An inquiry was addressed to our Department in May in connection with the mineral oil in the borings near Bhimnath Temple. An investigation was undertaken in June, on the nature of the oil, with a view to examine the possibility of its economic exploitation and utility. This inquiry taxed the Department to the utmost, as there was neither any adequate fittings nor provisions to undertake this type of work. In spite of this, the oil was fractionated, and the more important fraction was purified, its bitter smell removed and its illuminating properties were examined. The flash point of the fraction was also determined. Report of the inquiry, was only lately submitted to the Commerce Department.

A mineral deposit mainly of the pyrites type, was also submitted with the above oil, as it was found during the boring operations, with a view to know if traces of coal-formation accompanied the mineral. A report was duly submitted.

In June, a manufacturer from Kadi wanted information in connection with the extraction of oil from *Jatropha Carcass* (Ratanjot) and the total quantity of oil contained in the seeds, a sample of which was sent with the inquiry. The required information was reported to the Commerce Department after necessary experiments.

Early in July, a sample of metal was submitted for investigation as to the quantity of metallic antimony contained in it. The results of inquiry in this connection were duly sent.

I was asked to visit and inspect the Modern Chemical Works with a view to advise them in connection with certain technical problems, arising during the course of some new experiments that the manufacturers were undertaking. I visited the Works during the latter part of July. I find that in the interest of this industry, a number of control experiments should be carried out to fix a proper proportion between the raw materials and the yield. It is also necessary to ensure that all the Sulphur burnt is converted, as completely as possible, into Sulphuric Acid. There should be more efficiency and control in the working. All possible scientific help should be rendered to the Works to enable them to take a fair chance of standing against the ruinous competition in the market.

We are awaiting the water from Kadi Laxmi Cotton Mills which the latter desire to be analysed for boiler purposes, as per letter No. 1141 of 19-7-24 of the Commerce and Industry Department.

The Director of Commerce and Industry requested me to undertake a series of experiments in the College Chemical Laboratory, to investigate the best conditions for the manufacture of type-metal for casting types for the Government Press, Baroda. We are all busy preparing a number of samples of different kinds of type-metals and analysing them subsequently, with a view to finding out the one most suitable for our Press. We have been successful in producing type-metal-gram to gram-on the total weight of the mixed metals, which could not be done so far in the Press Foundry. We prepared two samples. From these samples, types were cast. They are undoubtedly superior to those manufactured in the Press Foundry and are generally approved to be suitable. With a few experiments, we could make as good types as, if not better than, those supplied to us as samples from Messrs. Caslon & Co. of London. The types cast from the type metal prepared by

our College, would cost about from 3 as. to 5 as. per lb. less, than when otherwise done. If the Central Press would give us the work, the State would save about Rs. 5,000 (five thousand) per annum, calculating 2,500 lbs. per month as the demand of types, by the Press.

The above will give an idea as to the quantity and variety of work which had to be undertaken by the College Chemical Laboratories which are mainly fitted for student's work. The number of students in Chemistry is increasing year after year, and this year it has reached the limit of one hundred and fifty. Over and above this, we had to refuse admission to many more. We have also a number of Research students, whose work is being published in the form of Research papers in the Journal of the Indian Chemical Society. This keeps every available place in the Chemical Laboratories occupied from morning 10 A.M. till 5-30 P.M. And the work of Industry Department has to be done either before 10 A.M. or after 5-30 P.M. It is, therefore, becoming *increasingly difficult* to carry on the work of the State in this limited place, with limited resources, and with none *bound* to help me. One fail to understand, how, we can escape from the growing and inevitable conviction brought home to us, that if the State is to help the development of its industries (for which help, inquiries are pouring in), an Industrial Laboratory will soon have to be provided for. But before one could take that step, I would venture to suggest the evolution of such a laboratory from the College advanced Laboratory, with a couple of assistants to do the work, and a specially fitted room set apart for the purpose, financially supported by the State, as an integral part of the College.

(Sd.) K. G. NAIK.

**List of Work done for the Commerce &
Industry Department.**

—:0:—

As per Letter

Work done.

No. dated—

- (1) 2248 of 31-7-23. Complete qualitative and quantitative analysis of (4) four samples of Type metal estimated—S n, S b, P b, in each.
- (2) ... 11-12-23. Mr. D. K. Karkhanis, a native of Baroda, called here to consult me on some problems of "Gold and Silver Thread Industry" now at Porbunder.
- (3) ... 18-12-23. Examination of the following substances sent from the Baroda Industrial Exhibition for Examination and report :—
- | | |
|----|------------------------------|
| 7 | Samples of (1) Toilet Soaps. |
| 7 | " " (2) Washing Soaps. |
| 3 | " " (3) Hair-removing Soaps. |
| 2 | " " (4) Candles. |
| 2 | " " (5) Glues. |
| 11 | " " (6) Oils. |
| 3 | " " (7) Disinfecting Fluids. |
| 16 | " " (8) Pure Chemicles. |

- | | | | |
|----|---|---|-------------------------------|
| 2 | „ | „ | (9) Varnishes & Polishes. |
| 2 | „ | „ | (10) Tinctures. |
| 3 | „ | „ | (11) Turpentine. |
| 14 | „ | „ | (12) Resins. |
| 3 | „ | „ | (13) Pomades, Hair Oils, etc. |
| 5 | „ | „ | (14) Chemical Apparatus, etc. |
| 2 | „ | „ | (15) Attars. |
- (4) ... 9-1-24. Consultation in connection with Boiler water by the Somabhai Ginning Works, Miyagam.
- (5) 840 of 28-1-24. Analysis of Type metal as above (1).
- (6) 967 of 14-2-24. Report on the Process of available market for, estimates of starting a factory for, the manufacture of 'Ferina' (white starch) from Potato, by a merchant from Pattan.
- (7) 844 of 19-2-24. Examination of some soaps.
- (8) 919 of 27-2-24. Report on the possibilities of working (1) the Reh Deposits of Zind with a view to manufacture Sodium Carbonate and Sulphate for use in the manufacture of glass, (2) the Preparation of imitation gems after examining a number of samples submitting with the latter.
- (9) ... 27-2-24. Consultation with Principal Vora as desired by the Commissioner

of Education in connection with the studies in *Oil Technology* by Prof. C. M. Shroff of the Kalabhavan, sent at the instance of the Department of Commerce and Industry.

- (10) ... 28-2-24. Report on the above sent to the Commissioner of Education.
- (11) 1104 of 3-5-24. Inquiry in connection with the mineral oil found near Bhimnath Temple.
- (12) 1131 of 24-6-24. Report on the Economical Utility and exploitation of the mineral oil submitted after examining its nature, fractionating the same, purifying it and studying its properties.
- (13) 1131 of 24-6-24. Report on the Examination of the Mineral deposit found with the above.
- (14) 184 of 1-7-24. Report on the extraction and estimation of the total quantity of the oil contained in the seeds of *Jatropha Carcass*, as desired by a manufacturer from Kadi (His letter dated 26-2-24).
- (15) 290 of 1-7-24. Report on the antimony content of a sample of metal or alloy submitted.
- (16) 1122 of 26-6-24. Visited and inspected the Modern
27. Chemical Works on the 27th
and 4-7-24. July 1924 to advise in connection with certain technical pro-

blems arising during the course of some new experiments that the manufacturers are undertaking.

- (17) 1141 of 19-7-24. Inquiry in connection with the water used for Boiler purposes from the Kadi Laxmi Cotton Mills.
- (18) 11-7-24. The Director of Commerce and Industry decided (in consultation with me) to have the manufacture of Type-metal investigated at the College Laboratory and Experiments in that connection are in progress.
- 4099/80 Govt. Press 16-7-24.
1141 of 23-7-24. 5210 Govt. Press.
26-7-24.
" " 2-8-24.

Appendix II.

AMRELI.

13th July 1924.

From

S. R. Gupte,

Abkari Superintendent,

Amreli.

To

The Director of Commerce and Industry,

Baroda.

Sir,

I beg to submit the report of the work done in Okhamandal in connection with the fisheries and recommendations thereon.

The Government having approved my last year's suggestions, sanctioned a sum of Rs. 2,000 for continuing the culture of W. P. Oysters and to expedite the matter and with a view to saving a lot of unnecessary expenses of travelling and other allowances, I was transferred from Vyara to Amreli as a District Abkari Superintendent. This is a convenient arrangement as it eliminates inconveniences both to me and to the Government. Had I been at Amreli last year, the Government probably would have realized a large income from the fisheries. This loss may be chiefly accounted for my being placed at Vyara where in the absence of pearl dealers my activities as a fishery officer remained unproductive.

Early in February, the arrangements were complete to resume the transplanting operations but owing to

pressure of work at Amreli and severe cold in Okhamandal the operations had to be delayed for a fortnight. From the third week of February, the weather conditions were found to be suitable and from that time the operations were started and continued till the first week of May.

Selection of beds.—Before commencing the relaying of oysters, it was necessary to select the bottom congenial for the growth of the oysters. Muddy flats between Aramra and Padli, having all the advantages, were selected for the purpose. This area, moreover, is extensive and if completely relaid with oysters, would be as valuable as Balapur.

