

SIXTEENTH ISSUE

DEPARTMENT OF STATISTICS, INDIA

ESTIMATES

OF

AREA AND YIELD

OF

Principal Crops in India

1913=14

Published by order of the Governor General in Council



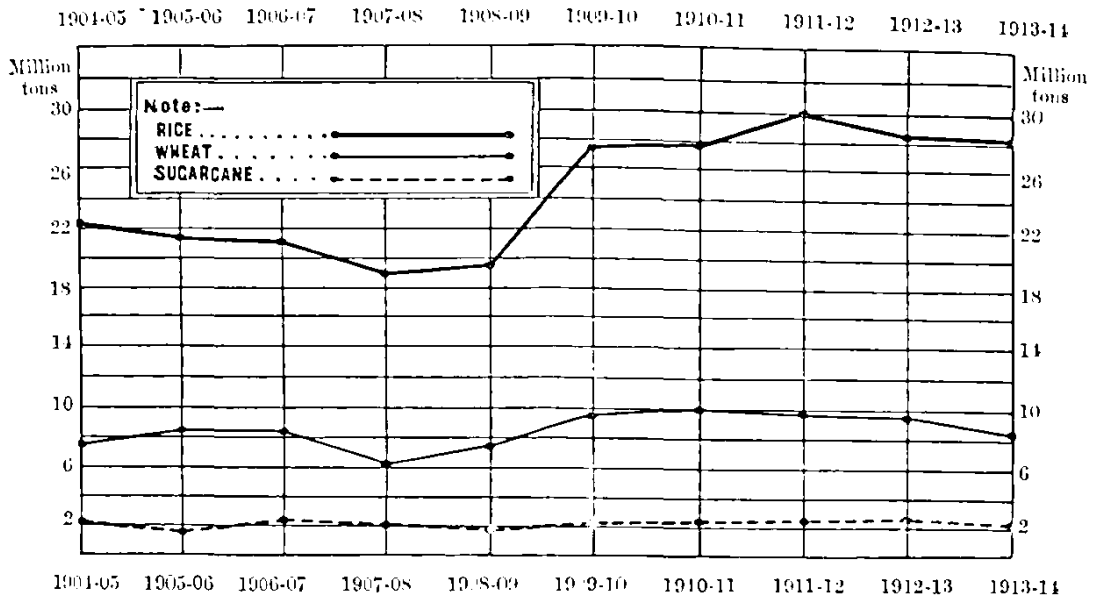
CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1915

PRICE FOUR ANNAS

Yield of certain principal crops from 1904-05 to 1913-14

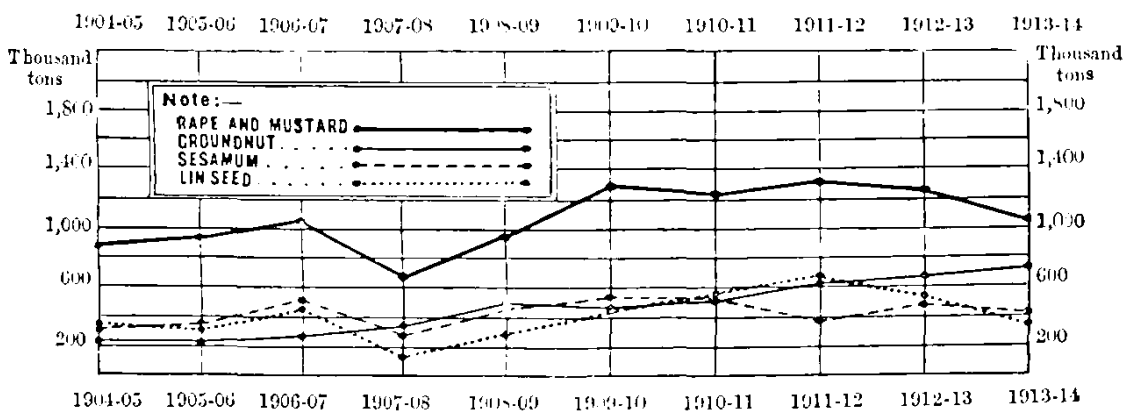
Rice, Wheat and Sugarcane

(in millions of tons)



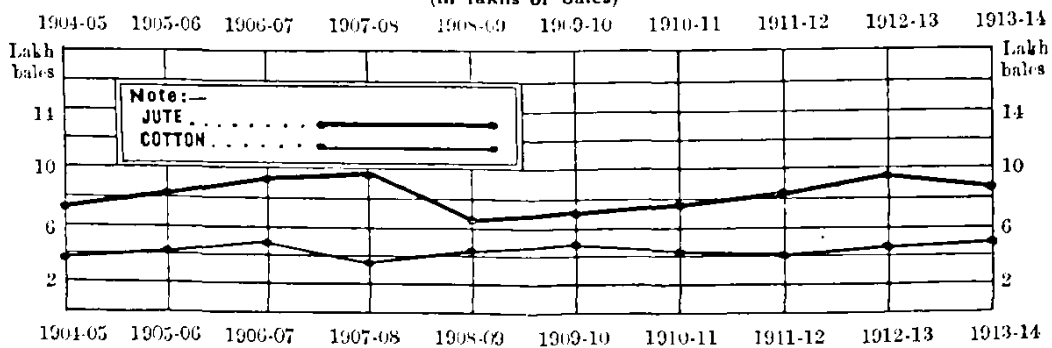
Sesamum, Linseed, Rape and Mustard and Groundnut

