

COMMERCIAL INTELLIGENCE DEPARTMENT
INDIA

AREA AND YIELD

OF CERTAIN

PRINCIPAL CROPS IN INDIA

RICE	OILSEEDS
WHEAT	JUTE
COTTON	INDIGO
SUGARCANE	

FOR VARIOUS PERIODS FROM
1898-99 TO 1912-13.



CALCUTTA
GOVERNMENT PRINTING, INDIA
1913

Price Four Annas or Six Pence

Area and yield of certain principal crops in India,
1898/99-1912/13

Fifteenth Issue]

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AREA AND YIELD

OF CERTAIN

PRINCIPAL CROPS IN INDIA

GENERAL NOTES

In the course of each year periodical estimates of the area and yield of certain crops are compiled from local returns and issued by the Commercial Intelligence Department.

The general practice is to issue a preliminary forecast, a second estimate, and a third (and final) estimate, fuller and more precise than the first two. The figures in these tables are abstracted from those appended to the final estimates and they show the area sown and the estimated yield of the crops.

The estimates state the area actually sown, whether the crop comes to maturity or not, but fields which have been sown with other crops, owing to the failure of the first sowings, are not entered.

The areas covered by the several crops in a mixed field are estimated in various ways in the different provinces, and the estimates are based on formulæ prescribed by the provincial authorities.

The estimates are not generally made for the whole of India, and they are necessarily, in the most favourable circumstances, only approximations to the truth. The very complete agricultural records in most of the provinces in connection with the assessment of the land revenue render it possible in many cases to state with great exactness the area sown with each crop; but an equally important factor in determining the outturn, namely, the average yield per acre, has to be estimated, and exactness can be obtained only by the most careful consideration of the classes of soil, the methods of cultivation, and the climatic conditions which depend mainly on the quantity and timeliness of the rainfall in every part of the reporting areas. The quantitative estimates are thus often imperfect and they have generally been too low. The attention recently paid to the estimates of the cotton and wheat crops showed that some of the estimates relating to past years were extremely defective, but measures have been taken, which appear already to have effected a substantial improvement. The revision of the estimates which was attempted has not, however, been entirely successful, for the reason that there are large unregistered movements of cotton across provincial boundaries by road, while the information from some of the Native States is defective and the internal consumption other than that in mills defies accurate computation. A conventional estimate of consumption outside mills has, however, been made in consultation with the Bombay Cotton Trade Association and included in the figures of net exports and consumption shown at the end of the table relating to cotton. In view of the carrying over of stocks from one year to another, it is interesting to calculate the averages on these figures. Estimates of area and production are now received from various areas which were formerly unreported; but the fact that the total estimated outturn has as a rule, fallen short of the total of net exports and consumption shows that there is still much room for improvement in the estimates of production. The years 1912-13 and 1906-07 furnish the only two instances in which the estimated outturn has exceeded the total of net exports and consumption.

Attention has also been paid to the improvement of the jute forecast, and the yield for past years, from 1898 to 1904, has been corrected by the statistics of exports and consumption, but the estimates of the area cultivated are based on data, which are still uncertain, although they have recently been improved. Next to those for cotton and jute, the estimates of acreage are most complete in respect of wheat. For the other crops, however, the estimates of area apply only to the specified regions where those crops are largely grown, and not to the whole of India. Thus the rice estimates relate only to Bengal, Bihar and Orissa, Assam, Lower Burma, Madras, and the United Provinces, and those for groundnut to Madras, Bombay, and Burma. Again, for the reporting territories the estimates are sometimes imperfect, for, with some exceptions, those tracts have been excluded, which have not been accurately surveyed or are held under privileged tenures, and hence do not possess the regular establishments maintained elsewhere for reporting the area placed under each crop. The most serious defect from this cause is in the figures for Madras, which is a large producer of rice, cottons, sesamum, and indigo, but which up to 1906-07 made forecasts only for the raiyatwari villages or about two-thirds of the area of the British districts. The Feudatory States within provincial boundaries are also generally omitted from the forecasts of all the provinces except Bombay and Sind. But for these omissions and a certain element of uncertainty in regard to crops which are grown conjointly or interspersed in the same field, the estimates of area relating to the Punjab, the United Provinces, the Central Provinces and Berar, and Madras may be regarded as fairly exact. The statistics for the British districts of Bombay are also very correct, but in this publication they are combined with the more conjectural figures of the provincial Feudatory States in which a large proportion of the cotton, oilseeds, and wheat is grown.

The statistics of area for Bengal and Bihar and Orissa which relate to nearly the whole of the cultivated portion of the province, omitting unimportant Feudatory States, are also conjectural since they consist of estimates which are founded on information of varying degrees of accuracy and which have been verified by cadastral survey in respect of only about 20 per cent for Bengal and 78 per cent for Bihar and Orissa.

The statistics for the States of Hyderabad and Mysore and the numerous States in the Central India and Rajputana Agencies rest on data similar to those of British India, and like them mostly refer to tracts in which there exists a reporting agency not equal in efficiency to that of the neighbouring British Provinces. Estimates are also included for some of the revenue-free lands held on privileged tenures.

PROVINCIAL NOTES

Burma

Estimates are made for rice, cotton, and groundnut.

The figures for area are obtained from the assessment rolls prepared by revenue surveyors.

The original information about the yield is obtained from township officers, inspectors of land records, and from the more important of the Land Revenue subordinate officers. In this way the estimate of each district is based on the information furnished by some thirty or more persons.

The figures for both area and yield are tabulated by the Superintendent of Land Records and checked by the Deputy Commissioner. The Commissioner of Settlements and Land Records compares the estimated yield with a standard representing the normal yield which was fixed after an extensive series of experimental crop cuttings by settlement officers.

(Rice)

Estimates are made for the sixteen chief rice-producing districts of Lower Burma, namely, Akyab, Kyaukpyu, Insein, Hanthawaddy (Syriam), Pegu, Tharravaddy, Prome, Maubin, Pyapôn, Bassein, Henzada, Myaungmya, Amherst, Tavoy, Toungoo, and Thatôn. The standard is 32 baskets (of 48lb each) = 1,536lb of unhusked rice to the acre.

(Cotton)

Until 1902-03 the estimates for cotton related to the five principal cotton-growing districts, namely, Sagaing, Lower Chindwin, Meiktila, Myingyan, and Thayetmyo. Since that year all the cotton-producing districts have been reported on. From 1909-10, however, regular reports have been furnished by the eleven districts in which more than a thousand acres are under cotton, while a rough estimate of the production in other districts has been made and included. Except in districts where a settlement officer has conducted experiments in crop cutting, it is not possible to estimate accurately the average yield per acre.

(Groundnut)

Estimates were made for the first time in 1908-09. Reports are furnished only by the six principal groundnut growing districts, and a rough estimate is made of the outturn in other districts.

Assam

Estimates are framed for rice, cotton, oilseeds, jute, and sugarcane. The information is received from district officers, who in their turn obtain figures from mandals in the case of the temporarily-settled areas and from zamindars in the case of the permanently-settled portion of Goalpara. These figures are said to be checked by sub-divisional and district officers, but, except where the district or the sub-divisional officer is himself able to do it, there is no valid check at all, and sometimes figures returned by district officers are more or less inaccurate and inconsistent.

(Rice)

The estimates for rice relate to all districts (except the Naga Hills). The crop includes the *bhadoi*, *aûs*, or autumn rice, and the *aman*, *dao*, or winter rice. The yield of a normal crop is taken to be 6 cwts per acre for autumn rice and 9 cwts per acre for winter rice.

(Cotton)

Cotton is grown in the Garo, the Khasi and Jaintia and the Lushai Hills, in Cachar, Sylhet, Goalpara, Nowgong, and Sibsagar. It is also believed to be grown in the Naga Hills, but it is not possible to make any estimate of the crop there. The crop is sown in March and April. The normal rate of outturn is taken to be 153lb of cleaned cotton per acre.

(Oilseeds)

The oilseeds are linseed, rape and mustard, and sesamum. They are generally grown in all the plains districts of Assam. Sesamum is grown also in the Garo, Khasi and Jaintia and the Lushai Hills. The average yield of rape and mustard has been taken to be 4½ cwt per acre and that of linseed and sesamum to be 4 cwt per acre.

(Jute)

The estimates for jute relate to all the districts of the province except the Naga Hills, the Khasi and Jaintia Hills, and the Lushai Hills. A general rate of 1,200lb (= 3 bales) per acre for a normal crop is taken to estimate the yield of the crop.

(Sugarcane)

The estimates for sugarcane relate to all the plains districts. The average yield of raw sugar (*gur*) is taken to be 17 cwts per acre.

Bengal

Estimates are made for rice, wheat, cotton, oilseeds, jute, indigo, and sugarcane. In the absence of any Revenue Agency the figures are based mainly on rough approximate estimates made by district officers, and are more or less conjectural. The district officers obtain information from the sub-divisional officers through the agency of the police. The system of making crop cuttings, as in other provinces, over a series of areas and seasons for the ascertainment of standards of yield has been in force in Bengal for the last eighteen years, but sufficiently trustworthy figures of yield have not yet been obtained from these cuttings to enable Government to accept them as standards.