Inspection of beds.—After selecting the place for relaying oysters, the natural beds off Mulvale wherefrom the oysters were to be transplanted at Aramra-Padli were inspected to determine the density and growth of the oysters. Luckily they were found to be thickly scattered all over the areas from Poshitra right upto the Khatumba frontier. This was undertaken just to verify the results of the last year which revealed the existence of this species (mature oysters) in abundant quantity. A few oysters that were dissected showed that they contained pearls in paying quantity. These facts were laid before the pearl merchants at Dwarka, Amreli and Porbandar and every information regarding local labour, selling and cost price of pearls per tola was given to them. And this business being lucrative, offers came from them to get the fishing contract whereupon the auction was held in May last with the result that the Government realised Rs. 16,000 for one year (excluding the revenue from chank fishery which has yielded Rs. 5,600 for three years)—a record income since 1915. It would not be deemed a self-praise, if I venture to say, that this result was in some measure due to my efforts. In this connection, I beg also to state

that but for your and Colonel Shivrajsing Sahab's whole-hearted support my efforts would have been unavailing.

Besides this concrete gain to the Government, the fisheries in Okha have a different and humane purpose to serve. It serves as a relief work in times of famine which occur too very often in that unhappy land and whereon as many as 3,000 (three thousand) men per day can be employed and to this extent the Government may be free from anxiety to give the poor the employment which in the absence of fisheries would cost thousands of rupees to the Government. The present year is one of intense suffering to the people of Okhamandal. The opening of this new source of employment, therefore, comes to them as a blessing in disguise. I am happy to state that by now over 1,000 (one thousand) people are working in this industry.

The inspection also brought to light the heavy fall of spat off Mulvale, which by the time of transplantation grew into young oysters. Owing to this fact, price per 100 was cut down from 4 annas per 100 to 2 annas per 100, and owing mainly to this fact we were able to relay a little over one million oysters at a little cost of Rs 1,875.

Transplantation :—Transplantation was commenced from the last week of February and continued till the first week of May during the spring tides. That this work was done in a shorter time than usual, was due, as I have pointed out above to the abundance of oysters and cheap labour. In the absence of either of these circumstances the work would not have been satisfactory as was the case last year, when only 3 lacs of oysters were relaid at a cost of Rs. 1,500. This year new areas were taken up for further extending the field of new beds. This consisted of muddy flats from Padli to Aramra an area fairly large having $(2 \times \frac{1}{2})$ sq. miles. Further more additional places in Balapur having an area of $(\frac{1}{2} \times \frac{1}{2})$ sq. mile were stocked with oysters. The following table shows the oysters realid thereon: —

Name of the Farm.	No. of oysters relaid.	Age.
1	2	3
Balapur Farm.	4,00,000	4 to 6 months.
Aramra Padli.	7,85,000	4 to 6 months.
Total ...	11,85,000	

Here the oysters are laid between low water lines of spring and neap tides so that they cannot be exposed to the Sun for a long time.

Examination of Oysters of Balapur and Kiu Farms:—Some oysters were dissected and were found to be in good condition. It is satisfactory to note that the Contractors demand the inclusion of Balapur farm in the lease but as yet it is premature to do so. For as yet the oysters besides being not stocked there in enough quantity are not sufficiently old to be picked up and also we want to get as many spatfall as possible from them. Under these circumstances, it is not advisable to hand over the beds to the Lessee. Premature fishing would cause depletion to an extent beyond repair.

Recommendations:—(1) I advise the Government to continue the transplantation of oysters with a view to stock the remaining portions of muddy flats on the north coast of Okhamandal so as to complete the stocking with oysters of the horse-shoe shaped muddy shore from Aramra to the north point of Poshitra and to further thicken the oysters already stocked at Kiu, Balapur, Hamusar, Padli and Aramra. And especially this should be done during the times of famine as this work besides its legitimate function would serve as a relief measure and as such would be cheaper than in ordinary times of good year.

(II) A rest should be given to the natural beds off Mulvale from time to time and their condition should be reported to the Director of Commerce every year whether the rest is necessary or otherwise. And as the contract is given this year, the Lessee is likely to fish undersized oysters. This should, as far as possible, be prevented. Twice or thrice a year fishing operations should be examined and injunctions issued to the contractors and fishers to prohibit fishing the undersized ones. The good result that we have witnessed this year is partly due to the rest given since the last two years and partly due to the size limit which had been continuously insisted upon by me while I was in Okhamandal as Fishery Assistant. These safeguards are necessary for the well-being of the oysters and if continued in future would ensure the steady revenue to the State.

If these recommendations are accepted by the Government, I may be immediately informed to put them in operation.

I beg to remain,

Sir,

Your most obedient servant,

(Sd.) S. R. GUPTE,

Abkari Superintendent, Amreli.

N. B.—

During my inspection of Kotda (Kodinar) Naka, while inquiring about the valuable shells, I was shown a live oyster which turned out to be nothing else than Window-pane-oyster. Further inquiry revealed the existence of the habitats of this species in the territory in Baroda jurisdiction. To verify this, it is necessary to have a searching inspection of the places off Kotada by means of dredges and expert fishers from Okha. At present South-

West monsoon with its strong wind and tidal waves renders the inspection impossible. I mean to begin this just after the weather conditions get settled. This is not possible till October. If the thickly populated beds are located, we shall have succeeded in tapping a new source of revenue to the State.

(Sd.) S. R. GUPTE.

Appendix

Comparative Statement of Private Mills,

Serial No.	Description.	Number on Register in 1923-24.		Those started in 1923-24.	
		Facto-ries.	Bollers.	Facto-ries.	Bollers.
1	2	3	4	5	6
1	Cotton Spinning and Weaving Mills.	12	26	2	5
2	Woollen Mills ...	1	4	...	...
3	Dyeing Factories ...	6	10	...	1
4	Sugar Factories ...	1	5	...	...
5	Rice Mills ...	5	5	...	...
6	Ginning Factories ...	107	115	7	11
7	Cotton Presses... ..	27	27	2	2
8	Water Pumps ...	12	13	...	3
9	Oil Mills ...	4	4	1	2
10	Steam Launches ...	3	3	...	...
11	Stone Quarry ...	1	1	...	...
12	Mortar Mills ...	3	3	...	...
13	Tan Technical Works... ..	1	1	...	...
14	Steam Lorries ...	2	2	...	...
15	Chemical Works ...	2	3	...	...

III.

Factories, etc., worked by Steam Power, 1923-24.

Those discontinued in 1923-24.		Total existing in 1923-24.		Total number of Boilers in 1923-24.			Remarks.
Factories.	Boilers.	Factories.	Boilers.	Working.	Not Working.	Total.	
7	8	9	10	11	12	13	14
...	...	14	29	29	...	29	
...	...	1	4	4	...	4	
...	...	6	11	10	1	11	
...	...	1	5	...	5	5	
...	...	5	5	...	5	5	
2	2	112	124	82	42	124	
...	...	29	29	27	2	29	
...	...	12	16	13	3	16	
...	...	5	6	3	3	6	
...	...	3	3	1	2	3	
...	...	1	1	...	1	1	
...	...	3	3	...	3	3	
...	...	1	1	1	...	1	
...	...	2	2	...	2	2	
...	...	2	5	5	...	5	

S. C. R.

APPENDIX

Serial No.	Description.	Number on Register in 1922-23.		Those started in 1923-24.	
		Facto-ries.	Boilers.	Facto-ries.	Boilers.
1	2	3	4	5	6
16	Hind Candle Works ...	1	3	...	...
17	Ice Factory	1	2	...	...
18	Slate Pen Factory ...	1	1	...	...
19	Iron Works	1	1	...	...
20	Flour Mills	1	1	...	...
21	Tile and Pottery Works.	2	2	...	...
22	Electrical Works ...	1	2	...	...
23	Cement Factory ...	1	4	...	2
24	Bone Mill	1	1	...	...
25	Bolts and Nuts Factory.	1	1	...	...
26	Laundry ... ..	...	...	1	1
	Total...	198	240	13	25

III.—Concluded.

Those discontinued in 1923-24.		Total existing in 1923-24.		Total number of Boilers in 1923-24.			Remarks.
Facto-ries.	Boilers.	Facto-ries.	Boilers.	Work-ing.	Not Work-ing.	Total.	
7	8	9	10	11	12	13	14
..	..	1	3	2	1	3	
..	..	1	2	2	..	2	
..	..	1	1	..	1	1	
..	..	1	1	..	1	1	
..	..	1	1	..	1	1	
..	..	2	2	2	..	2	
..	..	1	2	2	..	2	
..	..	1	6	6	..	6	
..	..	1	1	1	..	1	
..	..	1	1	1	..	1	
..	..	1	1	1	..	1	
2	2	209	263	190	73	263	

Appendix IV.

Statement of Average Wages in Baroda City in 1923-24.

No.	Name.	Average in 1922-23.	Average in 1923-24.	Remarks.
1	2	3	4	5
	MONTHLY.			
1	Manager	725- 0-0	651- 0-0	
2	Weaving Master ...	567- 0-0	600- 0-0	
3	Spinning Master ...	531- 0-0	563- 0-0	
4	Engineer	299- 0-0	275- 0-0	
5	Foreman	90- 0-0	93- 0-0	
6	Fitter	60- 0-0	60- 0-0	
7	Turner	51- 0-0	51- 0-0	
8	Blacksmith...	52- 0-0	49- 0-0	
9	Carpenter	61- 0-0	65- 0-0	
10	Mason	54- 0-0	51- 0-0	
11	Fireman	35- 0-0	31- 0-0	
12	Spinner	23- 0-0	21- 0-0	
13	Weaver	46- 0-0	47- 0-0	
14	Oilman	23- 0-0	20- 0-0	
15	Pcon	16- 0-0	14- 0-0	

Statement of Average Wages in Baroda City in 1923-24

APPENDIX IV.—*Concluded,*

No.	Name.	Average in 1922-23.	Average in 1923-24.	Remarks.
1	2	3	4	5
	DAILY.			
16	Man	0-11-6	0-11-0	
17	Woman	0- 9-3	0- 9-0	
18	Child	0- 6-9	0- 6-0	

Appendix

A Statement of Electric Supply in the Baroda State

No.	Name of scheme.	Name of town or District.	Source of Power.	System of generation and distribution.	Distance of transmission line.
1	2	3	4	5	6
1	Gaekwar's Baroda State Railways Electric Works.	Baroda.	Crude Oil.	A. C. System of generation and distribution.	Within a radius of five miles.
2	The Sidhpur Electric Industrial Co., Ltd., Sidhpur.	Sidhpur (Kadi Division).	Oil engine.	Direct current and overhead line service system.	About 7 miles.

for the year ending 31st. July 1924.