(in thousands of tons)



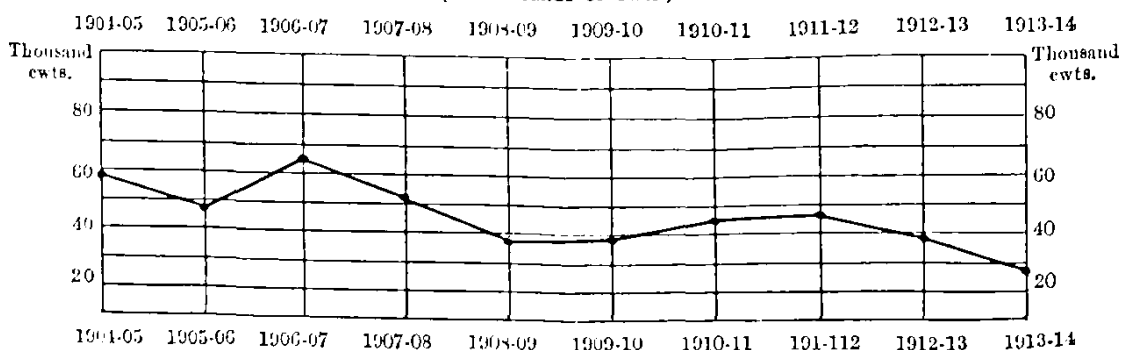
Cotton and Jute

(in lakhs of bales)



Indigo

(in thousands of cwts)



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CONTENTS

Introductory Note

	PAGE.
Source and scope of the estimates	1
Leading features of the season in respect of each crop	1—4
Charts illustrating the increase or decrease in yield of each crop in the last ten years	<i>frontispiece</i>

Tables

No.		
1.	Abstract table—Area and Yield of each crop	6
2.	Area and Yield of Rice in each province	7
3.	Area and Yield of Wheat in each province	8
4.	Area and Yield of Sugarcane in each province	9
5.	Area and Yield of Tea in each province	<i>ib.</i>
6.	Area and Yield of Cotton in each province	10
7.	Area and Yield of Jute in each province	11
8.	Area and Yield of Linseed in each province	<i>ib.</i>
9.	Area and Yield of Rape and Mustard in each province	12
10.	Area and Yield of Sesamum (til or jinjili) in each province	13
11.	Area and Yield of Groundnut in each province	14
12.	Area and Yield of Indigo in each province	<i>ib.</i>
13.	Yield per acre of each crop in each province	15
14.	Supplementary table—Area and Yield of Barley, Jawar, Bajra, Maize, and Gram in each province	16—17
	APPENDIX I.—Method of framing estimates of crops	19—20
	APPENDIX II.—Method of collecting the statistics province by province	21—23

Estimates of Area and Yield of Principal Crops in India, 1913-14

INTRODUCTORY NOTE.

The sixteenth issue of the "Area and Yield of Principal Crops in India" differs from its predecessors. The statistical tables have been reconstructed to show the provincial and all India total area and outturn at a glance. A series of charts, an introductory note, and an index for easy reference have been added to the volume. The delay in the publication of this issue is due partly to pressure of more urgent work owing to the war and partly to the reconstruction of the tables. It is hoped in future issues to publish the volume immediately after the final estimates of the season's crops are available.

The periodical estimates or forecasts of certain crops are compiled from local returns and issued by this Department. The general practice is to issue a preliminary forecast, a second estimate, and a third or final estimate—fuller and more precise in data than the two former forecasts. The figures in the tables in this volume are those given in the final forecasts. They show the area sown and the estimated yield in the last ten years, of rice; wheat; sugarcane; tea*; cotton; jute; linseed; rape and mustard; sesamum; groundnut; and indigo.

The estimates for these crops did not, especially in the earlier years of forecasts in India, relate to the total producing areas, but only to those tracts where the respective crops were grown on an extensive scale. Tracts of minor importance have been added gradually as will be seen from the tables and the footnotes thereto. It should, therefore, be remembered that owing to this gradual development, the estimates in the forecasts for earlier years are not altogether strictly comparable with those for later years as is the case with the agricultural statistics of British India, published in Volume I of Agricultural Statistics of India. The increase in this respect, however, between the year under report as against the previous year is so small as to be negligible and to afford a comparison of the crops of the year (1913-14) with the preceding year. At present the estimates for cotton, wheat, and jute relate to all the tracts in India where these crops are grown to any extent, excluding certain unimportant outlying tracts, such as Baluchistan, Kashmir, Nepal, and Sikkim. For other crops, however, the estimates, though relating to all the British provinces where they are grown to any considerable extent (excepting Burma in the case of sesamum), still exclude the Native States, except those in the Bombay Presidency and the States of Hyderabad and Baroda in certain cases. Further details regarding the reporting tracts are given in paragraphs below and in Appendix II on pages 21-23.