The rice crop includes the *bhadoi, aús* or autumn rice (sown in May and mostly reaped by the middle of September), the *áman* or winter rice (sown in May and June, transplanted in August and September, and reaped in November and December), and the *boro* or summer rice (sown towards the close of the cold weather and reaped in April to June). The yield of a normal or 100 per cent crop is taken to be 12 maunds per acre for winter rice and 10 maunds per acre for autumn and 13½ maunds for summer rice (the maund in each case being equal to 82½ lb). These rates have been assumed to represent the average yield of cleaned rice. (Rice)

Wheat is grown in all the districts of the Rajshahi, Burdwan, and Presidency Divisions (excepting the districts of Bogra, Howrah, 24 Parganas and Khulna) and in the district of Faridpur. The average yield of the crop has been determined to be 10½ maunds per acre. (Wheat)

Two varieties of cotton are grown in the province—early and late. The early crop is grown in the State of Hill Tippera and in the districts of Chittagong Hill Tracts, Bankura and Midnapore. The late crop is grown only in the last two districts. The early crop is generally sown before the rains and the late crop partly before and partly after the rains. Separate rate of outturn for the early and the late crops have been adopted for each district. (Cotton)

The oilseeds are linseed, rapé and mustard, and sesamum. The first three are grown in all districts (excepting Darjeeling, Jalpaiguri, Rangpur, and Chittagong Hill Tracts, in the case of linseed), and are sown generally in October and reaped early in winter. The average yield is assumed to be 6 maunds (494 lb) per acre. (Oilseed)

Sesamum is grown in all districts except Darjeeling; it is sown generally in July-September and reaped early in winter. An early variety is sown in the cold weather and reaped in June-July. The average yield is assumed to be 4½ maunds (350 lb) per acre.

Jute is grown in all the districts, excepting Birbhum, Bankura, and Chittagong Hill Tracts. A general rate of 1,271 lb, or 3.1 bales, is assumed to represent the average production per acre for every jute-growing district in the province. (Jute)

The only district in which indigo is still cultivated is Nadia. The average yield is assumed to be 12 lb per acre. (Indigo)

The report on sugarcane relates to all the districts of the province; it is sown during the winter season and harvested after a year. The average yield of raw sugar (*gúr*) is estimated at 35½ maunds (2,921 lb) per acre. (Sugarcane)

Estimates are made for rice, wheat, cotton, oilseed, jute, indigo, and sugarcane. In the absence of any Revenue Agency the figures are based mainly on rough approximate estimates made by district officers, and are more or less conjectural. The district officers obtain information from the sub-divisional officers through the agency of the police. The system of making crop cuttings, as in other provinces, over a series of areas and seasons for the ascertainment of standards of yield has been in force in the districts of this province for the last eighteen years, but sufficiently trustworthy figures of yield have not yet been obtained from these cuttings to enable Government to accept them as standards. Bihar and Orissa

The rice crop includes the *bhadoi, aús* or autumn rice (sown in May and mostly reaped by the middle of September), the *áman* or winter rice (sown in May and June, transplanted in August and September, and reaped in November and December), and the *boro* or summer rice (sown towards the close of the cold weather and reaped in April to June). The yield of a normal or 100 per cent crop is taken to be 15 maunds per acre for winter rice, and 10 maunds per acre for autumn and summer rice (the maund in each case being equal to 82½ lb). These rates have been assumed to represent the average yield of cleaned rice. (Rice)

Wheat is grown in all the districts, excepting Balasore and Puri. The crop is chiefly cultivated in Bihar, where it covers about 96 per cent of the total area under the crop in Bihar and Orissa. The average yield has been fixed provisionally at 12 maunds or 984 lb per acre for the Bihar districts, 10½ maunds or 861 lb per acre for the Orissa districts, and 451 lb per acre for the districts of the Chota Nagpur Division. (Wheat)

Two varieties of cotton are grown in the province—early and late. The early crop, which is sown before the monsoon rains commence and harvested in winter, is grown in the districts of Saran, Monghyr, Bhágalpur, the Sonthal Parganas, and in the Chota Nagpur and Orissa Divisions, and also to a limited extent in Shahabad, Champaran, and Darbhanga. The late crop, which is usually sown at the close of the rainy season and harvested in May and June, is grown in the districts of Manbhum, Singhbhum, and in the Patna, Tirhut, Bhágalpur, and Orissa Divisions, excepting the districts of Gaya, Purnea, the Sonthal Parganas, and Sambalpur. Separate rates of standard outturn for the early and the late crops have been adopted for each district; the rates vary from 70 to 280 lb per acre. (Cotton)

The oilseeds are linseed, rape and mustard, and sesamum. The first three are grown in all districts (excepting Angul, in the case of linseed), and are sown generally in October and reaped early in winter. The average yield is assumed to be 6 maunds (494 lb) per acre. (Oilseed)

Sesamum is grown in all districts; it is sown generally in October and reaped early in winter. An early variety is sown in the cold weather and reaped in May-August. The average yield is assumed to be 4½ maunds (350 lb) per acre.

The estimate of the jute crop covers seven districts in which jute is grown, namely, Champaran, Muzaffarpur, Bhágalpur, Purnea, the Sonthal Parganas, Cuttack, and Balasore. A general rate of 1,200 lb, or three bales, is assumed to represent the average production per acre for every jute-growing district in the province. (Jute)

The report on indigo relates to eight districts in which the crop is still grown, namely, four districts of the Tirhut Division and Shahabad, Monghyr, Bhágalpur and Purnea. The average yield is assumed to be 20 lb per acre. (Indigo)

(Sugarcane) The report on sugarcane relates to all the districts of the province; it is sown during the winter season and harvested after a year. The average yield of raw sugar (*gur*) is estimated at 22 cwts per acre.

United Provinces

Estimates are made for wheat, cotton, linseed, rapeseed, sesamum, indigo, sugarcane and winter rice.

The area is taken from the crop statements based on field-to-field inspections, which are furnished by patwaris and checked by higher revenue officers. The estimates of the standard yield are based on the results ascertained from crop-cutting experiments conducted in selected districts. The standards, which are separate for irrigated and unirrigated crops, are revised every five years on a consideration of the results of crop experiments, and are applied to the condition of the crops reported by district officers and selected land-holders whose number exceeds five hundred.

(Wheat) The estimates of the wheat crop relate to all the districts of the province except Almora and Garhwal. The rates of standard outturn are different in the various districts, the average for the province being irrigated 1,250lb and unirrigated 850lb.

(Cotton) The estimates of the cotton crop relate to all the districts of the province where cotton is grown to any considerable extent. The rates of standard outturn are different in the various districts, the average for the province being irrigated 220lb and unirrigated 130lb.

The Native State of Rampur, which is the only cotton-growing State in the province, is included in the estimates for that crop from 1905-06. The estimates of both area and yield are based on the figures furnished by the six tahsils of the State.

(Oilseeds) The estimates for all oilseeds show separately the mixed crop, that is, crop grown in the same field with other crops, which is gathered in small quantities over a wide area mostly for home consumption. The estimates of the mixed crop are, however, highly conjectural.

The average yield of the unmixed crop is estimated at 500lb per acre for linseed, 600lb for rapeseed, and 280lb for sesamum.

(Indigo) In estimating the yield of indigo (dye), it is assumed that one-tenth of the total area is annually set aside for seed, and that one-fourth of a factory maund (about 75lb) of dye represents the full average yield in an average year.

(Sugarcane) The estimates for sugarcane relate to all the districts of the province except Jhansi, Jalaun, Banda, Almora, Garhwal and Bahraich. The crop is planted in February and March and reaped in December and January, and is wholly an irrigated crop. Separate rates of normal outturn have been adopted for the different districts varying between 1,500lb and 3,200lb.

(Winter rice) Estimates of winter rice were made for the first time in 1912-13. The rates of standard outturn are different in various districts, the average for the province being in the case of rice irrigated 1,100lb and unirrigated 850lb.

Punjab

Estimates are prepared for wheat, cotton, rapeseed, sesamum, indigo, and sugarcane.

The figures of area are based on actual measurements by the revenue staff. Estimates of yield are recorded by Collectors after personal enquiry from tahsildars and leading agriculturists. The total number of agriculturists consulted by the Collectors and tahsildars must amount to several thousands.

(Wheat) The estimates of the wheat crop relate to all the districts of the province, and include the following Native States from 1907-08:—Patiala, Kapurthala, Nabha, Jind, Bahawalpur, Faridkot, Maler Kotla, Mandi, and Suket. Separate rates of normal outturn have been adopted for the different districts varying between 500lb and 1,180lb for irrigated and between 380lb and 720lb for unirrigated wheat.

(Cotton) The estimates of the cotton crop relate to all the districts except Simla, and include the following Native States from 1904-05:—Patiala, Kapurthala, Bahawalpur, Nabha, and Jind. The rates of normal outturn vary between 48lb and 192lb for irrigated and between 41lb and 132lb for unirrigated cotton.

(Oilseeds) The estimates for rapeseed relate to all but four districts, the exceptions being Simla, Jalandhar, Kangra, and Gurdaspur.