Capacity of plant installed in Killo-Watts.	Total load connected and nature of same in Killo-Watts.	Maximum load recorded at Generating Station, Killo-Watts.	No. of Consumers.	Units sold per annum.	Rates charged.	Remarks.
7	8	9	10	11	12	13
1070 K.W.	603 K. W. lighting consumers' premises. 123 Fans. 1,193 Motors and transformers. 18 Street lights. 1,937	420 K.W.	718	8,22,988	0-4-0 per unit for light 0-2-0 per unit for power.	
175 K.W.	160 K. W. for lights, fans, etc. 30 K. W. for power purposes. 190	52 K.W.	257 houses, 69 single lights, 110 public lights, 6 Power pur- poses.	64,021 K. W.	As. 6 per unit for lighting purposes. As. 3 per unit for power purposes.	

APPENDIX

A Statement of Electric Supply in the Baroda State

No.	Name of scheme.	Name of town or District.	Source of Power.	System of generation and distribution.	Distance of transmission line.
1	2	3	4	5	6
3	The Navsari Electric Supply Co., Ltd.	Navsari	Diesel Oil Engine	230/400 volts 3 phase A. C. 50 cycles.	About 7 miles.
4	The Kadi New Industrial and Electrical Co., Ltd.	Kadi	Steam Engine	Direct current Overhead line.	Nil.

V.—Concluded

for the year ending 31st July 1924.

Capacity of plant installed in Killo-Watts.	Total load connected and nature of same in Killo-Watts.	Maximum load recorded at Generating Station, Killo-Watts.	No. of Consumers.	Units sold per annum.	Rates Charged.	Remarks.
7	8	9	10	11	12	13
100 K. W.	Lighting and Fans 150 K. W.	40 K. W.	310	44,725	Lighting & Fans @ 0-6-0 and Motive Power @ 2 to 4 annas per unit.	First year of operation.
10½ K. W.	2½ K. W.	2½ K. W.	...	3,600	...	.

Appendix

List of Joint Stock Companies

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
			I. BANKING, LOAN AND INSURANCE. (a) Banking and Loan. (1) Banking.	
	1 20	20- 7-08	The Bank of Baroda, Ltd.	Banking and money lending.
	16 B			
	2 36	6- 1-17	The Pratapsinh Commercial Banking Company, Ltd.	Do.
	26 B			
			(b) Insurance. (2) Others.	
3	113	3- 4-22	The Indian Marriage Society Company, Ltd.	Marriage Insurance.
	10 N.			

VI--(A).

on the Register on 31st July 1924.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
C. E. Randle, Esqr.	Baroda.	60,00,000	60,00,000	29,99,955	
Maganlal Sakhidas Patel, Esqr.	Baroda.	10,00,000	5,18,100	35,220	Under Judicial liqui- dation.
	Total (a)	70,00,000	65,18,100	30,35,175	
Messrs. B. V. Salunke, Desai and Co.	Navsari.	25,000	25,000	865	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
4	120	30-11-22	The Bharat Marriage and Thread Beneficial Company, Ltd.	Marriage and Thread Insurance.
	12 N			
5	121	21- 1-23	The General Ceremony Beneficial and Life Insurance Company, Ltd.	Marriage and Life Insurance.
	13 N			
6	127	29-11-23	The Indian Wedding Helping Company, Ltd	Marriage Insurance.
	15 N			
7	128	18-12-23	The Marriage, Life and Death Beneficial Corporation, Ltd.	Marriage Insurance.
	65 B			

VI (A),—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs Desai, Naik and Co.	Navsari.	50,000	50,000	10,000	
Messrs.Mehta, Patel and Co.	Do.	50,000	...	...
Messrs. Kasim Ahmed & Co.	Do.	20,000	...	...
Messrs. N. V. Mehta & Co	Baroda.	30,000	...	...

APPENDIX.

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
8	129	2- 2-24	The Gujarat Marriage Society, Ltd.	Marriage Insurance.
	66 B			
9	130	29- 3-24	The Baroda Marriage Society, Ltd.	Do.
	67 B			
			II. TRANSIT AND TRANSPORT.	
			(c) Motor traction dealing and manufacturing.	
10	- 82	10- 9-20	The Gujarat Transport Company, Ltd.	Carrying Passengers and Luggage by running Motor Cars.
	32 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. H. M. Bhagalia and Co.	Baroda.	25,000	...	...
Messrs. C. L. Shah and Co.	Do.	50,000	...	...
	Total (b).	2,50,000	75,000	10,865	
	Total (I).	72,50,000	65,93,100	30,46,040	
Messrs. Vadi- lal Nathabhai Shah and Co.	Dehegam	1,25,000	53,940	11,330	
	Total (c)	1,25,000	53,940	11,330	
	Total (II)	1,25,000	53,940	11,330	

APPENDIX

Serial No.	No. on the Register	Date of Registration	Classification and Name of the Company	Object of the Company.
1	2	3		5
			III. TRADING AND MANUFACTURING	
			(b) Printing, Publishing and Stationery.	
11	67	22- 3-20	The Laxmi Electric Printing Press Co, Ltd	Printing and Publishing.
	39 B			
12	118	17- 8-22	The Bharat Swadeshi Pen and Paper Manufacturing Co., Ltd.	Manufacturing slates, pen and paper.
	61 B			
13	126	23-11-23	The Bharat Printing and Publishing Works, Ltd.	Printing and Publishing.
	14 N			
14	131	11- 7-24	The Muslim Literature Publishing Co., Ltd.	Publishing literature.
	17 N			
			(c) Chemical and allied Trades.	
15	28	24- 6-13	The Alembic Chemical Works Co., Ltd.	Preparing chemicals.
	20 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed	Paid-up.	
6	7	8	9	10	11
Chhotalal Lalbhai Patel Esqr.	Baroda.	1,00,000	78,600	78,600	
Gangashan- ker Umiya- shanker Pandya, Esqr.	Petlad.	2,50,000	25,000	14,590	
Messrs. Vai- dya and Co.	Navsari.	25,000	...	...
Messrs Vafa- dar and Co.	Do.	1,00,000	...	...
	Total (b).	4,75,000	1,03,600	93,190	
Messrs. Koti- bhasker, Amin and Co.	Baroda.	5,00,000	4,65,300	4,65,300	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
16	47	10-10-19	The Gaekwar Oil and Chemical Co., Ltd.	Manufacturing chemicals and extracting oil.
	30 B			
17	105	23- 4-21	The Modern Chemical Co., Ltd.	Preparing acids and chemicals
	55 B			
18	123	20- 3-23	Shree Ghanshyam Pharmacy, Ltd.	Preparing medicines.
	63 B			
(e) Engineering.				
19	116	27- 7-22	The Tata Construction Co., Ltd.	Constructions of all kinds.
	59 B			
20	117	27- 7-22	The Bombay Hume Pipe Co., Ltd.	Manufacturing cement pipes, etc.
	60 B			

VI, (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs N. Purshottam and Co.	Baroda.	50,00,000	44,21,200	11,02,825	
Messrs. Kao and Co.	Do.	8,00,000	1,95,700	93,715	
Messrs. Ram- narayan Vair- dya and Co.	Do.	5,00,000	50,850	17,905	
	Total (c).	68,00,000	51,33,050	16,79,745	
Messrs. Tata Sons, Ltd.	Bombay	2,00,00,000	78,50,000	56,86,960	
Do	Do.	20,00,000	3,75,200	3,75,200	
	Total (c).	2,20,00,000	82,25,200	60,62,160	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
21	22	30- 9-08	(f) Tanneries and Leather Trade.	Manufacturing Leather.
	17 B		The Swadeshi Modern Leather Manufacturing Co., Ltd.	
22	58	24- 1-20	The National Tannery Co., Ltd.	Refining leather.
	16 K			
23	73	6- 8-20	(h) Public Service Companies.	Supplying electricity.
	27 K		The Sidhpur Electric Industrial Co., Ltd.	
24	110	17-11-21	The Naosari Electric Supply Co., Ltd.	Do.
	9 N			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
G. R. Nimbalkar, Esqr.	Baroda.	1,00,000	1,00,000	93,375	Under Judicial liquidation. Do.
Messrs. Ganesh Desai and Co.	Kalol.	2,60,000	1,92,645	11,118	
	Total (f)	3,60,000	2,92,645	1,04,493	
Messrs. Ahmedmiya, Prahladji and Co.	Sidhpur.	7,00,000	5,98,100	5,77,450	
Messrs. Ardeshir Modi and Co.	Naosari.	5,00,000	1,17,890	1,11,297	
	Total (h)	12,00,000	7,15,990	6,88,747	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
25	38	24- 9-17	(i) Clay Stones, Cement, &c. The Tiles and Pottery Works Co., Ltd.	Preparing tiles and potteries.
	28 B			
26	63	13- 3-20	The China Clay Works of India, Ltd.	Manufacturing articles of clay.
	21 K			
27	91	4-11-20	The Fern Pottery and Colour Works, Ltd.	Do.
	35 K			
28	102	21- 3-21	The Dwarka Cement Co., Ltd.	Manufacturing Cement.
	2 A			
29	24	29-10-10	(j) Glass. The Baroda Glass Works Co., Ltd.	Manufacturing glass articles.
	18 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. P. B. Ganpule and Co.	Baroda.	2,00,000	1,29,050	1,29,050	
Messrs. Vadilal Popatlal and Co.	Vijapur.	5,00,000	5,00,000	1,50,000	Under Judicial liquidation.
Messrs. Fern Dwivedi and Co.	Dehegam.	10,00,000	79,550	29,494	
Messrs. Purshottamdas Vithaldas and Co.	Bombay (Branch Office Dwarka).	50,00,000	50,00,000	49,58,900	
	Total (i)	67,00,000	57,08,600	52,67,444	
Messrs. Dandvate and Co.	Baroda.	1,00,000	27,050	26,550	Do.