Estimates, so far as available, for certain other staple crops, namely, barley, jawar, bajra, maize, and gram, have been shown in a supplementary table (No. 14), the figures being taken from the provincial Season and Crop Reports.

Rice, which is generally regarded as a winter crop, is mainly harvested in December and January. It is sown from the month of May to August. The provinces to which the estimates for rice now † relate are Bengal, Bihar and Orissa, Madras, Burma, the United Provinces, Assam, Bombay, Sind, and Coorg. These tracts comprise 93 per cent of the total rice area of British India. The only Native States for which estimates for rice are prepared are those in the Bombay Presidency. The total area under rice in all these tracts in 1913-14 was reported as 70,583,000 acres as compared with the 71,623,000 acres of the preceding year. The crop suffered more or less through drought in parts of the United Provinces, of Bombay, and of Bihar and Orissa, and from floods in parts of Bengal. Elsewhere the season was, on the whole, fairly favourable. The total estimated yield was 28,167,000 tons as against 28,485,000 tons.

* For the tea crop no forecast is prepared; the figures are taken from the Annual Report on the Production of Tea in India published by this Department

† The Central Provinces and Berar have started the preparation of rice forecasts with effect from 1914-15.

in 1912-13. To this figure should be added some 7 per cent in respect of other British provinces (containing about 5,400,000 acres under rice) for which no estimates are made.

Wheat.

Wheat, which is a *rabi* (spring) crop in India, is sown from October to December and harvested from March to May. The provinces and states to which the estimates for this crop relate are the Punjab, the North-West Frontier Province, the United Provinces, Ajmer-Merwara, the Central Provinces and Berar, Bombay, Sind, Bengal, Bihar and Orissa, Central India, Rajputana, Hyderabad, and Mysore. These contain practically the whole of the reported area under wheat in India. The total area under wheat in 1913-14 was reported to be 27,697,000 acres, which falls short of the area of the preceding year by 2,346,000 acres or 8 per cent. The seasonal conditions were favourable in the Punjab, which contains about a third of the total wheat area of India; but the crop suffered much through drought in some of the important wheat-growing districts of the United Provinces and the Bombay Presidency, as also in most of the Rajputana and Central India States. Elsewhere conditions were, on the whole, favourable. The total estimated yield was 8,427,000 tons, which was less than the final figure of 1912-13 by 1,426,000 tons or 14 per cent.

Sugarcane

The sugarcane crop is planted in February and March and harvested a year afterwards. The provinces* to which the reports on this crop relate are the United Provinces, Bihar and Orissa, Bengal, Assam, the Punjab, the North-West Frontier Province, Bombay, and Madras. These tracts contain 99 per cent of the total area under sugarcane in British India. Reports are also received from the Native States in the Bombay Presidency (including the Baroda State). No report is received from any other Native State. The total reported area (2,520,000 acres) under sugarcane in 1913-14 was nearly the same as in the preceding year (2,527,000 acres); but the estimated yield (2,263,000 tons) was 12 per cent below the final figure (2,584,000 tons) of the preceding year, owing mainly to the prolonged drought in the United Provinces, which comprise over half the total sugarcane area of British India.

Tea.

The provinces where tea is grown are Assam, Bengal, Madras, the United Provinces, the Punjab, Bihar and Orissa, Burma, and the State of Travancore. The total area under tea in 1913 was reported to be 609,700 acres, which is nearly 3 per cent greater than that in the preceding year. Excessive rain and floods in Cachar and Lakhimpur and in parts of Sylhet in the early parts of the season caused considerable damage to the bushes and a consequent loss of outturn. The cold weather set in rather suddenly in all districts. Otherwise climatic conditions were fairly favourable in Assam and Bengal. In parts of Southern India the crop was affected by drought. The total production of manufactured tea (both black and green) was reported to be 307,250,000 lbs in 1913 as against 297,878,000 lbs in the preceding year.

Cotton.

The total reported area under cotton was 24,595,000 acres in 1913-14 as against 22,028,000 acres in 1912-13. All the important provinces contributed to the increase. The season was, on the whole, favourable except in parts of the Bombay Presidency, the Central Provinces, and the United Provinces. The crop in these tracts suffered more or less through drought. The total estimated outturn was 5,201,000 bales of 400 lbs each, which is 591,000 bales or 13 per cent more than the final figure of 1912-13. The figures for 1913-14 for both area and outturn are the highest ever returned. The marginal statement compares the estimates of yield for the last three years with the sum of net exports and internal consumption (in thousands of bales).

	Thousand bales.		
	1911-12	1912-13	1913-14
Net exports	1,773	2,307	3,538
Mill consumption	1,781	1,806	1,809
Consumption outside mills (conjectural)	450	450	450
Total	4,004	4,563	5,797
Estimate of yield	3,288	4,610	5,201
Excess (+) or deficit (-)	-716	+47	-596

There are, it may be remembered, two varieties of cotton grown in India, *viz.*, the early and the late. Early cotton grows principally in northern and central India, and late cotton largely in southern and western India. Taking both the varieties together, the sowing season extends from March to August

* The Central Provinces and Berar have started the preparation of sugarcane forecasts from 1914-15.

and the harvesting season from October to April. In parts of southern India sowings continue till October and harvesting till July. The estimates given above relate to all the cotton-growing provinces and states in India.