The estimates for sesamum relate to twenty-two districts: Hissar, Gurgaon, Karnal, Ambala, Ferozpur, Kangra, Hoshiarpur, Jalandhar, Multan, Jhang, Montgomery, Lahore, Amritsar, Gurdaspur, Siálkot, Gujrat, Gujranwála, Rawalpindi, Attock, Mianwali, Dera Ghazi Khan, and Muzaffargarh.

(Indigo) Until 1904-05 the estimates for indigo related to seven districts: Hissar, Rohtak, Gurgaon, Karnal, Multan, Dera Ghazi Khan, and Muzaffargarh; in two of these (Hissar and Rohtak) the crop was grown only for seed, and in the remaining five partly for seed and partly for dye. From that year the estimates relate to four districts only: Rohtak, Multan, Dera Ghazi Khan, and Muzaffargarh.

(Sugarcane) The estimates for sugarcane include all but eleven districts, the districts omitted being Hissar, Simla, Ferozpur, Jhelum, Rawalpindi, Attock, Mianwali, Montgomery, Jhang, Multan, and Dera Ghazi Khan. The crop is sown in March and April.

Estimates are prepared for wheat, cotton, rapeseed, and sugarcane. Until 1903-04 an *N.W. Frontier* estimate was made for the sesamum crop also, but as the area never exceeded 10,000 acres it has been discontinued.

The figures of area are based on actual measurements made by the patwaris in their field-to-field inspection in each harvest. They are further checked by higher revenue officers.

The estimates of the standard yield are based principally on data derived from a large number of tests made during the progress of settlement operations in which crops were cut and weighed. They were framed for each assessment circle which is the unit of area, and separately for lands irrigated by canals, by wells, for alluvial (*sailab*) lands, and for lands entirely dependent on rain. The standards are applied to the estimates received from the district officers who frame their estimates in consultation with local agriculturists. The exact number of agriculturists consulted by the district officers is not available, but it must amount to several hundreds.

The estimates for wheat relate to all the districts of the province, and include the Tochi Agency from 1904-05, and the Kurram Agency from 1906-07. For irrigated wheat the rate of normal outturn is taken to be 741lb for four districts and 823lb for three districts; the rates for unirrigated wheat vary between 329lb and 535lb.

(Wheat)

The estimates of the cotton crop include all the districts of the province.

(Cotton)

The estimates for rapeseed up to 1905-06 relate to all districts except Kohat. From 1906-07 Kohat has been included.

(Oilseeds)

The sugarcane crop is sown in March and April. The estimate relates to three selected districts, namely, Hazara, Peshawar, and Bannu.

(Sugarcane)

Estimates are framed for wheat, cotton, linseed, rapeseed, sesamum, groundnut, and sugarcane, *Bombay and Sind*

The estimates include British districts as well as Native States.

In the British districts of the Presidency the area under different crops is ascertained in the first instance by village officers and recorded in village returns which are checked by circle inspectors and other revenue officers, and compiled by the former for their circle, and then for the taluka. The taluka figures are totalled up for each district in the Director's office. For Sind this work is done by local officers, and the Director receives district-by-district figures. The information received is for villages for which regular statistics are available, the proportion of reporting area being 91.4 per cent in the Presidency proper and 99.6 per cent in Sind. From 1909-10, however, estimates for the non-reporting areas have been made so far as possible and included in the table. In the case of Native States the acreage is estimated on the best local data available. The approximate numerical strength of the reporting agency is 175 in the Presidency proper, 57 in Sind, and 33 in the Native States.

No standard of yield has yet been adopted. Local estimates are converted to quantitative figures on the basis of a formula showing the average yield of crops which has been adopted provisionally. This formula is now being revised quinquennially, the revision being based on the ascertainment of actual yield in different parts of the Presidency by careful local enquiry by officers of the Provincial Agricultural Department who are tabulating the results and comparing them for the purpose. The unit of area in the formula is the district and dry and irrigated crops are separately dealt with.

Each year's estimate is prepared by the mamlatdars (or mahalkaris where the taluk is sub-divided) from notes which they make and from reports from village accountants and circle inspectors. The estimate is sent direct to the Director of Agriculture, who, in the light of the general prospects of the season, makes the quantitative calculations. A copy of the estimate is at the same time sent to the Collector through the sub-divisional officer, who sends his remarks, if any, to the Collector, forwarding a copy of the same to the Director. The Collector on receipt of these remarks forwards to the Director his opinion as regards the general condition of the whole district.

For Sind there are no formulae, and all the necessary information is obtained from the District Collectors in the form of estimates on the basis of twelve annas for a normal crop, together with quantitative equivalents gathered from general experience.

For the Native States estimates are obtained, and the formulae for adjoining British districts is applied.

The estimates for wheat include the British districts and Native States in Gujarát, Deccan, Karnátak, and Sind.

(Wheat)

The figures for cotton relate to the whole area under that crop in the Bombay Presidency (including Sind), and include both the early crop of the Deccan sown in July to August and harvested in December, and the late crop of Gujarát, Karnátak, and Sind sown in September to October and reaped in February to March.

(Cotton)

The estimates for linseed include the British districts and the Native States in Gujarát, Deccan, and Karnátak.

(Oilseeds)

Those for rapeseed include the British districts and the Native States in Gujarát and Sind.

The estimates for sesamum include the British districts and the Native States in Gujarát, Deccan, Karnátak, Konkan (excluding Kanara), and Sind.

The estimates for groundnut include the British districts and Native States in the Deccan and the Belgaum district in Karnátak.

(Groundnut)

(Sugarcane) The estimates for sugarcane include the British districts and Native States in Gujarát (except Panch Mahals and Broach), Deccan, Karnátak, and Konkan (except Kolaba and Ratnagiri).

Central
Provinces

Estimates are framed for wheat, cotton, linseed, and sesamum.

As regards acreage, the figures for cotton and sesamum are estimates based on reports furnished by the local officials of the Land Records staff. The figures for wheat and linseed represent the actual areas sown with those crops as disclosed by the field-to-field inspection by patwaris. The reporting agency consists of 217 revenue inspectors with, on an average, 24 patwaris working under each inspector. Each tahsil has usually 4 revenue inspectors.

Standards of outturn were framed for each crop from the results of crop-cutting experiments on selected fields under the supervision of responsible and selected officials during the years 1884-85 to 1887-88. For wheat the standard was framed separately for first and second class lands, and the proportion in which the area of each class was cropped was taken into account; irrigation also was taken into account, but in a less degree, as it is of importance only in the case of the rice crop for which no estimates are made. These standards have been revised from time to time on the basis of the results of crop-cutting experiments since made, the last revision having been made in 1912. The yield expressed by the people in terms of annas in the rupee is converted into percentages, 13.3 annas, or a normal crop, being taken to be equal to 100. A full crop or 16 annas is denoted by 120, and a bumper crop or 20 annas by 150. All deductions based on the standards are made by the Director of Land Records and Settlements from the year's figures furnished by district officers, who are supposed to bear in mind the standards when estimating the yield of the season.

Until 1897-98 the figures did not take into account the zamindari areas in Raipur, Biláspur, and Drug, for which no statistics were available, the survey being in progress. Since that year the surveyed portions of these zamindari areas have been included.

(Wheat) The estimates of the wheat crop relate to all the districts of the province, and include the Native States of Khairagarh and Nandgaon from 1907-08. The standard rates of outturn vary between 450lb and 660lb per acre.

The area sown with wheat as a mixed crop with gram is reduced for the purpose of excluding gram by 15 per cent in the districts of the Nagpur and Chattisgarh Divisions, and by from 25 to 40 per cent in the rest of the province.

(Cotton) The cotton crop is grown in all the districts of the province. The rate of standard outturn is taken to be 95lb per acre in one district, 90 in three, 80 in one, 70 in three, 60 in one, 55 in four, and 45 in five.

The area on which cotton is grown mixed with other crops is reduced by deductions varying in the different districts from 7 to 16 per cent.

(Oilseeds) The estimates for oilseeds (linseed and sesamum) also relate to all the districts of the province. The standards vary between 180lb and 300lb in the case of linseed and between 150lb and 300lb in the case of sesamum.

In the case of linseed sown with gram the area is reduced by 20 per cent for the purpose of excluding gram.

Berar

Estimates are framed for wheat, cotton, linseed, and sesamum.

The system by which areas are returned is similar to that in the Central Provinces.

No standard yield was fixed until 1903-04 and there was no specific system for estimating the yield of the harvests for the purposes of the forecasts. The estimates from 1903-04 have been calculated on the lines followed in the Central Provinces. The standards of normal outturn adopted in 1903-04 were revised in 1908 and again in 1912. The standards are 580lb per acre for wheat, 87lb for cotton, 330lb for linseed, and 300lb for sesamum.

Madras

Estimates are framed for rice, cotton, sesamum, groundnut, indigo, sugarcane, and castor seed. [Figures for castor seed are not included in these tables.]

The estimates of the rate of yield are those reported by tahsildars or deputy tahsildars, which are scrutinized and tabulated by the Director of Agriculture.

(Rice) For rice the standard rates are based on the results of crop-cutting experiments either conducted by district officers or made in Government Agricultural Farms.