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
30	52	18-10-19	The Gujarat Glass works Co. Ltd.	Manufacturing glass articles.
	33 B			
31	79	22- 7-20	Messrs. Narharilal Kalidas Kevaldas and Co., Ltd.	Agency.
	30 K			
32	P 1	2-12-22	Messrs. Mehta, Patel and Co., Ltd.	Do.
	1 K			
33	89	25-10-20	The Hind Oil Products, Ltd.	Manufacturing candles, glycerine, etc.
	5 N.			
34	8	20-10-06	The Indian Metal Sheets Factory, Ltd.	Manufacturing articles of Metal.
	3 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Nandlal Sons and Co.	Baroda.	5,00,000	4,34,900	72,040	
	Total (j).	6,00,000	4,61,950	98,590	
Baldevdas Kalidas, Esqr.	Kadi.	6,400	6,400	640	
Messrs. Mehta and Patel Co.	Kalol.	2,500	2,500	...	
	Total (i).	8,900	8,900	640	
Messrs. Mohamedally Sardesai and Co.	Billimora.	50,00,000	10,08,750	6,26,550	
	Total (o).	50,00,000	10,08,750	6,26,550	
Chhotalal Hargovinddas, Esq.	Baroda.	1,00,000	6,900	6,900	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
35	9	15-11-06	The National Metal Works Co., Ltd.	Manufacturing articles of metal.
	7 B			
36	16	23- 1-08	The Baroda Union Dyeing, Bleaching and Calico Printing Factory, Ltd.	Dyeing and bleaching.
	13 B			
37	25	1- 4-11	The Baroda Brush Factory, Ltd.	Preparing brushes, etc.
	19 B			
38	44	15- 3-20	Shri Nandol Shikshana Sahitya Karyalaya Co., Ltd.	Manufacturing Kindergarten articles.
	10 K			
39	68	1- 4-20	The Cotton and Silk Weaving Works, Ltd.	Weaving Cotton and Silk cloth on handloom.
	24 K			
40	71	18- 5-20	The Vishnu Machinery Manufacturing and Iron Foundry, Ltd.	Manufacturing machinery of brass, iron, etc.
	41 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Balkrishna Balaji, Esqr.	Baroda.	35,000	30,500	29,400	Under voluntary liquidation.
Messrs. Hirabhai Trikamal and Co.	Do.	1,55,000	1,20,200	1,11,800	Under Judicial liquidation.
Messrs. B. P. Master and Co.	Do.	50,000	9,080	4,540	Under voluntary liquidation.
Kashibhai Chhaganbhai Patel, Esqr.	Nandol (Dehegam).	1,00,000	74,075	36,935	Do.
Messrs. Nirmaldas and Co.	Dehegam.	2,50,000	1,37,980	60,779	Under Judicial liquidation.
Messrs Bhogilal Gordhandas and Co.	Baroda.	5,00,000	79,050	29,055	Under voluntary liquidation.

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
41	81	30- 8-20	The Baroda Stove and Metal Works Co., Ltd.	Manufacturing stoves and articles of metal, etc.
	46 B			
42	87	16-10-20	The Swadeshi Udyog Bhandar, Ltd.	Weaving by hand-looms.
	49 B			
43	90	27-10-20	The Gujarat Vanat Mandal, Ltd.	Do.
	50 B			
44	92	6-11-20	The Sidhpur Swadeshi Bhandar Co., Ltd.	Do.
	36 K			
45	103	31-3-21	The Indian Industries Development Manufacturing Co., Ltd.	Preparing hemp-shoes, etc.
	54 B			
46	104	31-3-21	Shri Bharat Udyogic Mandali, Ltd.	Preparing chocolates, etc.
	41 K			
47	112	14-2-22	The Pattan Hand-looms Weaving Co., Ltd.	Weaving by Hand-looms.
	43 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed	Paid-up.	
6	7	8	9	10	11
Messrs. Ramnarayan Chunilal and Co.	Baroda.	2,50,000	30,250	8,720	Under voluntary liquidation
Messrs. Chhotalal Narottamdas and Co.	Padra.	1,00,000	17,460	17,120	
Messrs. Changakar and Co.	Changa (Petlad).	50,000	6,230	2,470	
Messrs. Gopallal Desai and Co.	Sidhpur.	1,00,000	10,400	4,455	Do.
Maganlal Ishwarlal, Esqr.	Sojitra (Petlad).	2,50,000	11,000	2,764	
Messrs. Pandit, Trivedi and Co.	Dehgam	1,00,000	10,775	3,775	Do.
Messrs. Tribhovandas Dashrathlal and Co.	Pattan.	1,00,000	30,250	9,618	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
48	122 62 B	20-2-23	Shri Ramkrishna Knitting and Weaving Co., Ltd.	Knitting and weaving.
			IV. Mills and Presses. (a) Cotton Mills.	
49	1 1 B	14-2-05	The Baroda Spinning and Weaving Co., Ltd.	Spinning and weaving.
50	3 2 B	7-9-05	Shri Sayaji Mills Co., Ltd.	Do.
51	7 5 B	15-9-06	The Maharaja Mills Co., Ltd.	Do.
52	14 3 K	2-9-07	Shri Sayaji Jubilee Cotton and Jute Mills Co., Ltd.	Do.

VI. (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. K. J. Javeri and Co.	Baroda.	50,000	10,275	4,765	
	Total (s)	21,90,000	5,84,425	3,33,096	
	Total III.	4,53,33,900	22,24,31,110	14,95,46,55	
Messrs. Zaverchand, Laxmichand and Co.	Baroda.	6,00,000	5,30,800	5,30,700	
Messrs. Samal Bechar and Co.	Do.	8,25,000	6,09,600	6,09,600	
Messrs. Har- govinddas Dwarkadas and Co.	Do.	6,00,000	4,97,000	4,95,200	
Messrs. Pahladji Sevakram and Co.	Sidhpur.	6,70,000	5,21,100	5,21,100	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
53	35	18- 6-16	The Ahmedabad Advance Mills, Ltd.	Spinning and weaving.
	3 N			
54	40	17-10-19	The Kalol Kapadia Spinning and Weaving Mills Co., Ltd.	Do.
	6 K			
55	41	20- 1-20	The Pattan Spinning and Weaving Mills Co., Ltd.	Do.
	7 K			
56	42	18-10-19	The Kalol Spinning and Weaving Mills Co., Ltd.	Do.
	8 K			
57	43	12-11-19	The Kalol Cotton Mills Co., Ltd.	Do.
	9 K			
58	50	8- 4-20	The Dadabhai Navroji Mills Co., Ltd.	Do.
	13 K			
59	53	18-10-19	The Raj Ratna Naranbhai Mills Co., Ltd.	Do.
	34 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Sorabji Naorji Tamboli, Esqr.	Naosari.	10,00,000	10,00,000	10,00,000	
Messrs. C. Nanalal Maganlal and Co.	Kalol.	9,25,000	9,25,000	2,85,939	
Messrs. Bhagubhai Shambhunath & Co.	Pattan.	10,00,000	2,62,400	32,220	Under voluntary liquidation
Messrs. Praptasinh Mohalalbhai and Co.	Kalol.	12,00,000	12,00,000	3,65,925	
Messrs. Mohanlal Amritlal Mehta and Brothers.	Do.	12,00,000	11,85,100	11,12,880	
Messrs. Pandit, Parekh and Co.	D. hegam	12,00,000	2,76,100	83,470	
Messrs. Ramanlal Keshavlal and Co.	Petlad.	20,00,000	15,00,000	14,25,470	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company
1	2	3	-	5
60	56 16 N	9-12-19	The Gaekwar Industrials, Ltd.	Spinning, weaving, dyeing, ginning, &c.
61	57 37 B	24-11-19	The Petlad Bulakhidas Mills Co., Ltd.	Spinning and weaving.
62	75 43 B	14-6-20	The New Baroda Mills Co., Ltd.	Do.
63	78 29 K	22-7-20	The Kadi Laxmi Cotton Mills Co., Ltd.	Do.
64	88 34 K	25-10-20	The Sidhpur Mills, Ltd.	Do.
65	99 40 K	18-1-21	The Kalol Swadeshi Mills Co., Ltd.	Do.
66	100 6 N	21-2-21	The Darbhanga Spinning and Weaving Mills Co., Ltd.	Do.