Jute is sown from March to May and harvested in August and September. ^{Jute} The provinces where it is grown are Bengal, Bihar and Orissa, and Assam. It is also grown to a small extent in the Nepal State, but no reliable information is available for that State. The total reported area under jute in 1913 (2,911,000 acres) fell short of that of the preceding year by 2 per cent, but the estimated yield (8,894,000 bales of 400 lbs each) fell short by 10 per cent. The decrease in outturn was due mainly to damage done by excessive rain and floods in Bengal, which contain 89 per cent of the total jute area. In 1914 the estimated area and yield were 3,359,000 acres and 10,444,000 bales respectively.

Linseed is a *rabi* (spring) crop, being sown from August to October ^{Linseed.} and harvested from January to April. The provinces to which the estimates for linseed relate are the United Provinces, the Central Provinces and Berar, Bengal, Bihar and Orissa, the Punjab, and Bombay. These tracts comprise 99 per cent of the total area under linseed in British India. Reports are also made by the States of Hyderabad and Baroda and by the states in the Bombay Presidency. No report is received from any other Native State. The total area under linseed reported by all these tracts in 1913-14 was 2,997,000 acres, which was 27 per cent short of the final figure of the preceding year. The only province, where the season was distinctly favourable for the linseed crop, was Bihar and Orissa. In the important linseed-growing tracts of the Central and the United Provinces, the crop was seriously affected by drought. Insects, cloudy weather, and hailstorms also injured the crop in parts of the Central Provinces. In other provinces also, the season was not, on the whole, favourable owing chiefly to deficient rainfall. As a consequence the total estimated yield (382,000 tons) fell short of that of the preceding year by 30 per cent.

Rape and mustard are also *rabi* (spring) oilseeds, being sown from August ^{Rape and mustard.} to October and harvested from January to April. The provinces from which reports are received are the Punjab, Bengal, Bihar and Orissa, Assam, the United Provinces, the North-West Frontier Province, Bombay, and Sind. These tracts contain 99.4 per cent of the total area under rape and mustard in British India. Reports are also received from the States of Hyderabad and Baroda and from the states in the Bombay Presidency. No report is received from any other Native State. The total area under rape and mustard reported by all the reporting tracts in 1913-14 was 5,941,000 acres, which is 1 per cent short of the figure for the preceding year. Weather conditions at sowing time were, on the whole, favourable, except in parts of the United Provinces and the Punjab, where moisture in the soil was insufficient owing to scanty autumn rains. The crop was seriously affected by drought in the southern and western districts of the United Provinces, where these oilseeds are extensively cultivated. Elsewhere conditions were, on the whole, from fair to good. The total estimated yield (1,043,000 tons) was nearly 16 per cent below the final figure of the preceding year.

Sesamum is mainly a *kharif* (autumn) crop, being sown from May to ^{Sesamum.} July and harvested from October to December; in parts of southern India sowing continues till September or October and harvesting till March or April. A *rabi* or summer variety is also grown in certain tracts; this is sown in January and February and harvested in May to July. The provinces* to which the estimates for sesamum relate are the Central Provinces and Berar, Bombay, Sind, Madras, the United Provinces, Bengal, Bihar and Orissa, Punjab, and Ajmer-Merwara. These tracts contain about 80 per cent of the total area under sesamum in British India. Reports are also received from the Native States of Hyderabad and Baroda and those in the Bombay Presidency. No report is received from any other Native State or from Burma. The total reported area under sesamum in 1913-14 was 5,119,000 acres against 4,989,000 acres in the preceding year. The crop suffered through deficient rainfall in parts of western and northern India, and through excessive rain and floods in parts of eastern India. Elsewhere weather conditions were, on the whole, favourable.

* Assam prepared forecasts of sesamum for a few years (1910-11 to 1913-14), but has discontinued them with effect from 1914-15.

The total estimated yield was 408,000 tons as against 474,000 tons in 1912-13— a decrease of 14 per cent. An addition of approximately 25 per cent should be made to this figure in respect of other British provinces (containing an aggregate area of about 1,046,000 acres under sesamum) for which no estimate is made.

Groundnut.

The groundnut crop is sown from May to August and harvested from November to January. The provinces to which the estimates for this crop relate are Madras, Bombay (including Native States), and Burma, these being the provinces where groundnut is grown to a considerable extent. The total area under groundnut in these three provinces in 1913-14 was reported as 1,663,000 acres, which is 22 per cent larger than the figure of the preceding year, the estimated yield (732,000 tons) being only 9 per cent in excess of last year. In Madras, where 70 per cent of the total reported area was cultivated, the crop was damaged in places by floods in November and December.

Indigo.