(Cotton) For cotton the standard rates have been determined on a full consideration of all available data. The rates for unirrigated cotton are 90lb per acre for *Tinnevellies*, 75lb for *Cocanadas*, 55lb for *Salems*, and 50lb for *Northerns*, *Westerns*, and others; the rates for irrigated cotton are 150lb per acre for the variety grown in the Bellary district and 400lb in the case of South Arcot, Salem, Coimbatore, Trichinopoly, Tanjore, Madura, Ramnad, and Tinnevely districts. The sowings of cotton continue from July to October in the Central and Deccan districts, and in the southern districts until the end of December. The harvesting of the crop begins in February and continues until July or August.

(Sesamum) For sesamum the standard of yield has been fixed with reference to the latest crop-cutting experiments at 336lb per acre for the Vizagapatam, Godavari, Tanjore, and Trichinopoly districts, 224lb for Malabar and the Deccan districts and 280lb for the remaining districts.

The groundnut crop is chiefly grown in Anantapur, North Arcot, South Arcot, Tanjore, Cuddapah and Salem, more than one-third of the area being cultivated in South Arcot. (Groundnut)
The rate of outturn has been fixed at 10 cwts of nuts in shell per acre.

The estimates for indigo comprise the districts in which it is mainly grown: Guntur, Nellore, Karnul, Cuddapah, Chingleput, South Arcot, and Salem. The standard of yield has been taken, on the best information on record, at 35lb of dye to the acre. (Indigo)

The sugarcane crop is grown chiefly in South Arcot, Godavari, Bellary, and Coimbatore. (Sugarcane)
The standard of yield has been fixed at 45 cwts of manufactured jaggery (*gur*) to the acre.

Estimates are made for cotton only. As regards area the information is taken from the field book (*khasra girdawari*), prepared by the patwaris in November each year and checked by the higher revenue officers. The estimates of yield are based on the average of the results obtained by crop-cutting experiments conducted each year. The Ajmer-Merwara district is divided into 12 girdawars' circles and in each circle the girdawar carries out crop experiments every harvest. The Revenue Extra Assistant Commissioner does the same in the Ajmer tahsil, and the tahsildars of Beawar and Todgarh in the two tahsils in Merwara. At each harvest a piece of land under a particular crop is selected and its yield weighed. The results of all the experiments are sent to the Revenue Extra Assistant Commissioner, in whose office a combined return is prepared and included in the annual report. *Ajmer-Merwara*

The figures include khalsa as well as jagir areas.

Estimates are framed for wheat and cotton. They are generally defective in consequence of the absence of figures for unsurveyed areas and privileged tenures in many cases. *Rajputana and Central India*

Estimates are framed for wheat, cotton, and oilseeds. Until 1902-03 the figures excluded *Hyderabad* jagir and such other revenue-free lands or privileged tenures; since then statistics for these areas have been obtained as far as possible and included in the statement.

Estimates are framed for wheat and cotton.

As regards area the information is based on the entry made by the Shanbog (village accountant) in his crop inspection book, which is checked by the *Shekdar* (taluk officer) and the *Amildar* (collector). The outturn is also noted by the Shanbog in his book in terms of annas (16 annas being taken for a normal or 100 per cent crop) and this is converted into tons in the case of wheat and bales in the case of cotton by reference to the standard normal outturn per acre fixed for each taluk. The figures are finally scrutinised and consolidated in the Revenue Commissioner's Office. *Mysoore*

No information is at present available for inam villages in certain districts, but instructions have been issued to obtain this information so far as possible.

Tables of Area and Yield

COTTON

The Provinces and States dealt with in this table practically contain

[The figures of outturn represent cleaned cotton, i.e., cotton with the seeds extracted]

	Bombay (including Native States) (a)		Central Provinces and Berar (c)		Hyderabad State (d)		Madras (e)	
	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs
1898-99	5,098,145	1,232,861	5,144,828	782,391	1,738,379	222,302	1,321,700	127,670
1899-1900	3,095,208	(b)81,647	2,696,438	231,743	1,292,329	91,975	1,382,700	101,440
1900-01	4,240,140	759,096	3,526,463	999,920	1,698,836	288,570	1,373,300	118,320
1901-02	4,394,796	567,386	3,670,543	880,081	1,689,139	300,301	1,351,200	130,130
1902-03	4,786,657	943,327	3,902,066	970,866	2,359,130	280,267	1,560,900	167,109
1903-04	5,702,000	1,059,000	4,144,000	760,000	2,661,000	275,000	1,665,000	175,000
1904-05	5,955,000	796,000	4,553,000	1,229,000	2,731,000	330,000	1,755,000	132,000
1905-06	6,665,000	1,198,000	4,849,000	818,000	2,537,000	303,000	1,597,000	145,000
1906-07	7,383,000	1,762,000	4,678,000	881,000	3,480,000	449,000	1,703,000	157,000
1907-08	7,101,000	1,039,000	4,432,000	595,000	3,100,000	203,000	1,855,000	198,000
1908-09	6,241,000	1,283,000	4,176,000	766,000	2,902,000	307,000	1,576,000	162,000
1909-10	6,464,000	1,661,000	4,167,000	1,070,000	3,401,000	431,000	1,569,000	180,000
1910-11	7,394,000	1,450,000	4,487,000	629,000	3,562,000	293,000	1,873,000	235,000
1911-12	5,786,000	695,000	4,648,000	913,000	3,224,000	300,000	2,878,000	335,000
1912-13	6,694,000	1,498,000	4,523,000	910,000	2,888,000	300,000	2,426,000	317,000

	Burma		Rajputana States		Mysore State		North-West Frontier (g)		Bihar and Orissa	
	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs
1898-99	167,821	(h)	478,604	117,743						
1899-1900	148,563	32,900	325,033	44,161						
1900-01	141,718	21,077	369,384	104,390	(i)	(i)				
1901-02	130,610	13,125	281,934	87,858			30,400	6,759		
1902-03	148,867	21,114	456,503	164,142			27,400	7,420		
1903-04	165,000	27,000	395,000	113,000	70,000	13,000	35,900	8,424		
1904-05	159,000	39,000	469,000	186,000	71,000	5,000	49,000	10,000	(i)	(i)
1905-06	183,000	35,000	291,000	61,000	76,000	5,000	59,000	13,000		
1906-07	167,000	36,000	428,000	201,000	89,000	10,000	61,000	13,000		
1907-08	195,000	29,000	438,000	91,000	84,000	6,000	48,000	9,000		
1908-09	204,000	41,000	389,000	80,000	65,000	3,000	54,000	12,000		
1909-10	198,000	32,000	464,000	148,000	81,000	6,000	32,000	7,000		
1910-11	167,000	28,000	465,000	143,000	101,000	10,000	39,000	8,000		
1911-12	186,000	32,000	263,000	78,000	101,000	17,000	56,000	12,000	88,000	19,000
1912-13	227,000	45,000	393,000	125,000	154,000	19,000	55,000	13,000	89,000	19,000

(a) Includes the State of Baroda

(b) The estimate for the year is too low, as the mill consumption for the year ending the 30th June and the net exports for the year ending the 30th September were 805,000 bales. For both the preceding and the following years the trade figures are however lower than the estimates, so that for the 3 years 1898-1901 the production would seem to be understated only by 109,000 bales. In this calculation the excess of the exports from the districts of the North and East Deccan over their reported production, which averages 208,000 bales in the twelve years 1891-1903, has been taken to represent imports by road into the Presidency from the neighbouring Native States

(c) The figures of production for Berar for the years previous to 1903-04 and those for the Central Provinces for the years 1898-99 to 1901-02 represent the mill consumption for the year ending the 30th June and the exports for the year ending the 30th September, as the provincial estimates of the outturn were extremely defective

(d) The figures for the years previous to 1902-03 exclude jagir areas

(e) The estimates for Madras up to 1903-07 relate only to raiyatwari tracts; but since that year estimates for certain zamindari and whole inam villages and Native States have also been included

(f) Includes Native States from 1904-06.

Note.—The figures for 1912-13 are subject to revision

the whole of the reported area under cotton in India

Punjab (f)		United Provinces (f)		Central India States		Sind (including Native States)		
acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	
988,400	138,928	933,395	261,304	471,408	46,800	39,712	39,712	1898-99
1,215,400	205,203	996,673	227,787	479,565	23,100	92,069	20,507	1899-1900
1,090,200	219,846	1,046,176	294,169	542,673	63,900	84,560	43,031	1900-01
1,026,800	213,466	1,153,870	368,638	529,094	72,200	129,409	72,553	1901-02
1,193,600	229,005	1,239,131	327,728	591,006	115,878	195,486	110,808	1902-03
1,205,100	261,241	841,000	184,000	772,000	125,000	209,000	115,000	1903-04
1,698,000	408,000	1,201,000	368,000	846,000	138,000	221,000	97,000	1904-05
2,020,000	162,000	1,372,000	394,000	979,000	130,000	293,000	84,000	1905-06
1,413,000	357,000	1,489,000	639,000	1,132,000	222,000	250,000	155,000	1906-07
1,474,000	356,000	1,461,000	268,000	993,000	55,000	259,000	135,000	1907-08
1,562,000	324,000	1,392,000	426,000	978,000	144,000	259,000	101,000	1908-09
1,436,000	396,000	1,241,000	384,000	1,068,000	221,000	214,000	104,000	1909-10
1,385,000	306,000	1,347,000	348,000	1,349,000	237,000	279,000	97,000	1910-11
1,582,000	241,000	921,000	251,000	1,400,000	228,000	346,000	124,000	1911-12
1,575,000	346,000	1,143,000	425,000	1,314,000	206,000	288,000	121,000	1912-1913