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remark
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Tricumdas Gordhandas Khattau and Co.	Billimora	1,00,00,000	50,00,000	32,49,645	
Messrs. Motilal Kashandas and Co.	Petlad.	15,00,000	10,00,000	9,19,270	
Messrs. Zaverchand Laxmichand Brothers and Co.	Baroda.	25,00,000	12,50,000	10,66,655	
Messrs. Narharilal Kalidas & Co.	Kadi.	15,00,000	12,00,000	8,57,235	
Messrs. Maganlal Parbhudas and Co.	Sidhpur	25,00,000	5,00,000	4,93,450	
Messrs. Shah Maneklal Premchandbhai and Co.	Kalol.	5,00,000	1,85,900	1,74,150	Under voluntary liquidation.
The New Textile Co.	Naosari.	50,00,000	40,00,000	35,52,350	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
67	124	16-6-23	The Virgin Mills, Ltd.	Spinning and Weaving.
	64 B			
68	29	12-8-13	The Bhilupur Ginning and Pressing Co., Ltd.	Ginning and pressing.
	21 B			
69	32	8-12-14	The Karoli Ginning and Pressing Co., Ltd.	Do.
	24 B			
70	37	24-9-17	The Mahendra Cotton Gin Press Co., Ltd.	Do.
	27 B			
71	51	18-11-19	The Kadi Industrial Co.	Do.
	14 K			
72	76	28-6-20	The Randheja Aryodaya Ginning and manufacturing Co., Ltd.	Do.
	28 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Baptist and Co.	Bombay (Branch Office Baroda.)	50,00,000	7.68,700	3,72,860	
	Total (a)	3,97,20,000	22411700	17148119	
Messrs. Mulji Jetha and Co.,	Bhilurpur. (Dabhoi)	50,000	48,900	48,900	Under voluntary liquidation.
Messrs. Narandas Rajaram and Co.	Dabhoi.	1,00,000	75,500	75,500	
Messrs. Hiral Sampatram and Co.	Baroda.	1,50,000	1,31,250	1,31,000	
Messrs. C.M. Samal Bechar and Co.	Kadi.	2,50,000	2,00,000	1,95,400	
Messrs. Keshavlal Morardas Patel and Co.	Randheja (Kalol)	1,00,000	48,000	46,225	

APPENDIX.

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
73	80 47 K	17- 8-20	The Kadi New Industrial and Electrical Co., Ltd.	Ginning and Pressing.
74	83 47 B	11- 9-20	Shri Hanuman Vijay Ginning and Pressing Factory, Ltd.	Do.
75	95 37 K	30-11-20	The Laxmi Vijay Ginning and iron Manufacturing Co., Ltd.	Do.
76	101 7 N	1- 3-21	The Gaico Automatic Ginning and Pressing Co., Ltd.	Do.
			(c) Mills for Wool, Silk and Hemp.	
77	55 35 B	20-12-19	The Maharani Woollen Mills Co., Ltd.	Spinning and weaving.

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. M. S. Gandhi and Co.	Kadi.	2,50,000	2,16,400	1,88,590	
Messrs. Nandlal Laxmichand and Co.	Baroda.	2,25,000	1,20,000	1,17,600	
Messrs. C. M. Contractor and Co.	Bhandu (Vis- nagar).	2,00,000	...	...
Messrs. Desai Sons and Co.	Kosamba (Man- grol).	2,00,000	51,400	45,880	
	Total (b)	15,25,000	8,91,450	8,49,095	
Messrs. Matubhai Kantavala and Co.	Baroda.	15,00,000	11,00,000	10,66,560	
	Total (c)	15,00,000	11,00,000	10,66,560	

APPENDIX

1	2	3	4	5
Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
78	86	13-10-20	(i) Saw and Timber Mills.	Manufacturing sizes of wood by sawing.
	4 N		The Naosari Wood Sawing and Manufacturing Co., Ltd.	
79	23	3- 2-20	(j) Oil Mills.	Extracting oil from seeds of all kinds.
	4 K		The Kadi Ginning, Pressing and Oil Mills Co., Ltd.	
80	54	17- 1-20	The Asian Oil and Margarine Manufacturing Co., Ltd.	Do.
	15 K			
81	65	28- 2-20	The United Oil and Manufacturing Co., Ltd.	Do.
	38 B			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Tamboli and Sons.	Naosari.	2,00,000	31,500	31,500	Under voluntary liquidation.
	Total (i)	2,00,000	31,500	31,500	
Messrs. Narandas Purshottamdas and Sons.	Kadi.	1,50,000	1,50,000	1,50,000	
Messrs. Parekh and Co.	Kheralu.	2,50,000	43,525	30,830	
Messrs. M. Chhotalal and Co.	Baroda.	10,00,000	2,61,950	54,475	

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
82	66	1- 3-20	The Gopal. Oil and Manufacturing Co., Ltd.	Extracting oil from seeds of all kinds.
	23 K			
V. Tea and Other Plantation Companies.				
(d) Others.				
83	119	30-10-22	The Gaekwar Dairy Farm and Cotton Plantations, Ltd.	Dairy.
	45 K			
84	125	21- 6-23	The Kadi Industrial and Agricultural Co., Ltd.	Agriculture.
	46 K			
XI. Others.				
85	85	9-10-20	The Mahalaxmi Agricultural and Industrial Co., Ltd.	Agriculture.
	33 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Hira- lal Ghanij- wala and Co.	Dehegam	5,00,000	1,35,750	50,638	
	Total (j).	19,00,000	5,91,225	2,85,943	
	Total IV.	4,48,45,000	25,02,58,75	19,38,12,17	
Messrs. Mehta, Patel and Co.	Kalol.	10,00,000	...	...	Under volun- tary liqui- dation.
Messrs. B. Sen Kshatriya and Co.	Kadi.	1,00,000	...	...
Total V.		11,00,000	...	...
Messrs. Trivedi and Co.	Mehe- sana.	3,00,000	30,425	13,295	Under Jud- cial liqui- dation.

APPENDIX

Serial No.	No. on the Register.	Date of Registration.	Classification and Name of the Company.	Object of the Company.
1	2	3	4	5
86	94	6-11-20	The Kamdhenu Dudhaya Co., Ltd.	Agriculture and Milk-supplying.
	52 B			
87	98	6- 1-21	The Uttar Gujarat Gopalan Co., Ltd.	Cattle-breeding and farming.
	39 K			
88	114	14-4-22	Shri Babalpur Krishi Co., Ltd.	Agriculture.
	44 K			

VI (A).—Continued.

Name of the Manager or Agent.	Situation of the Office.	Capital.			Remarks.
		Authorised.	Subscribed.	Paid-up.	
6	7	8	9	10	11
Messrs. Bhikhabhai and Co.	Baroda.	5,00,000	45,000	12,447	
Messrs. Vishnu Vinod, Trivedi and Co.	Pattan.	2,50,000	75,200	39,630	
Messrs. Balgovind Harinarayan and Co.	Babal- pur (Dehe- gam).	2,00,000	42,400	22,600	
	Total XI.	12,50,000	1,93,025	87,972	
	Grand Total...	9,99,03,900	54109500	37481214	

Appendix

Joint Stock Companies cancelled

Serial No.	Number on the Register.	Date of Registration.	Name of the Company.
1	2	3	4
			III. Trading and Manufacturing.
			(a) Mutual Trading Associations.
1	60	19- 1-20	Messrs. Chakuram Lallooram and Company, Ltd.
	18 K		
			(b) Printing, Publishing and Stationery.
2	115	21- 7-22	The Hind Printing and Publishing Company, Ltd.
	11 N		
			(c) Chemical and Allied Trades.
3	21	11- 9-08	The Navsari Chemical Works Company, Ltd.
	1 N		
4	84	23- 9-20	The Premier Ink and Chemical Company, Ltd.
	48 B		
			(i) Clay, Stones, Cement, etc.
5	33	8- 5-15	The Baroda Tiles and Bricks Pottery Company, Ltd.
	25 B		

VI (B).

during the year 1923-24.

Authorised.	Capital.		Date of going into liquidation.	Date of final dissolution.
	Subscribed.	Paid-up.		
5	6	7	8	9
25,000	...	...	...	12- 5-24 (Struck off the list).
25,000	...	...	...	Do.
2,00,000	43,800	25,326	6- 4-18	10- 9-23
35,000	21,000	5,572	25- 8-23	10- 3-24
60,000	11,120	2,836	...	12-1-24 (Struck off the list).

APPENDIX

Serial No.	Number on the Register.	Date of Registration.	Name of the Company.
1	2	3	4
			(s) Others.
6	59	8- 5-20	The Indian Sewing Thread and Ribbon Manufacturing Company, Ltd.
	17 K		
7	111	20-12-21	Shri Krishna National Weaving and Manufacturing Company, Ltd.
	42 K		
			Total III.
			IV. Mills and Presses.
			(b) Cotton Gins and Presses.
8	109	22-10-21	The Brilliant Cotton Ginning and Pressing Factory.
	58 B		
			Total IV
			X. Hotels, Theatres and Entertainments.
9	30	3-10-13	Shri Deshi Natak Company, Ltd.
	22 B		
			Total X

VI (B)-Continued.