The indigo crop is sown from February to July and harvested from August to November. The provinces to which the estimates for indigo relate are Bihar and Orissa, Bengal, the United Provinces, the Punjab, Bombay, Sind, and Madras. These tracts contain 99.9 per cent of the total area under indigo in British India. No report is received from any Native State, except the state of Khairpur in Sind. The cultivation of indigo continues to decline, the total reported area (173,000 acres) in 1913-14 being 21 per cent short of that of the preceding year. The crop suffered, on the whole, through excessive rainfall in Bihar and Orissa and in the eastern districts of the United Provinces, and through drought in the Punjab and in the western districts of the United Provinces. Elsewhere conditions were reported to be fair to good. The total estimated yield of dye was 27,000 cwts, which was less than the figure of the preceding year by 31 per cent.

G. FINDLAY SHIRRAS,
Director of Statistics.

DEPARTMENT OF STATISTICS, INDIA,
Calcutta, January 12, 1915.

TABLES

NO. 1.—ABSTRACT TABLE—AREA AND YIELD OF EACH CROP.

Area (acres)

Crops	1909-10	1910-11	1911-12	1912-13	1913-14
Rice	58,119,000	58,029,000	64,726,000	71,623,000	70,583,000
Wheat	28,106,000	30,565,000	31,141,000	30,043,000	27,697,000
Sugarcane	2,112,800	2,114,600	2,380,300	2,526,700	2,519,800
Tea	555,300	563,600	574,600	591,800	609,700
Cotton	20,545,000	22,596,000	21,615,000	22,028,000	24,595,000
Jute	2,876,600	2,937,800	3,106,400	2,970,500	2,911,000
Linseed	3,188,100	3,742,400	5,038,000	4,124,900	2,997,100
Rape and Mustard	6,630,600	6,315,900	6,990,300	5,955,800	5,941,000
Sesamum	5,415,000	5,206,000	4,808,100	4,989,500	5,119,100
Groundnut	1,048,700	951,900	1,214,100	1,866,400	1,663,400
Indigo	289,100	276,400	266,900	220,100	172,600

Yield

Crops	1909-10	1910-11	1911-12	1912-13	1913-14
Rice tons	27,857,000	27,897,000	30,074,000	28,485,000	28,167,000
Wheat "	9,633,400	10,061,500	9,924,500	9,853,000	8,427,000
Sugarcane "	2,127,100	2,217,800	2,451,100	2,583,600	2,262,600
Tea lbs.	258,136,400	263,269,400	268,602,700	297,878,100	307,249,600
Cotton bales	4,718,000	3,853,000	3,288,000	4,610,000	5,201,000
Jute "	7,206,600	7,932,000	8,234,700	9,842,800	8,893,900
Linseed tons	427,800	561,200	639,800	538,600	382,200
Rape and Mustard "	1,270,200	1,233,200	1,308,500	1,234,800	1,042,900
Sesamum "	560,800	511,800	397,600	474,000	407,900
Groundnut "	459,300	503,200	605,700	669,900	731,900
Indigo cwts	39,300	46,000	47,700	39,100	26,800

Notes.—Figures for 1913-14 are subject to revision. The estimates for 1914-15, so far as available, are:—

Rice 78,068,000 acres	Cotton 24,090,000 acres	and 4,950,000 bales	Sesamum 5,882,000 acres	and 537,300 tons
Wheat 28,694,000 "	Jute 8,858,700 "	" 10,443,900 "	Groundnut 1,726,000 "	
Sugarcane 2,450,000 "	Linseed 2,453,800 "		Indigo 181,700 "	and 24,900 cwts
	Rape and Mustard 8,786,200 "			

No. 2.—AREA AND YIELD OF RICE IN EACH PROVINCE.

Area (acres)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Bengal (a)	38,355,000	41,111,000	40,239,000	40,210,000	38,158,000	42,977,000	42,793,000	20,437,000	20,639,000	19,708,000
Bihar and Orissa	(c)	(c)	(c)	(c)	(c)	(c)	(c)	17,363,000	16,196,000	16,275,000
Madras (b)	6,323,000	6,604,000	6,944,000	7,215,000	7,361,000	7,675,000	7,787,000	10,288,000	10,944,000	11,032,000
Burma (e)	6,909,000	6,713,000	6,974,000	7,252,000	7,569,000	7,467,000	7,449,000	7,373,000	9,966,000	10,133,000
United Provinces	(d)	(d)	(d)	(d)	(d)	(d)	(d)	5,220,000	6,811,000	6,062,000
Assam	(d)	(c)	(c)	(c)	(c)	(c)	(c)	4,045,000	4,272,000	3,831,000
Bombay (including Native States) (f)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	1,624,000	2,369,000
Sind (including Native States) (f)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	1,088,000	1,071,000
Coorg	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	83,000	82,000
TOTAL	51,587,000	54,428,000	54,157,000	54,877,000	53,088,000	58,119,000	58,029,000	64,726,000	71,623,000	70,583,000