Bengal (j)		Assam		Ajmer-Merwara		TOTAL		Net exports and consumption (bales of 400 lbs) (k)			
acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	Outturn (bales of 400 lbs)				
167,900	45,560	(h)	(A)	(A)	(h)	14,602,892	3,015,289	3,407,758	1898-99		
160,600	39,705					11,884,576	1,090,168	2,105,377	1899-1900		
127,700	41,262					14,231,150	2,953,381	3,132,501	1900-01		
118,500	32,094					14,506,295	2,744,591	3,566,296	1901-02		
100,300	29,368					16,581,046	3,367,030	4,049,672	1902-03		
127,000	40,000	(i)	(i)	33,000	5,000	18,026,000	3,180,665	3,789,263	1903-04		
128,000	37,000			52,000	18,000	19,918,000	3,791,000	3,943,802	1904-05		
132,000	33,000			29,000	5,000	21,072,000	3,416,000	4,168,451	1905-06		
151,000	33,000			40,000	19,000	22,484,000	4,994,000	4,854,579	1906-07		
149,000	33,000			41,000	10,000	21,630,000	3,122,000	3,782,401	1907-08		
161,000	35,000			40,000	9,000	19,999,000	3,692,000	4,200,150	1908-09		
166,000	35,000			39,000	13,000	20,545,000	4,718,000	4,928,000	1909-10		
169,000	49,000			45,000	20,000	22,596,000	3,853,000	4,308,000	1910-11		
63,000	25,000			36,000	11,000	27,000	12,000	21,615,000	3,288,000	4,004,000	1911-12
51,000	21,000			35,000	10,000	51,000	20,000	21,911,000	4,395,000	4,326,000	1912-13

(g) Constituted in 1901 out of the Punjab

(h) No information

(i) Included under Bengal

(j) Includes Bihar and Orissa up to 1910-11, Assam from 1903-04 to 1910-11, and the Hill Tipperah State from 1906-07

(k) For the years up to 1911-12 the exports as well as the mill consumption are for the year ending the 30th September. For 1912-13 they are for the year ending the 30th June. No reliable information exists as to the annual consumption outside the mills, but in 1911 it was settled in consultation with the Bombay Cotton Trade Association to adopt the conventional estimate of 450,000 bales. This figure has been included in the figure for each year shown in this column.

Note.—Figures for 1912-13 are subject to revision

WHEAT

The Provinces and States dealt with in this table practically contain

	Punjab (a)		United Provinces		Central Provinces and Berar (b)	
	acres	tons	acres	tons	acres	tons
1898-99	7,729,200	1,977,777	6,348,688	2,277,414	2,941,661	509,740
1899-1900	6,366,500	1,833,188	6,202,826	2,410,052	1,650,980	20,317
1900-01	8,766,400	2,940,602	6,790,440	2,384,605	2,299,290	470,909
1901-02	7,327,100	1,840,392	6,461,729	2,401,940	2,900,223	605,425
1902-03	6,995,800	2,314,714	6,909,549	2,972,497	2,501,863	701,214
1903-04	7,765,700	3,075,161	7,788,753	3,230,018	3,373,824	821,440
1904-05	7,712,100	2,855,300	7,706,500	1,997,000	3,497,100	831,900
1905-06	8,572,100	3,510,300	6,478,900	2,428,700	3,443,800	834,400
1906-07	9,100,100	3,266,900	7,044,000	2,164,500	3,714,400	904,100
1907-08	8,271,800	2,488,500	4,405,700	1,674,700	2,801,600	507,000
1908-09	9,002,100	3,062,200	5,694,700	2,124,000	2,859,600	720,900
1909-10	9,142,000	3,484,000	6,491,000	2,975,000	3,176,000	992,000
1910-11	9,981,000	3,709,000	7,342,000	2,919,000	3,585,000	973,000
1911-12	11,013,000	3,809,000	7,578,000	3,032,000	3,789,000	904,000
1912-13	9,309,000	2,989,000	7,397,000	2,944,000	3,739,000	1,067,000
	North-West Frontier (e)		Hyderabad State (f)		Rajputana States	
	acres	tons	acres	tons	acres	tons
1898-99 . . . . .	...	...	1,113,431	33,098	1,196,014	276,388
1899-1900 . . . . .	...	...	939,136	1,598	360,733	79,289
1900-01 . . . . .	...	...	686,247	12,279	719,290	170,682
1901-02	796,500	159,279	603,182	38,353	541,834	103,869
1902-03	822,900	234,594	614,092	53,724	918,399	190,841
1903-04	994,062	302,094	1,134,769	100,535	1,126,277	297,162
1904-05	882,200	267,600	1,126,600	89,700	1,023,800	189,000
1905-06	1,024,600	279,700	934,500	41,800	665,600	136,800
1906-07	1,146,400	305,200	1,039,500	109,000	842,400	181,600
1907-08	977,700	213,200	932,900	67,200	608,800	132,600
1908-09	1,019,500	213,300	1,088,300	71,600	887,800	198,400
1909-10	1,008,000	235,000	1,097,000	67,900	1,085,000	266,000
1910-11	1,033,000	266,000	1,104,000	97,000	1,187,000	265,000
1911-12	1,203,000	280,000	970,000	43,000	963,000	204,000
1912-13	880,000	195,000	851,000	48,000	1,014,000	211,000

(a) Includes Native States from 1907-08

(b) " the Native States of Khairagarh, and Nandgaon from 1907-08

(c) " " " State of Baroda.

(d) Included under Bengal

the whole of the reported area under wheat in India

Central India States		Bombay (including Native States) (c)		Bengal (g)		Bihar and Orissa		
acres	tons	acres	tons	acres	tons	acres	tons	
1,613,851	287,749	2,470,998	737,385	1,582,500	656,400			1898-99
692,950	100,276	1,157,077	99,408	1,550,300	572,700			1899-1900
1,244,330	220,116	1,433,810	298,479	1,498,700	472,600			1900-01
1,459,116	255,027	1,510,459	179,034	1,408,300	391,500			1901-02
1,182,298	408,843	1,797,245	532,601	1,417,000	485,900			1902-03
1,856,069	523,855	2,174,076	560,279	1,508,600	527,800	(d)	(d)	1903-04
2,227,400	473,200	2,260,900	356,600	1,505,600	495,200			1904-05
1,852,100	420,600	1,947,200	275,100	1,408,100	446,800			1905-06
2,447,500	614,600	1,662,900	338,200	1,538,500	420,800			1906-07
1,694,100	271,300	1,677,700	336,200	1,095,900	320,500			1907-08
2,046,400	397,400	1,745,700	383,200	1,832,000	334,000			1908-09
2,313,000	514,000	1,820,000	451,000	1,500,300	566,300			1909-10
2,460,000	582,000	1,855,000	506,000	143,000	38,000	1,312,000	570,000	1910-11
2,563,000	686,000	1,284,000	265,000	143,000	47,000	1,285,000	657,000	1911-12
2,138,000	984,000	1,539,000	451,000	146,000	51,000	1,281,000	532,000	1912-13
Sind including (Native States)		Mysore State		Total				
acres	tons	acres	tons	acres	tons			
869,706	81,281	4,029	492	25,370,078	6,837,674			1898-99
364,522	68,226	2,758	254	18,687,782	5,357,142			1899-1900
479,487	123,160	2,556	197	23,864,550	7,093,529			1900-01
534,004	109,009	3,714	258	23,446,161	6,090,524			1901-02
331,608	75,987	5,123	531	23,395,277	7,971,446			1902-03
586,895	202,171	5,718	630	28,413,743	9,641,145			1903-04
522,700	126,100	5,300	440	28,470,200	7,582,040			1904-05
628,100	196,200	2,400	140	26,367,400	8,570,140			1905-06
672,300	186,300	4,500	700	29,212,500	8,491,700			1906-07
447,500	113,300	2,600	600	22,911,300	6,125,100			1907-08
548,200	133,800	1,600	200	26,235,900	7,639,000			1908-09
471,000	132,000	3,200	400	28,106,500	9,633,600			1909-10
560,000	136,000	2,800	500	30,564,800	10,061,500			1910-11
391,000	97,000	4,000	500	31,141,000	9,924,500			1911-12
471,000	127,000	4,000	700	29,569,000	9,599,700			1912-13

(c) Constituted in 1901 out of the Punjab

(f) The figures for the years previous to 1902-03 exclude jagir areas

(g) Includes Bihar and Orissa up to 1909-10

Note.—The figures for 1912-13 are subject to revision

RICE

The Provinces dealt with in this table ordinarily contain some

[The figures of outturn represent cleaned rice]