Capital.			Date of going into liquidation.	Date of final dissolution.
Authorized.	Subscribed.	Paid-up.		
5	6	7	8	9
2,50,000	1,31,850	32,740	...	12-1-24 (Struck off the list).
5,00,000	...	...	...	11-6-24 (Struck off the list).
10,95,000	2 07,770	66,474		
3,00,000	...	...	...	12-1-24 (Struck off the list).
3,00,000	...	...
50,000	15,000	15,000	8-9-16	18-1-24
50,000	15,000	15,000		

APPENDIX

Serial No.	Number on the Register.	Date of Regis- tration.	Name of the Company.
1	2	3	4
10	77	21- 7-20	<p>XI. Others.</p> <p>The National Cattle Breeding and Farming Company, Ltd.</p> <p>Total XI.</p> <p>Grand Total</p>
	44 B		

VI. (B)—Concluded.

Capital.			Date of going into liquidation.	Date of final dissolution.
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
10,00,000	...	...	...	12-5-24 (Struck off the list).
10,00,000	...	...
24,45,000	2,22,770	81,474		

Appendix

List of Joint Stock Companies, that having ceased to

Serial No.	Number on the Register.	Date of Registration.	Classification and name of the Company.
1	2	3	4
1	36	6- 1-17	I. Banking, Loan and Insurance.
	26 B		(a) Banking and Loan. 1. Banking. The Pratapsinh Commercial Banking Company, Ltd.
2	22	30- 9-08	III. Trading and Manufacturing.
	17 B		(f) Tanneries and Leather Trade. The Swadeshi Modern Leather Manufacturing Company, Ltd.
3	58	24- 1-20	The National Tannery Company, Ltd.
	16 K		(i) Clay, Stones, Cement &c
4	63	13- 2-20	The China Clay Works of India, Ltd.
	21 K		

VI.--(C).

work, have gone into liquidation upto the end of 31st July 1924.

Authorised.	Capital.		Date of going into liquidation.	Date of final dis-solution.
	Subscribed.	Paid-up.		
5	6	7	8	9
10,00,000	5,19,100	35,220	11-3-20	
1,00,000	1,00,000	93,375	10-3-15	
2,60,000	1,93,645	11,118	7-11-21	
5,00,000	5,00,000	1,50,000	9- 1-22	

APPENDIX

Serial No.	Number on the Register.	Date of Registration.	Classification and name of the Company.
1	2	3	4
5	24	29-10-10	(J) Glass. The Baroda Glass Works Company, Ltd.
	18 B		
6	16		(s). Others.
7	13 B	23- 1-08	The Baroda Union Dyeing, Bleaching and Calico Printing Factory, Ltd.
	68		
	24 K	1- 4-20	The Cotton and Silk Weaving Works, Ltd.
8	71		
	41 B	18- 5-20	The Vishnu Machinery Manufacturing and Iron Foundry, Ltd.
9	81		
	46 B	30- 8-20	The Baroda Stove and Metal Works Company, Ltd.
10	9		
	7 B	15-11-06	The National Metal Works Company, Ltd.
11	104		
	41 K	31-12-21	Shri Bharat Udyogic Mandali, Ltd.
12	44		
	10 K	15- 3-20	Shri Nandol Shikshan Sahitya Karyalaya Company, Ltd.

VI (C)—Continued.

Authorised.	Capital.		Date of going into liquidation.	Date of final dissolution.
	Subscribed.	Paid-up.		
5	6	7	8	9
1,00,000	27,030	26,550	21-12-15	
1,55,000	1,20,200	1,11,800	21-12-21	
2,50,000	1,37,980	60,779	25- 4-23	
5,00,000	79,050	29,055	3-12-22	
2,50,000	30,250	8,720	13- 5-23	
35,000	30,500	29,400	4-10-23	
1,00,000	10,775	3,775	16- 9-23	
1,00,000	74,075	36,825	19-11-23	

APPENDIX

Serial No.	Number on the Register.	Date of Registration.	Classification and name of the Company.
1	2	3	4
13	92	6-11-20	Shri Sidhpur Swadeshi Bhandar Company, Ltd.
	36 K		
14	25	1- 4-11	The Baroda Brush Factory, Ltd. IV. Mills and Presses. (a) Cotton Mills.
	19 B		
15	41	20- 1-20	The Pattan Spinning and Weaving Mills Company, Ltd.
	7 K		
16	99	18- 1-21	The Kalol Swadeshi Mills Company, Ltd. (b) Cotton Gins and Presses.
	40 K		
17	29	12- 8-13	The Bhilupur Ginning and Pressing Company, Ltd. (i) Saw and Timber Mills.
	21 B		
18	86	13-10-20	The Naosari Wood Sawing and Manufacturing Company, Ltd.
	4 N		

VI (C) Continued.

Capital.			Date of going into liquidation.	Date of final dis-solution.
Authorised.	Subscribed.	Paid-up.		
5	6	7	8	9
1,00,000	10,400	4,455	5- 1-24	
50,000	9,080	4,540	9- 3-24	
10,00,000	2,62,400	32,220	19- 4-22	
5,00,000	1,85,900	1,74,150	24- 8-23	
50,000	48,900	48,900	25- 3-22	
2,00,000	31,500	31,500	14- 2-24	

APPENDIX

Serial No.	Number on the Register.	Date of Registration.	Classification and name of the Compan.
1	2	3	4
			V. Tea and other Plantation companies.
			(d) Others.
19	119 45 K	30-10-22	The Gaekwar Dairy Farm and Cotton Plantations, Ltd.
			VI. Others.
20	85 33 K	9-10-20	The Mahalaxmi Agricultural and Industrial Company, Ltd.
			Total

VI (C)—Concluded.

Capital			Date of going into liquidation.	Date of final dis- solution.
Authorisen.	Subscribed.	Paid--up.		
5	6	7	8	9
10,00,000	...	...	22-10-23	
3,00,000	30,425	13,295	30- 6-23	
65,50,000	24,00,230	9,05,677		

Appendix VI (D).

Abstract Statement of Joint Stock Companies in the
Baroda State with their capital at the end of 31st
July 1924.

Classification of Companies.	No. of Cos.	Capital.		
		Authorised.	Subscribed.	Paid-up.
1	2	3	4	5
I. BANKING, LOAN AND INSURANCE.				
(a) Banking and Loan.				
(1) Banking.	2	70,00,000	65,18,100	30,35,175
(b) Insurance.				
(2) Others.	7	2,50,000	75,000	10,865
Total I...	9	72,50,000	65,93,100	30,46,040
II. TRANSIT AND TRANSPORT.				
(c) Motor Traction, Dealing and Manufacturing.	1	1,25,000	53,940	11,330
III. TRADING AND MANUFACTURING.				
(b) Printing, Publishing and Stationery.	4	4,75,000	1,03,600	93,190

APPENDIX. VI. (D).—Continued.

Classification of Companies.	No. of Cos.	Capital.		
		Authorised.	Subscribed.	Paid-up.
1	2	3	4	5
(c) Chemicals and Allied Trades.	4	68,00,000	51,33,050	16,79,745
(e) Engineering.	2	20,00,000	82,25,200	60,62,160
(f) Tanneries and Leather Trades.	2	3,60,000	2,92,645	1,04,493
(h) Public Service Companies.	2	12,00,000	7,15,990	6,88,747
(i) Clay, Stones, Cement, &c.	4	67,00,000	57,08,600	52,67,444
(j) Glass	2	6,00,000	4,61,950	98,590
(l) Agencies	2	8,900	8,900	640
(o) Soap, Candles, &c.	1	50,00,000	10,08,750	6,26,550
(s) Others	15	21,90,000	5,84,425	3,33,096
Total III...	38	4,53,33,900	2,22,43,110	1,49,54,655
IV. MILLS AND PRESSES.				
(a) Cotton Mills.	19	3,97,20,000	2,24,11,700	1,71,48,119
(b) Cotton Gins and Presses.	9	15,25,000	8,91,450	8,49,095

APPENDIX VI (D)—Concluded.

Classification of Companies.	No. of Cos.	Capital.		
		Authorised.	Subscribed.	Paid-up
1	2	3	4	5
(c) Mills for Wool, Silk and Hemp.	1	15,00,000	11,00,000	10,66,560
(i) Saw and Timber Mills.	1	2,00,000	31,500	31,500
(f) Oil Mills	4	19,00,000	5,91,225	2,85,943
Total IV...	344	48,45,000	2,50,25,875	1,93,81,217
V. TEA AND OTHER PLANTING COMPANIES.				
(d) Others	2	11,00,000	...	...
XI. OTHERS	4	12,50,000	1,93,025	87,972
Grand Total...	88	9,99,03,900	5,41,09,050	3,74,81,214

Appendix VI (E).

Comparative Statement showing the number of Documents classified under different heads in the year 1923-24.

No.	Nature of Document.	1922-23.	1923-24.
1	2	3	4
	(a) BARODA STATE COMPANIES.		
1	Prospectus ... ..	...	6
2	Memorandum of Association ...	8	6
3	Articles of Association ... ..	...	4
4	Notices of Addresses	14	14
5	Balance Sheets	47	54
6	Annual Returns	39	53
7	Special Resolutions	15	24
*8	List of Directors and Managers...	8	22
9	Returns of Allotments	19	29
10	Mortgages	4	9
11	Copies of Courts orders	5	...
12	Statutory Reports... ..	...	6
13	Other Deeds	55	20
14	Declaration under Section 110 ...	4	7
15	" " " 24 ... ..	...	6
16	Accounts of Liquidation... ..	...	12
	(b) FOREIGN COMPANIES.		
17	Balance Sheets	2	8
18	Other Deeds	3	...
	(c) BENEVOLENT SOCIETIES ACT. OF SAMVAT 1963-NIBANDH II.		
19	Memoranda	1	...
20	Returns under the Act	9	15
	Total	233	295

Appendix VI (F).