Yield (tons)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Bengal (a)	17,361,000	16,463,000	15,769,000	13,328,000	14,131,000	21,780,000	21,848,000	8,635,000	8,856,000	7,871,000
Bihar and Orissa	(c)	(c)	(c)	(c)	(c)	(c)	(c)	8,906,000	5,969,000	8,147,000
Madras (b)	2,025,000	2,292,000	2,522,000	2,475,000	2,185,000	2,868,000	3,174,000	5,833,000	4,435,000	4,218,000
Burma (e)	3,037,000	2,897,000	3,096,000	3,157,000	3,233,000	3,209,000	2,875,000	3,325,000	4,501,000	4,241,000
United Provinces	(d)	(d)	(d)	(d)	(d)	(d)	(d)	1,779,000	1,998,000	1,264,000
Assam	(d)	(c)	(c)	(c)	(c)	(c)	(c)	1,596,000	1,948,000	1,339,000
Bombay (including Native States) (f)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	820,000	1,212,000
Sind (including Native States) (f)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	405,000	342,000
Coorg	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	53,000	35,000
TOTAL	22,423,000	21,657,000	21,387,000	18,960,000	19,549,000	27,857,000	27,897,000	30,074,000	28,485,000	28,167,000

(a) Includes Bihar and Orissa down to 1910-11 and Assam from 1905-06 to 1910-11.

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

(c) Included under Bengal.

(d) Not available.

(e) The figures down to 1911-12 relate only to the chief rice-growing districts in Lower Burma.

(f) The estimates for Bombay and Sind relate to chief rice-growing districts.

Notes.—Figures for 1913-14 are subject to revision.

No. 3.—AREA AND YIELD OF WHEAT IN EACH PROVINCE.

Area (acres)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Punjab (a)	7,712,000	8,572,000	9,100,000	8,272,000	9,002,000	9,142,000	9,981,000	11,018,000	9,216,000	9,177,000
United Provinces	7,706,000	6,479,000	7,044,000	4,406,000	5,695,000	6,491,000	7,342,000	7,578,000	7,382,000	6,378,000
Central Provinces and Berar (b)	3,497,000	3,444,000	3,714,000	2,801,000	2,860,000	3,176,000	3,585,000	3,738,000	3,743,000	3,383,000
Central India States	2,327,000	1,852,000	2,448,000	1,694,000	2,046,000	2,313,000	2,460,000	2,538,000	3,216,000	2,684,000
Bombay (including Native States) (c)	2,261,000	1,327,000	1,663,000	1,678,000	1,746,000	1,820,000	1,855,000	1,284,000	1,785,000	1,759,000
Bihar and Orissa	(d)	(d)	(d)	(d)	(d)	(d)	1,312,000	1,285,000	1,270,000	1,842,000
North-West Frontier Province (e)	892,000	1,025,000	1,146,000	278,000	1,019,000	1,008,000	1,033,000	1,203,000	879,000	992,000
Hyderabad State	1,127,000	934,000	1,040,000	939,000	1,098,000	1,097,000	1,104,000	970,000	851,000	702,000
Rajputana States	1,024,000	668,000	842,000	604,000	898,000	1,035,000	1,187,000	968,000	1,014,000	622,000
Sind (including Native States)	523,000	628,000	673,000	447,000	548,000	471,000	520,000	391,000	487,000	481,000
Bengal (f)	1,506,000	1,403,000	1,539,000	1,096,000	1,332,000	1,500,000	143,000	143,000	146,000	144,000
Ajmer-Merwara	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	5,000
Mysore State	5,000	2,000	4,000	2,000	2,000	3,000	3,000	4,000	4,000	3,000
TOTAL	29,470,000	26,357,000	29,215,000	22,911,000	26,236,000	28,106,000	30,535,000	31,141,000	30,043,000	27,697,000

Yield (tons)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Punjab (a)	2,855,000	3,510,000	3,267,000	2,489,000	3,062,000	3,484,000	3,709,000	3,809,000	2,999,000	3,428,000
United Provinces	1,897,000	2,429,000	2,165,000	1,675,000	2,124,000	2,975,000	2,919,000	3,032,000	2,938,000	2,205,000
Central Provinces and Berar (b)	832,000	834,000	904,000	507,000	721,000	992,000	973,000	904,000	1,062,000	683,000
Central India States	473,000	420,000	615,000	271,000	397,000	514,000	592,000	686,000	1,049,000	492,000
Bombay (including Native States) (c)	357,000	275,000	338,000	336,000	383,000	451,000	506,000	285,000	543,000	444,000
Bihar and Orissa	(d)	(d)	(d)	(d)	(d)	(d)	570,000	557,000	529,000	583,000
North-West Frontier Province (e)	268,000	280,000	305,000	219,000	213,000	235,000	286,000	280,000	195,000	259,000
Hyderabad State	90,000	42,000	109,000	87,000	72,000	68,000	97,000	48,000	48,000	48,000
Rajputana States	189,000	137,000	182,000	133,000	199,000	266,000	266,000	204,000	244,000	122,000
Sind (including Native States)	126,000	196,000	186,000	113,000	134,000	132,000	136,000	97,000	204,000	114,000
Bengal (f)	495,000	447,000	421,000	321,000	334,000	566,000	33,000	47,000	51,000	51,000
Ajmer-Merwara	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	2,000
Mysore State	400	100	700	800	200	400	500	500	1,000	1,000
TOTAL	7,582,400	8,570,100	8,492,700	6,125,800	7,639,200	9,638,400	10,061,500	9,924,500	9,853,000	8,427,000

(a) Includes Native States from 1907-08.