	Bengal (a)		Bihar and Orissa		Assam		Madras (b)	
	acres	cwts	acres	cwts	acres	cwts	acres	cwts
1898-99	39,605,400	405,842,900					7,166,000	54,946,700
1899-1900	39,490,500	357,956,360					6,429,000	39,437,100
1900-01	36,013,900	311,508,600					6,591,600	49,023,100
1901-02	35,094,800	272,201,800			(d)	(d)	6,958,200	51,490,200
1902-03	37,553,700	358,977,300					7,734,800	57,485,500
1903-04	34,931,500	316,669,700					7,768,300	58,200,000
1904-05	38,355,200	347,329,100	(c)	(c)			6,322,700	40,497,000
1905-06	41,110,800	329,365,100					6,604,400	45,838,200
1906-07	40,239,500	315,331,800					6,944,400	50,438,200
1907-08	40,210,200	366,561,800			(c)	(c)	7,215,100	49,501,500
1908-09	38,157,700	282,621,700					7,361,500	43,699,200
1909-10	42,977,000	435,605,000					7,875,000	57,356,000
1910-11	42,798,000	436,974,000					7,787,000	63,471,000
1911-12	20,437,000	172,707,000	17,363,000	178,125,000	4,045,000	31,922,000	10,288,000	116,650,000
1912-13	20,691,000	167,512,000	17,021,000	125,926,000	4,053,000	36,983,000	9,994,000	78,394,000

LINSEED

The British Provinces dealt with in this table ordinarily contain 96.6 per cent of the total area under

	United Provinces (a)		Central Provinces and Berar (b)		Hyderabad State (c)		Bihar and Orissa	
	acres	tons	acres	tons	acres	tons	acres	tons
1898-99	438,728 445,000	87,854 91,284	1,009,340	66,838	426,045	13,448		
1899-1900	367,330 409,000	73,267 89,464	828,437	4,319	171,970	1,506		
1900-01	448,206 466,000	75,780 79,000	619,881	28,034	371,988	8,774		
1901-02	373,092 498,000	75,876 100,113	795,334	42,392	370,376	18,403		
1902-03	536,044 621,000	114,595 122,000	614,890	49,641	378,559	22,343		
1903-04	782,302 592,000	144,736 105,000	993,389	96,184	529,214	25,290		
1904-05	634,500 647,000	51,800 49,000	959,700	80,500	775,800	33,500	(d)	(d)
1905-06	210,900 567,000	32,800 88,000	912,100	77,300	604,500	24,700		
1906-07	315,000 633,000	56,000 113,000	1,158,200	106,200	664,300	28,600		
1907-08	57,500 269,000	6,500 30,000	547,600	23,500	484,800	13,600		
1908-09	194,700 499,000	30,400 78,000	954,700	80,900	555,400	17,200		
1909-10	308,400 597,000	62,000 120,000	926,200	90,300	548,900	18,400		
1910-11	472,800 636,000	102,900 142,000	1,080,400	124,500	631,300	80,400	510,800	102,400
1911-12	848,800 747,000	159,700 140,000	1,858,800	1,9,000	603,500	26,800	567,600	120,100
1912-13	493,500 667,000	95,500 128,000	1,508,600	141,800	512,400	17,300	517,900	99,300

Rice—(a) Includes Bihar and Orissa up to 1910-11 and Assam from 1906-06 to 1910-11

(b) The estimates for Madras up to 1906-07 relate only to raiyatwari villages; but since that year estimates for certain zamindari and whole inam villages have also been included

(c) Included under Bengal

(d) No information

Note.—The figures for 1912-13 are subject to revision

86 per cent of the total rice area of British India

Lower Burma		United Provinces		Total		
acres	cwts	acres	cwts	acres	cwts	
5,910,650	44,851,000			52,632,050	505,640,600	1898-99
6,050,135	54,160,000			51,909,635	451,553,460	1899-1900
6,326,993	52,975,000			48,932,493	413,506,700	1900-01
6,558,190	60,602,000			48,511,190	384,294,100	1901-02
6,553,890	53,022,000			51,842,390	460,484,800	1902-03
6,761,665	64,411,000			49,461,465	439,280,700	1903-04
6,909,300	60,735,000	(d)	(d)	51,586,900	443,461,100	1904-05
6,713,400	57,940,000			54,428,600	433,188,300	1905-06
6,973,700	61,924,000			54,167,600	427,743,800	1906-07
7,252,000	63,148,000			54,677,800	379,211,300	1907-08
7,569,100	64,659,000			53,088,300	390,979,900	1908-09
7,467,000	64,175,000			58,119,000	557,136,000	1909-10
7,449,000	57,493,000			58,029,000	557,938,000	1910-11
7,373,000	66,490,000	5,220,000	35,579,000	64,726,000	601,473,000	1911-12
7,835,000	71,258,000	6,811,000	39,950,000	66,405,000	520,023,000	1912-13

linseed in British India

Bengal (e)		Assam		Bombay (including Native States) (f)		Total		
acres	tons	acres	tons	acres	tons	acres	tons	
677,900	144,700			277,463	23,975	2,829,475 445,000	336,610 91,284	1898-99
653,200	126,700			137,956	428	1,648,908 409,000	206,220 89,464	1899-1900
806,700	183,400			141,221	3,036	2,417,991 466,000	247,024 79,000	1900-01
783,800	110,800			224,002	4,537	2,546,604 498,000	251,808 100,113	1901-02
864,200	160,000			198,544	12,989	2,592,237 621,000	359,568 122,000	1902-03
922,800	168,800			381,374	31,322	3,809,079 592,000	466,332 105,000	1903-04
829,400	114,100	(g)	(g)	548,000	18,500	3,747,400 647,000	298,400 49,000	1904-05
829,500	127,800			154,800	2,600	2,711,800 567,000	265,200 88,000	1905-06
805,600	114,600			167,100	6,800	3,110,200 633,000	312,200 113,000	1906-07
589,400	85,900			151,100	4,000	1,830,400 269,000	133,500 30,000	1907-08
634,800	72,500			158,600	8,700	2,498,000 499,000	219,700 78,000	1908-09
673,400	124,200			134,200	12,900	2,591,100 597,000	307,800 120,000	1909-10
196,900	30,700	14,900	2,400	194,700	23,300	3,101,300 656,000	421,600 142,000	1910-11
236,800	39,200	13,800	2,200	205,300	15,000	4,304,800 747,000	502,000 140,000	1911-12
199,800	37,400	12,400	2,300	141,600	14,100	3,386,200 667,000	407,700 128,000	1912-13

Linseed—(a) The figures in Italics represent "mixed" crop, i.e., seed sown in the same fields with other crops. The estimates of the mixed crop of the United Provinces are highly conjectural; hence they have been kept separate.
 (b) The estimates of yield for Berar for the years previous to 1903-04 are defective, being based on incorrect data.
 (c) The figures for the years previous to 1902-03 exclude jagir areas.
 (d) Included under Bengal.
 (e) Includes Bihar and Orissa up to 1909-10.
 (f) Includes the state of Baroda also.
 (g) No information.

Note.—The figures for 1912-13 are subject to revision.

RAPE AND MUSTARD

The British Provinces dealt with in this table ordinarily contain 99.46 per cent of the total area under

	United Provinces (a)		Punjab		Bengal (b)		Bihar and Orissa		Assam	
	acres	tons	acres	tons	acres	tons	acres	tons	acres	tons
1898-99	92,679	22,884	582,600	56,041	2,167,200	448,200			134,856	21,891
1899-1900	1,509,000	410,983								
	76,180	21,186	897,500	26,761	2,032,900	371,900			119,110	21,789
	1,381,000	425,471								
1900-01	91,180	24,060	1,638,400	248,032	2,048,200	337,800			126,309	21,140
	1,449,000	372,000								
1901-02	120,436	36,841	665,800	64,361	1,922,400	372,900			157,671	28,294
	1,461,000	430,617								
1902-03	140,296	31,320	936,100	91,857	1,914,100	341,700			174,719	27,905
	2,335,000	516,000								
1903-04	131,928	29,643	1,083,900	159,236	1,973,900	365,500	(c)	(c)	172,039	29,098
	2,429,000	542,000								
1904-05	140,100	18,800	1,210,800	119,300	1,977,500	360,300			157,700	28,000
	2,509,000	336,000								
1905-06	154,700	30,000	1,614,200	183,000	1,861,700	287,300			164,400	30,200
	2,026,000	388,000								
1906-07	153,400	30,000	1,402,400	172,300	2,026,500	837,000			222,000	43,600
	2,210,000	424,000								
1907-08	96,800	11,800	842,800	110,000	1,869,100	275,600			261,000	42,700
	1,870,000	217,000								
1908-09	136,800	26,900	1,158,900	183,900	1,854,900	231,900			284,300	46,400
	2,153,000	423,000								
1909-10	176,900	36,000	1,329,900	226,900	2,273,300	440,100			320,100	60,500
	2,269,000	466,000								
1910-11	146,200	34,400	1,089,000	155,100	1,370,700	238,600	765,700	151,900	318,100	56,000
	2,371,000	561,000								
1911-12	176,200	37,200	1,414,100	196,600	1,317,500	243,900	780,100	154,700	258,100	47,600
	2,872,000	609,000								
1912-13	145,900	31,000	870,200	147,200	1,325,400	266,800	693,700	132,100	293,600	58,700
	2,373,000	551,000								

SESAMUM (til or jinjili)

The British Provinces dealt with in this table ordinarily contain some 79 per cent of the total area under