Comparative Statement showing the amount of receipts classified under different heads in the year 1923-24.

No.	Head.	1922-23.	1923-24.
1	2	3	4
	(a) BARODA STATE COMPANIES.		
1	New Companies	413-12-0	148-12-0
2	Declarations	15- 0-0	16- 4-0
3	Resolutions	18-12-0	30- 0-0
4	Returns of Allotments	23-12-0	36- 4-0
5	Balance Sheets	46- 4-0	67- 8-0
6	Annual Returns	48-12-0	66- 8-0
7	Orders of Courts	6- 4-0	...
8	Mortgages	40- 0-0	90- 0-0
9	Notices of addresses	17- 8-0	17- 8-0
10	List of Directors and Managers ...	10- 0-0	27- 8-0
11	Other Deeds	68-12-0	38- 8-0
12	Auditors fees	50- 0-0	75- 0-0
	(b) GENERAL.		
13	Copies	125- 0-0	93- 1-0
	(c) FOREIGN COMPANIES.		
14	Balance Sheets	10- 0-0	40- 0-0
15	Other Deeds	15- 0-0	...
	(d) BENEVOLENT SOCIETIES		
16	Memoranda	10- 0-0	...
	Total...	918-12-0	746-13-0

Appendix VI--G.

List of Benevolent Societies at the end of the year 1923-24.

16 C R.

Serial No.	Regis-tered No.	Date of Regis-tration.	Name of Society.	Object of the Society.	Situation of the Registered Office.	Remarks.
1	2	3	4	5	6	7
1	1 1 B	21- 8-09	Shri Maratha Shikshnottejak Mandal.	For encouraging educa-tion among the Maratha students.	Baroda.	
2	3 2 B	11- 8-10	Shri Vakal Leuva Patel Mandal.	For improving the constitu-tion of the Caste and intro-ducing social reforms.	Bhaili, (Baroda.)	
3	4 2 K	18- 2-11	Auditch Sahastra Caste Asso-ciation of Seventy-six villages of Shri Dandhavya.	Do	Gojaria, (Vijapur.)	

APPENDIX VI—G—Continued.

Serial No.	Registered No.	Date of Registration.	Name of Society.	Object of the Society.	Situation of the Registered Office.	Remarks.
1	2	3	4	5	6	7
4	6 3 K	3- 7-11	Auditch Sahastra Brahmin Zinni Caste Association of Seventy-six villages of Shri Dandhavya.	For improving the constitution of the Caste and introducing social reforms.	Manekpur, (Vijapur.)	
5	7 4 B	7-10-11	Shri Niradhar Stri Hunnar Uttejak Mandal.	For encouraging industries amongst helpless women.	Baroda.	
6	8 4 K	15- 2-13	Shri Daskroshi Travadi Mevada Brahmin Gnati Mandal.	For improving the constitution of the Caste and introducing social reforms.	Esand, (Kalol.)	
7	9 5 K	20- 5-14	Krishnarpan Kanya Apnara Auditch-Sahastra Brahmin Gnati Mandal of Dandhavya.	Do.	Kolvada, (Vijapur.)	

8	10	21- 9-14	Shri Jaleshwar Anath Balkashram.	For helping and educating young boys and girls.	Baroda.
	5 B				
9	11	22- 2-15	Auditch Sahastra Gnati Mandal of Kadi.	For improving the constitution of the Caste and introducing social reforms.	Kadi.
	6 K				
10	12	12- 4-15	Shri Sidhpur High School Board Association.	For the efficient management of Sidhpur High School.	Sidhpur.
	7 K				
11	13	19- 4-16	Shri Kanam Leuva Patel Mandal	For improving the constitution of the Caste and introducing social reforms.	Saras, (Baroda.)
	6 B				
12	14	15- 6-16	The Charotar Education Society.	For encouraging education amongst their caste.	Petlad.
	7 B				
13	15	15- 9-17	The Property Board of the Methodist Episcopal Church in the Baroda State.	For procuring land and estate for the Christian parsonages, mission premises, Medical houses, etc.	Baroda Camp.
	8 B				

APPENDIX VI G—Concluded.

Serial No.	Registered No.	Date of Registration.	Name of Society.	Object of the Society.	Situation of the Registered Office.	Remarks.
1	2	3	4	5	6	7
14	17 10 B	16-11-18	Vaso Kelveani Mandal.	For encouraging physical and school education amongst Vaso youths.	Vaso, (Petlad.)	
15	18 8 K	2- 1-19	Shri Sidhpur/ Gopal Krishna Sanatan Brahma-Charya-Ashram.	For encouraging celibacy and helping poor students in education.	Sidhpur.	
16	19 9 K	16- 6-19	Shri Kadi Dasha Disaval Vanik Hitvardhak Mandal.	For pioneering the social reforms and encouraging education in the caste.	Kadi.	
17	20 10 K	12- 5-20	The Sanatan Auditchi Sahastra Sampradayak Gnati Mandal.	For improving the constitution of the Caste and introducing social reforms.	Rupal, (Kalol.)	

18	21	31- 3-21	The Property Board of the Women's Foreign Missionary Society of the Methodist Episcopal Church.	For procuring land and estate for the Christian Women, etc.	Baroda Camp.
	11 B				
19	22	8- 7-21	The Dehgam Dasha Shrimali Shrawak Vania Gnatina Mandal.	For improving the constitution of the Caste and introducing social reforms.	Dehgam.
	11 K				
20	23	24- 6-22	Shri Mahi Reva Vachcheni Auditch Brahman Betalish Gnati Mandal.	Do.	Dabhasa, (Padra.)
	12 B				
21	24	5- 7-22	Shri Tapodhan Brahman Parishad Sthayi Fund Sabha.	Do.	Sidhpur.
	12 K				
22	25	19- 3-23	Shri Dandhav and Charotar Jayaga Brahma Bhatt Same-lan.	Do.	Kalol.
	13 K				

Appendix VII.

Statement of money spent for initial outlay.

Type Foundry.						
Type metal.	Machines, moulds, metrics, sticks, tanks, etc.	Furniture, wooden.	Electric fittings.	Total Columns 1, 2, 3, 4.	Expenditure for casting types, quotations, leads, etc. in Type Foundry.	Types purchased from outside.
1	2	3	4	5	6	7
...	1,103- 7- 0	405-12 0	...	Samvat 1979. 1,509- 3- 0	86- 0- 0	...
20,309-11- 1	22,379- 6-10	36-10-9	118- 9-6	Samvat 1980. 42,844- 6- 2	5,217- 0-2	4,443- 9- 8
Total. 20,309-11- 1	23,482-13-10	442- 6-9	118- 9-6	44,353- 9- 2	5,303- 0-2	4,443- 9- 8

APPENDIX VII.—Continued.

Composing.				Machine.			
Furniture.	Proofing Presses.	Electric fittings.	Total columns 8-9-10.	Machines.	Furniture.	Electric fittings.	Total columns 12-13-14.
8	9	10	11	12	13	14	15
...	...	...	Samvat 1979. ...	...	...	...	...
18,416-15-6	790-10-0	2,491-13-4	21,699-6-10	57,914-12-5	2,343-0-0	1,185-14-1	61,443-10-6
Total:-				Total:-			
18,416-15-6	790-10-0	2,491-13-4	21,699-6-10	57,914-12-5	2,343-0-0	1,185-14-1	61,443-10-6

APPENDIX VII—Continued.

Machines.	Binding.			Stores.		
	Furniture.	Electric fittings.	Total columns 16, 17, 18.	Furniture.	Electric fittings.	Total columns 20-21.
16	17	18	19	20	21	22
...
		Samvat 1979.				
	
		Samvat 1980.				
18,998-9-9	1,050-8-0	355-12-3	20,404-14-0	3,783-4-5	703-7-7	4,486-12-0
Total :- 18,998-9-9	1,050-8-0	355-12-3	20,404-14-0	3,783-4-5	703-7-7	4,486-12-0

APPENDIX VII.—Conclud.

Office.			Total Columns.	Remarks.
Furniture.	Electric fittings.	Total columns 23-24.	5 to 7 11 - 15 19 - 22 and 25	
23	24	25	26	27
...	...	Samvat 1979. ...	1,595-3-0	
1,278-6-0	1,034-15-5	Samvat 1980. 2,313-5-5	1,62,853-0-9	
1,278-6-0	1,034-15-5	2,313-5-5	1,64,448-3-9	

Appendix VIII.

ANNUAL REPORT OF THE WORKING OF THE
TYPE REPAIRING BRANCH.

Upto the end of the official year 1922-23 all State type machines were oiled and cleaned and repaired by Messrs. Warden and Company. This involved a lot of expenditure to Government and consequently a tippan was submitted to Government to have this repair work done by the Kalabhavan Work-Shops and it was sanctioned by H. E. the Dewan Saheb under Order No. 70/54, dated 1st July 1923. It is now one year since the Kalabhavan Work-Shops took up this work and the undersigned is glad to note that the scheme has become a success as will be shown below :—

2. During the year under report number of machines oiled and cleaned was 225 and that of repaired is 116. Over and above this work, the Work-Shops has also repaired machines received from private persons.