(b) Includes the Native States of Khairagarh and Nandgaon from 1907-08.

(c) Includes the Native State of Baroda.

(d) Included under Bengal.

(e) Includes the Tochi Agency and from 1906-07 the Kurram Agency.

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

(g) Not available

NOTE.—Figures for 1913-14 are subject to revision

No. 4.—AREA AND YIELD OF SUGARCANE IN EACH PROVINCE

Area (acres)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
United Provinces	1,212,600	1,228,900	1,366,700	1,481,700	1,120,100	1,037,600	1,047,100	1,340,600	1,425,400	1,379,900
Punjab (a)	325,500	172,700	277,700	391,800	365,700	403,800	387,900	284,800	367,000	411,200
Bihar and Orissa	(b)	(b)	(b)	(b)	(b)	(b)	(b)	263,000	256,100	262,900
Bengal (c)	633,000	623,100	606,700	607,200	553,000	507,800	513,600	223,300	221,800	216,500
Bombay (including Native States)(e)	(d)	(d)	(d)	74,300	92,800	89,200	83,400	94,700	79,400	93,400
Madras (f)	47,800	60,700	52,100	49,000	43,700	43,800	47,900	107,700	98,800	77,700
Assam	(d)	(b)	(b)	(b)	(b)	(b)	(b)	34,700	38,200	46,500
North-West Frontier Province (g)	25,900	25,600	28,600	35,200	27,500	30,600	32,700	31,500	30,000	31,700
TOTAL	2,244,800	2,111,000	2,351,800	2,639,200	2,202,800	2,112,800	2,114,600	2,380,300	2,526,700	2,519,800

Yield (tons) of raw sugar (gúr)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
United Provinces	1,183,400	884,000	1,264,600	916,700	844,200	955,200	1,042,900	1,259,300	1,301,500	974,500
Punjab (a)	238,300	69,000	212,800	238,700	265,600	323,700	262,600	161,200	274,300	298,600
Bihar and Orissa	(b)	(b)	(b)	(b)	(b)	(b)	(b)	303,800	292,700	289,200
Bengal (c)	634,700	615,200	594,700	583,100	430,800	495,800	563,500	256,300	263,200	242,800
Bombay (including Native States)(e)	(d)	(d)	(d)	184,200	221,200	232,300	226,000	214,600	160,700	233,300
Madras (f)	90,000	114,500	100,400	92,000	81,000	82,000	87,100	196,000	204,500	150,000
Assam	(d)	(b)	(b)	(b)	(b)	(b)	(b)	28,000	33,100	39,100
North-West Frontier Province (g)	22,600	22,800	32,800	32,200	30,100	33,100	35,700	31,900	33,600	35,100
TOTAL	2,169,900	1,725,500	2,205,300	2,046,900	1,872,900	2,127,100	2,217,800	2,451,100	2,583,600	2,202,600

(a) Figures for years prior to 1913-14 exclude unimportant districts

(b) Included under Bengal

(c) Includes Bihar and Orissa down to 1910-11

(d) Not available

(e) Includes Sind from 1912-13

(f) The estimates for Madras down to 1906-07 relate only to *raiyatwari* villages; but since that year estimates for *samindari* and *whols inam* villages have also been included

(g) Up to 1912-13 the figures related to three selected districts. From 1913-14 all the districts including the Tuchi Agency have been reported on

NOTE.—Figures for 1913-14 are subject to revision

No. 5.—AREA AND YIELD OF TEA IN EACH PROVINCE

Area (acres)

Province.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Assam	337,800	339,200	339,200	342,300	345,600	348,000	350,200	354,300	361,700	367,500
Bengal	134,700	136,300	136,500	139,500	141,000	143,200	145,900	146,800	150,500	156,000
Travancore	24,700	25,200	27,500	26,000	27,100	29,200	30,400	32,000	34,100	37,400
Madras	8,600	8,600	10,100	11,000	14,600	15,700	18,100	20,600	24,400	26,300
United Provinces	8,000	7,900	8,000	8,000	8,100	8,100	7,900	7,600	7,800	8,000
Punjab	9,300	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,300	9,300
Bihar and Orissa (a)	...	...	...	...	...	...	...	2,200	2,300	2,200
Burma	1,400	1,500	1,500	1,700	1,700	1,700	1,700	1,700	1,700	3,000
TOTAL	524,500	528,000	532,200	537,900	548,100	555,300	563,600	574,600	591,800	609,700

Yield (lbs)