	United Provinces (a)		Central Provinces and Berar (b)		Bombay (including Native States) (c)		Hyderabad State (d)		Madras (e)		Bengal (f)	
	acres	tons	acres	tons	acres	tons	acres	tons	acres	tons	acres	tons
1898-99	155,178	15,159			754,327	115,566	426,740	14,468	690,700	100	367,200	52,100
	713,000	70,000										
1899-1900	203,004	22,743	1,142,346	63,568	803,148	6,186	237,512	2,388	665,900	45,100	388,200	49,700
	517,000	60,000										
1900-01	238,154	28,431	1,132,232	91,692	719,642	105,187	392,032	10,421	850,000	68,200	396,000	45,400
	632,000	75,000										
1901-02	252,870	23,226	828,890	41,978	802,985	64,421	377,023	21,660	727,700	66,400	411,100	54,900
	611,000	60,000										
1902-03	316,150	35,279	1,213,149	102,012	904,523	177,137	472,282	34,038	783,700	71,700	384,800	45,000
	717,000	80,000										
1903-04	374,553	34,345	1,083,847	85,181	1,125,055	218,219	601,607	53,325	855,700	78,600	428,300	58,000
	747,000	70,000										
1904-05	304,100	13,900	891,100	69,000	793,900	52,700	780,000	29,400	674,200	55,100	493,700	59,000
	600,000	35,000										
1905-06	278,200	17,500	792,900	66,900	908,100	105,100	465,600	18,400	723,300	55,000	515,000	61,700
	700,000	45,000										
1906-07	309,200	36,200	807,900	70,400	1,049,500	186,000	493,700	27,300	554,900	45,800	498,800	72,200
	775,000	90,000										
1907-08	329,800	10,000	977,600	55,400	992,700	61,400	510,600	20,600	647,000	53,100	419,400	46,300
	900,000	30,000										
1908-09	322,000	34,000	790,000	59,900	979,500	99,500	511,900	18,700	685,900	57,200	453,400	59,000
	1,000,000	100,000										
1909-10	481,300	48,700	842,700	91,900	1,037,400	132,400	597,300	24,500	718,900	69,700	491,800	68,600
	900,000	90,000										
1910-11	438,910	45,400	895,300	76,400	994,800	109,400	677,700	34,400	573,200	49,300	489,100	79,400
	900,000	90,000										
1911-12	375,000	29,000	886,700	72,300	548,900	31,700	663,900	25,400	887,200	73,200	271,800	41,500
	800,000	100,000										
1912-13	316,700	4,000	836,300	61,800	761,800	94,000	649,100	32,500	742,400	62,100	251,200	39,300
	900,000	310,000										

Rape and Mustard—(a) The figures in Italics represent "mixed" crop, i.e., seed sown in the same fields with other crops. The estimates of the mixed crop of the United Provinces are highly conjectural; hence they have been kept separate.

(b) Includes Bihar and Orissa up to 1909-10.

(c) Included under Bengal.

(d) Constituted in 1901 out of the Punjab.

(e) The figures for the years previous to 1902-03 exclude *jagir* areas.

Note.—The figures for 1912-13 are subject to revision.

rape and mustard in British India

Sind (including Native States)		North-West Frontier (d)		Bombay (including Native States)		Hyderabad State (e)		Total		
acres	tons	acres	tons	acres	tons	acres	tons	acres	tons	
70,766	8,601	.....	.....	53,091	9,795	8,796	286	3,109,988	567,698	1898-99
64,637	6,193	.....	.....	2,536	111	905	6	1,509,000	410,933	1899-1900
119,596	12,304	.....	.....	39,134	6,613	16,597	286	2,093,768	447,948	1900-01
113,140	12,049	73,700	8,723	17,438	1,721	12,077	146	1,381,000	425,471	1901-02
78,606	7,813	110,910	13,151	54,625	7,691	12,537	289	4,077,366	650,225	1902-03
85,525	16,550	130,231	17,127	36,007	5,786	14,917	286	1,449,000	372,000	1903-04
60,100	2,500	55,700	8,300	25,100	3,000	13,000	200	3,082,692	525,035	1904-05
64,200	11,500	85,500	12,200	43,800	9,300	14,300	100	1,461,000	430,617	1905-06
87,900	12,400	218,800	19,400	61,400	14,300	10,700	100	3,421,883	521,326	1906-07
63,100	6,400	121,000	12,800	46,900	12,500	9,500	200	2,335,000	516,000	1907-08
120,400	23,400	226,900	28,600	60,800	23,200	12,500	200	2,335,000	516,000	1908-09
69,700	10,100	91,700	7,900	86,900	22,600	8,100	100	3,583,445	623,206	1909-10
78,200	11,100	85,100	9,500	84,600	15,400	9,300	200	2,429,000	542,000	1910-11
54,000	4,700	94,200	12,100	17,600	2,600	6,500	100	3,640,000	540,400	1911-12
45,700	4,700	75,700	7,200	73,200	19,500	11,100	200	2,508,000	336,000	1912-13
								4,003,800	563,600	
								2,026,000	398,000	
								4,183,100	629,100	
								2,210,000	424,000	
								3,330,200	471,000	
								1,870,000	217,000	
								3,875,500	564,500	
								2,153,000	423,000	
								4,361,600	804,200	
								2,289,000	466,000	
								3,944,900	672,200	
								2,371,000	561,000	
								4,118,330	699,500	
								2,872,000	609,000	
								3,540,500	669,400	
								2,373,000	651,000	

sesamum in British India

Bihar and Orissa		Assam		Punjab and N.-W. Frontier (g)		Sind (including Native States)		Total		
acres	tons	acres	ton	acres	tons	acres	tons	acres	tons	
				252,600	25,350	114,129	8,285	3,530,625	348,118	1898-99
				216,400	16,238	158,937	7,323	713,000	70,000	1899-1900
				218,500	19,077	105,831	4,468	3,316,067	213,256	1900-01
				211,500	17,640	99,693	5,985	517,000	60,000	1901-02
				244,000	21,819	118,044	7,602	4,052,491	372,856	1902-03
				246,600	28,143	122,496	5,685	622,000	75,000	1903-04
(h)	(h)	(i)	(i)	158,000	16,000	83,700	5,300	3,711,711	296,210	1904-05
				146,300	18,960	84,400	6,300	611,000	60,000	1905-06
				95,500	8,800	55,900	4,300	4,435,648	493,587	1906-07
				84,100	4,700	55,600	4,200	717,000	80,000	1907-08
				164,700	23,700	80,500	12,300	4,838,164	539,478	1908-09
				175,600	18,500	67,000	6,500	747,000	70,000	1909-10
		(h)	(h)	143,700	14,900	88,300	12,600	4,178,700	300,400	1910-11
14,600	33,500	9,700	1,300	92,100	9,900	58,200	4,800	600,000	35,000	1911-12
20,600	24,700	10,600	1,800	150,100	15,000	67,400	6,500	3,918,800	344,800	1912-13
								700,000	45,000	
								3,864,900	451,000	
								775,000	90,000	
								4,016,800	255,700	
								900,000	30,000	
								3,937,900	364,300	
								1,000,000	100,000	
								4,515,000	470,900	
								900,000	90,000	
								4,306,000	421,800	
								900,000	90,000	
								4,008,100	327,600	
								800,000	70,000	
								4,006,200	371,700	
								900,000	100,000	

Sesamum—(a) The figures in Italics represent "mixed" crop, i.e., seed sown in the same fields with other crops. The estimates of the mixed crop of the United Provinces are highly conjectural; hence they have been kept separate

(b) The estimates of yield for Bihar for years previous to 1903-04 are defective, being based on incorrect data

(c) Includes the State of Baroda

(d) The figures for the years previous to 1902-03 exclude jagir areas

(e) The estimates for Madras up to 1906-07 relate only to raiyatwari villages; but since that year estimates for certain zamindari and whole inam villages have also been included

(f) Includes Bihar and Orissa up to 1910-11 and Assam for 1910-11

(g) The figures for both area and yield from 1904-05 relate to the Punjab only; the forecast of the Sesamum crop of the North-West Frontier Province having been discontinued from that year

(h) Included under Bengal

(i) No information

Note—The figures for 1912-13 are subject to revision

D

SUGARCANE

The Provinces dealt with in this table ordinarily contain some 98·3 per cent
[The figures of outturn represent raw sugar (gúr)]

	United Provinces		Punjab		Bihar and Orissa		Bengal (a)			
	acres	tons	acres	tons	acres	tons	acres	tons		
1898-99	1,227,881	1,904,799	351,200	(b)			861,100	871,485		
1899-1900	1,259,070	838,885	343,600	303,935			884,400	817,185		
1900-01	1,212,456	1,193,214	334,500	272,114			801,800	811,420		
1901-02	1,228,691	976,223	351,500	239,105			661,200	676,410		
1902-03	1,151,777	904,132	309,400	204,012			673,500	681,580		
1903-04	1,089,602	877,102	321,200	232,664			632,400	653,900		
1904-05	1,212,600	1,163,400	325,500	238,300			(c)	(c)	633,000	634,700
1905-06	1,228,900	884,000	172,700	89,000			623,100	615,200		
1906-07	1,386,700	1,264,600	277,700	212,800			608,700	594,700		
1907-08	1,481,700	916,700	331,800	238,700			607,200	583,100		
1908-09	1,120,100	844,200	365,700	265,800			553,000	430,800		
1909-10	1,037,800	955,200	403,800	329,700			507,600	495,800		
1910-11	1,047,100	1,042,900	387,900	262,600			615,600	563,500		
1911-12	1,340,800	1,259,300	284,500	161,200	263,000	303,800	223,300	256,300		
1912-13	1,424,300	1,300,700	360,400	255,700	266,200	292,800	221,300	263,200		