3. The annexed table, Ex. No. 1, will show the total receipts and expenditure and the net profit gained by the Work-Shops in this connection during the year under report. It will be seen therefrom that the net amount of profit derived from this work is Rs. 1,431.

4. Since this scheme was introduced total amount spent on salaries, etc., of the mechanics engaged for the purpose is Rs. 1,884. Rs. 1,292 were spent in purchasing the required number of parts. Out of these spare parts valued at Rs. 746 were used during the year and the remaining worth Rs. 546 are in stock.

5. It was found that the repair work which was done by the Warden Company was not a satisfactory one, as in many cases the machines that were repaired by them found deficient and the Government had consequently to undergo fresh expenses on this account and since the taking up of the repair work by the Kalabhavan no room is left for any complaint.

Re: repair work of the Company:

6. During the year under report, it was found that some old and condemned machines were auctioned out for almost a nominal price or so, and therefore a suggestion was made to the Commerce Department to put a stop to such auctions with result that a notification was issued in Adnya Patrika dated 7th January 1924, according to which old and condemned machines, 12 in number, were received from various offices. Out of this stock, four machines were found workable, one Underwood Deonagari, one Remington English and two Yost. Yosts being pad machines no department is willing to have them. One Underwood Deonagari machine was handed over to the Huzur Appeal Branch and one Remington is used as a loan machine, which gives good work. Out of the other machines spare parts worth Rs. 52 were utilized in the machines sent for repairs and for which no charge was made. It is hoped that all the Departments instead of condemning and disposing of the machines will send them here in compliance with notification issued by the Commerce Department.

7. From the experience obtained during the year, the undersigned begs to offer the following suggestions for consideration of

Government :—

- (1) According to the present system the oiling and cleaning operations are done four times

in the year. On account of constant use of the machines, four cleanings are not sufficient. The undersigned thinks that they must be cleaned at least six times in the year. This will enhance the life of the machines although a little additional cost may be incurred on that account.

- (2) Rs. 200 are sanctioned as Jathu Tasalmat for purchasing the new spare parts but it falls too short for the purpose, owing to the long time that requires for its recoupment which causes great inconvenience to order out new parts and delays the repair work of the machines. Therefore, a Jathu Tasalmat of Rs. 500 is quite necessary.

8. It will be seen from the above that this new additional Branch to the Work-Shops Conclusion. has turned out very satisfactory work. Besides giving satisfaction to all the Departments concerned, it has made a profit of Rs. 1,431 to Government. Finally, the undersigned takes pleasure to note that during the year there is no complaint received from any office in the matter and the mechanical staff engaged has given me full satisfaction in the work.

BARODA,

28th August 1924.

(Sd). M. J. VAISHNAV,

Work-Shops Superintendent,

Kalabhavan, Baroda.

Ex. No. 1.

Statement showing receipts and disbursements and the net profit gained by the Type-Repairing Branch of the Work Shops.

1	225	Number of machines oiled and cleaned.
2	1,480	Amount recoverable for oiling and cleaning done to the typewriters.
3	116	Number of machine over-hauled and repaired.
4	1,740	Approximate cost for over-hauling and repairing if given to Company without any spare parts. At Rs. 15 for each one minimum.
5	...	Cost for over-hauling and repairing of the machines to Government without any spare parts.
6	95	Receipts from the private machines repaired.
7	3,315	Total receipts of oiling and cleaning with the approximate cost of the Company Col. 4 & Col. 6.
8	1,584 Staff. 250 Dead-Stock. 50 Oiling. <u>1,884</u>	Actual expenses to Government on staff, Dead Stock, etc.
9	1,431	Net profit to Government.
10		Remarks.

Review of the Annual Report

OF THE
DEPARTMENT OF COMMERCE AND INDUSTRIES
 FOR THE YEAR 1923—24.

The Department continued under the control of Dr. S. M. Pagar for the year under report.

2. At the express desire of His Highness the Maharaja Saheb, an Industrial Exhibition was held at Baroda on 16th December 1923 so that the exhibits collected for the Empire Exhibition can be exhibited to the view of the public. For the first time two Exhibitions of women's work were also held in Baroda. These owed their success to the zeal and interest evinced by Princess Kamala Devi and Lady Dhanvantagavri. Artistic articles as well as agricultural and forest products were also sent to the Padua Fair during the year under review.

3. Old and well-established industries continued to progress and declared dividends from 4% to 25%. This was a little less than that declared in the previous year, but in view of the menacing industrial situation created by depression in trade and industrial slump all over the world it can safely be said that the old industries have done satisfactory work.

4. In face of adverse financial circumstances, 6 ginning factories, 2 cotton presses, one Bone-Mill and a Pharmacy for manufacturing Ayurvedic medicines were promoted during the year under report, in addition to the Cinema Industry which has lately developed owing to the essential facilities available here for the purpose.

Review of the Annual Report

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5. His Highness' Government continued the generous policy of offering concessions and affording all possible facilities to the capitalists and promoters of new industries in the form of (1) Loans (2) Acquisition of land, (3) Exemption from octroi on payment of a nominal lump sum, (4) Water at concession rates, (5) Extension of the period of concessions and (6) Ordering purchase of the materials, &c., from the concerns in the State, (7) Affording at the same time means for creating increased demand for the articles produced, &c.

6. As a direct result of the efforts made by the Department, a public telephone call office directly connected with Bombay has been opened at Baroda from 6-9-24.

7. In view of the recommendations of the Director of Geological Survey, India, investigations of natural gas continued and further boring on the Bhimnath ground were made to a depth of 622 feet, but as Daccan Trap was struck the work has been given up and the idea of leasing the area to a capitalist for prospecting is under consideration of the Government.

8. It is gratifying to note the activities of the Department to foster and try to start new industries such as match and button making, fish canning and pearl fishery, &c.

9. In face of high prices and scarcity of labour, 18 fly-shuttle hand-looms in addition to those independently bought and worked by weavers were introduced by the Department.

Demonstrations of hand-spinning machines sent by Her Highness the Maharani Saheb as also of improved fly-shuttle pit and frame looms were given at Baroda, Amreli and Dwarka. Warping machine on the principle of vertical warping mill was also made and demonstrated at Amreli as also double shuttle sley.

The weaving branch has made useful experiments in wool weaving and continued to impart instructions in hosiery and works connected therewith.

10. The advantages of the Co-operative Societies are being realised by the backward Weavers' Co-operative Societies. classes and this year too, a co-operative society was successfully organized among the weavers at Varvala.

11. An increase of about Rs. 7,218 in the Cotton Excise duty on cotton. Excise was the direct result of the inspection of the Cotton mills on the lines contemplated last year.

12. It is a matter of great satisfaction that the State Empire Exhibition. Stall at the British Empire Exhibition was successfully organised. The total expenditure on this account will approximately amount to Rs. 41,000.

13. The number of steam boilers in use in private factories was 209 against 198 in the preceding year. The number of factories has also risen in number from 120 to 127. The increase in the number of factories as also of the number of operatives employed in the factories is an indication of the flourishing condition of industries in the State.

14. The increase of about 18% in expenditure on establishment for factory inspection does not compare favourably with the trifling increase of about 3% in income from proceeds of factory inspection. It is hoped the Department will endeavour to bring down the expenditure.

Expenditure on account of Factory Inspection.

15. New system of rating by heating surface of Boilers adopted by the Government of India has been introduced and it has come into effect from 1-8-24.

Introduction of new system of Rating.

16. It is regrettable to note that more than 50% of the accidents occurred in the G. B. S. Railway Workshops. The Railway Department should inquire into the causes of the same and adopt strict measures to minimise the number of accidents.

Accidents.

17. The Electric license at Navsari commenced to supply energy during the year under report and the arrangements for supplying energy at Dabhoi had been completed though the opening ceremony of the factory was made on 9-8-24.

Electric Installation.

18. The revision of the Electricity Act is under consideration of the Legal Remembrancer. It is now time to expedite introduction of the new Act with a view to enforce uniformity in procedure of all the Electric Installations.

Revision of the Electricity Act.

19. There were 98 Joint Stock Companies during the year under review as against 92 in the preceding year. Of these, 10 companies were cancelled and 10 went into liquidation.

Joint Stock Companies.

20. Though the authorised capital shews appreciable decrease, subscribed and paid up capital have considerably increased which is a sure indication of public confidence in the stability of old and established concerns. Modifications in the Act under contemplation to enable the Registrar to exercise greater vigilance for safe-guarding the interests of the shareholders of the Companies would shew still better results.

Capital of the Companies.
21. The total printing charges amounted to Rs. 1, 06,898/- as against Rs. 83,712/-. Thus showing an increase of about 24%. This is due to the increase of work by about 50%.

Printing Expenses.
22. As anticipated last year, the new Government Press commenced working from 1st April 1924. The practical work being new, arrangements are made for the inspection of the Press by Mr. E. E. Coombs of the Bombay Government Central Press every six months.

New Government Press.
23. A glance at the expenditure of the Department shows an increase as compared with that for the previous years. However, if the special and non-recurring expenditure incurred in connection with the Empire Exhibition, London, and Industrial Exhibition at Baroda be neglected the net expenditure shews substantial decrease.

Expenditure.
24. Thanks of His Highness' Government are due to Dr. Pagar for the skill displayed by him in efficiently controlling the various branches under him:

BARODA,

(Sd.) G. B. AMBEGAOKAR,

31st, January 1925.

Naib Dewan.

20 C. R.

CHECKED
9.03-04