INDIGO

The Provinces dealt with in this table ordinarily contain some 98 per cent of the total area under indigo

	Bihar and Orissa (a)		Bengal		Madras			
	acres	cwts	acres	cwts	acres	cwts		
1898-99	512,100	74,321			210,600	30,320		
1899-1900	449,200	44,896			249,000	33,340		
1900-01	360,600	47,707			251,900	46,100		
1901-02	311,300	41,820			239,400	38,480		
1902-03	255,500	21,924			212,300	40,260		
1903-04	249,700	31,895			241,900	45,900		
1904-05	223,100	24,300			126,300	16,700		
1905-06	181,500	15,800			(b)	(b)	113,900	17,300
1906-07	137,800	17,300			180,700	32,300		
1907-08	143,800	17,700			141,900	20,000		
1908-09	135,800	17,000			81,800	12,400		
1909-10	107,400	11,400			96,400	14,400		
1910-11	117,000	13,900			82,800	20,100		
1911-12	109,800	17,800	1,000	100	90,300	21,200		
1912-13	90,100	14,700	1,000	100	60,100	18,300		

Sugarcane—(a) Includes Bihar and Orissa up to 1910-11 and Assam from 1905-06 to 1910-11

(b) No information

(c) Included under Bengal

(d) The estimates for Madras up to 1906-07 relate only to *raiyatwari* villages; but since that year estimates for certain *samindari* and whole *inam* villages have also been included

(e) Included under Punjab

Note.—The figures for 1912-13 are subject to revision

of the total area under sugarcane in British India

Assam		Madras (d)		Bombay (including Native States)		N.-W. Frontier		Total			
acres	tons	acres	tons	acres	tons	acres	tons	acres	tons		
		45,500	(b)					2,485,681	2,076,234	1898-99	
		54,400					(e)	(e)	2,541,470	1,860,005	1899-1900
		55,400							2,404,156	2,276,748	1900-01
(b)	(b)	51,100	109,400			23,900	21,339	2,316,391	2,022,476	1901-02	
		46,600	93,400	(b)	(b)	26,652	23,660	2,237,829	1,906,784	1902-03	
		44,300	83,700			27,090	24,620	2,114,592	1,871,986	1903-04	
		47,800	90,000			25,900	22,600	2,244,800	2,169,000	1904-05	
		60,700	114,500			25,600	22,800	2,111,000	1,725,500	1905-06	
		53,100	100,400			28,600	32,800	2,351,800	2,205,300	1906-07	
(c)	(c)	49,000	92,000	74,300	184,200	35,200	32,200	2,639,200	2,046,900	1907-08	
		43,700	81,000	92,800	221,200	27,500	30,100	2,202,800	1,872,900	1908-09	
		48,800	82,000	89,200	232,300	30,600	33,100	2,112,800	2,127,100	1909-10	
		47,900	87,100	83,400	226,000	32,700	35,700	2,114,600	2,217,800	1910-11	
34,700	28,000	107,700	196,000	94,700	214,600	31,500	31,900	2,380,800	2,451,100	1911-12	
38,200	33,100	101,000	204,500	72,500	168,500	29,800	33,500	2,514,200	2,552,000	1912-13	

in British India

Punjab		United Provinces		Total		
acres	cwts	acres	cwts	acres	cwts	
47,200	8,269	240,418	26,416	1,010,318	139,320	1898-99
97,300	15,577	231,400	17,977	1,026,900	111,890	1899-1900
115,700	22,693	262,175	31,529	990,375	148,029	1900-01
71,600	13,533	168,990	18,986	791,190	112,819	1901-02
42,000	7,016	135,811	10,007	645,511	79,207	1902-03
74,200	12,184	140,834	12,823	706,634	102,802	1903-04
53,000	9,900	74,500	8,000	476,900	58,900	1904-05
67,500	10,800	40,700	4,300	393,600	48,200	1905-06
62,300	11,000	40,400	5,100	421,200	65,700	1906-07
57,900	9,000	47,300	5,600	393,900	52,300	1907-08
36,200	5,600	30,600	3,800	283,900	38,800	1908-09
43,400	8,300	41,900	5,200	289,100	39,300	1909-10
45,400	8,500	31,200	3,500	276,400	46,000	1910-11
36,600	5,600	29,400	3,000	286,900	47,700	1911-12
34,400	6,000	28,900	3,500	214,500	37,600	1912-13

Indigo—(a) Includes Bengal up to 1910-11

(b) Included under Bihar and Orissa

Note.—The figures for 1912-13 are subject to revision

GROUNDNUT

[The figures of outturn represent nuts in shell]

	Madras (a)		Bombay (including Native States)		Burma (c)		Total	
	acres	tons	acres	tons	acres	tons	acres	tons
1898-99	116,200	(b)	101,614	70,561			217,814	70,561
1899-1900	102,000		71,946	9,250			173,946	9,250
1900-01	229,997		64,411	28,631			294,408	28,631
1901-02	337,600		96,622	63,298			434,222	63,298
1902-03	421,300		69,855	61,854	(b)	(b)	491,155	61,854
1903-04	384,400		89,793	94,409			474,193	94,419
1904-05	366,400	151,700	93,300	63,200			459,700	214,900
1905-06	393,100	174,500	92,800	36,700			485,900	211,200
1906-07	511,000	189,000	111,000	84,700			622,000	273,700
1907-08	601,800	202,000	129,800	82,500	137,000	67,700	868,600	352,500
1908-09	718,700	246,500	133,700	129,500	258,600	116,700	1,111,000	495,700
1909-10	740,100	221,900	162,300	172,700	146,300	64,700	1,048,700	459,300
1910-11	667,300	254,200	185,800	222,300	98,800	41,900	951,900	503,200
1911-12	806,000	306,000	269,300	248,300	138,800	51,400	1,214,100	605,700
1912-13	934,500	341,100	216,800	215,300	196,000	75,000	1,847,300	631,400

(a) The estimates for Madras up to 1906-07 relate only to *ruiyatwari* villages; but since that year estimates for certain *zamindari* and whole *inam* villages have also been included

(b) No information

(c) The figures up to 1911-12 relate to the principal groundnut growing districts. Those for 1912-13 include rough estimates for other districts also

(d) Bombay only

Note.—The figures for 1912-13 are subject to revision

JUTE

The Provinces dealt with in this table practically contain the whole area under jute in India

	Bengal (a)		Bihar and Orissa		Assam		Cooch Bihar State		Total	
	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs	acres	bales of 400 lbs
1898	1,624,400	5,334,000							1,624,400	
1899	1,961,800	5,412,000							1,961,800	
1900	2,093,400	6,526,000			(d)	(d)	(d)	(d)	2,093,400	
1901	2,263,800 (b)	7,438,000							2,263,800	See under Bengal
1902	2,109,300	6,577,000			34,400	48,000			2,142,700	
1903	2,213,600	7,241,000	(c)	(c)	38,250 (c)	90,000	23,200	50,000 (c)	2,275,050	
1904	2,850,000	7,400,000			29,700	46,000	20,000	36,000	2,899,700	
1905	3,080,700	8,029,000			37,600	59,100	(d)	52,800	3,128,300	8,140,900
1906	3,434,000	9,020,500			48,900	106,900	(d)	79,000	3,482,900	9,208,400
1907	3,846,500	9,512,100			95,500	224,100	32,000	81,600	3,974,300	9,817,800
1908	2,766,300	6,132,700			68,400	138,500	22,000	39,000	2,856,700	6,310,800
1909	2,773,100	6,992,500			83,500	180,500	20,000	33,600	2,876,600	7,206,600
1910	2,841,600	7,735,300			82,200	177,800	14,000	18,900	2,937,300	7,932,000
1911	2,737,600	7,247,600	258,100	705,500	90,700	239,600	20,000	42,000	3,106,400	8,231,700
1912	2,927,100	8,413,700	298,300	792,900	95,600	226,800	32,800	88,400	3,353,800	9,521,600

(a) Including Bihar and Orissa up to 1910. The estimates of area previous to 1904 were based on very uncertain data

(b) Revised according to the statistics of trade and consumption, and including the production of Assam, Cooch Bihar and Nepal

(c) Included in the figures shown under Bengal for these years

(d) Not reported

(e) Excluding the figures for Nepal, Upper India, and Madras, which are stated below (bales):—

	Nepal	Upper India (via F. I. Ry.)	Madras (via B. N. Ry.)
1905	64,300	28,269	4,257
1906	60,018	10,520	1,057
1907	77,600	5,500	7,800
1908	81,800	6,100	300
1909	69,884	11,264	154
1910	42,751	35,860	564

Note.—The figures for 1912 are subject to revision

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