Province.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Assam	152,197,400	151,904,800	162,468,000	164,194,300	166,456,900	174,851,200	175,095,100	179,053,000	198,798,300	199,722,000
Bengal	53,885,800	53,570,800	60,688,200	60,216,600	59,971,600	60,920,700	64,674,200	64,653,900	70,524,200	80,106,700
Travancore	9,078,900	10,147,600	11,186,300	12,749,400	13,593,800	13,363,700	14,323,100	14,714,500	16,053,600	15,165,600
Madras	1,652,600	1,762,700	3,094,500	3,470,600	4,436,400	5,325,700	5,645,200	5,795,400	7,555,800	7,089,000
United Provinces	2,673,100	2,474,700	2,290,200	2,294,600	2,009,900	2,206,600	2,045,300	2,534,700	2,656,800	2,579,100
Punjab	1,916,800	1,432,300	1,237,700	1,237,500	1,437,500	1,413,700	1,418,900	1,489,200	1,931,000	2,129,800
Bihar and Orissa (a)	...	...	...	...	...	...	...	285,500	269,100	311,600
Burma	67,400	107,300	112,600	129,600	118,400	64,800	67,600	76,500	63,300	163,800
TOTAL	221,367,000	221,400,200	241,077,500	244,292,600	247,024,500	258,136,400	263,269,400	268,602,700	297,878,100	307,219,600

(a) Figures for years down to 1910 are included under Bengal

No. 6.—AREA AND YIELD OF COTTON IN EACH PROVINCE

Area (acres)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Bombay (including Native States) (a)	5,955,000	6,665,000	7,383,000	7,101,000	6,241,000	6,469,000	7,334,000	5,786,000	6,826,000	7,100,000
Central Provinces and Berar . . .	4,553,000	4,849,000	4,678,000	4,432,000	4,176,000	4,167,000	4,487,000	4,648,000	4,493,000	4,715,000
Hyderabad State . . .	2,731,000	2,537,000	3,480,000	3,100,000	2,903,000	3,401,000	3,562,000	3,234,000	2,888,000	3,653,000
Madras (b) . . .	1,755,000	1,597,000	1,703,000	1,855,000	1,576,000	1,569,000	1,673,000	2,578,000	2,414,000	2,593,000
Punjab (including Native States)	1,698,000	2,020,000	1,413,000	1,474,000	1,562,000	1,436,000	1,385,000	1,582,000	1,575,000	2,053,000
United Provinces (c)	1,201,000	1,372,000	1,489,000	1,461,000	1,392,000	1,241,000	1,347,000	921,000	1,153,000	1,586,000
Central India States	846,000	979,000	1,132,000	993,000	978,000	1,068,000	1,349,000	1,400,000	1,314,000	1,426,000
Rajputana States . . .	499,000	291,000	423,000	438,000	359,000	464,000	455,000	263,000	393,000	470,000
Sind (including Native States)	221,000	230,000	250,000	259,000	259,000	214,000	279,000	345,000	296,000	332,000
Burma . . .	189,000	183,000	187,000	195,000	204,000	193,000	167,000	186,000	233,000	286,000
Mysore . . .	71,000	76,000	89,000	84,000	65,000	81,000	101,000	101,000	154,000	93,000
Bihar and Orissa . . .	(d)	(d)	(d)	(d)	(d)	(d)	(d)	88,000	92,000	88,000
North-West Frontier Province (e)	49,000	59,000	61,000	48,000	54,000	32,000	33,000	58,000	56,000	59,000
Bengal (f)	128,000	132,000	151,000	149,000	161,000	166,000	169,000	63,000	51,000	51,000
Ajmer-Merwara . . .	52,000	29,000	41,000	41,000	49,000	39,000	45,000	27,000	59,000	57,000
Assam . . .	(d)	(d)	(d)	(d)	(d)	(d)	(d)	36,000	35,000	33,000
TOTAL	19,918,000	21,072,000	22,464,000	21,630,000	19,999,000	20,545,000	22,596,000	21,615,000	22,025,000	24,595,000

Yield (bales of 400 lbs. each)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Bombay (including Native States) (a)	796,000	1,198,000	1,762,000	1,039,000	1,282,000	1,661,000	1,450,000	695,000	1,520,000	1,572,000
Central Provinces and Berar . . .	1,229,000	818,000	681,000	595,000	766,000	1,070,000	629,000	913,000	910,000	931,000
Hyderabad State . . .	330,000	303,000	449,000	293,000	307,000	461,000	293,000	300,000	300,000	400,000
Madras (b) . . .	132,000	145,000	157,000	198,000	162,000	180,000	235,000	335,000	471,000	513,000
Punjab (including Native States)	408,000	192,000	357,000	356,000	324,000	396,000	306,000	241,000	373,000	594,000
United Provinces (c)	368,000	394,000	639,000	268,000	426,000	384,000	348,000	251,000	428,000	494,000
Central India States	136,000	170,000	222,000	55,000	144,000	221,000	237,000	223,000	208,000	273,000
Rajputana States . . .	186,000	61,000	201,000	91,000	80,000	148,000	143,000	73,000	125,000	132,000
Sind (including Native States)	97,000	84,000	155,000	135,000	101,000	104,000	97,000	124,000	123,000	133,000
Burma . . .	39,000	35,000	36,000	29,000	41,000	32,000	28,000	32,000	46,000	50,000
Mysore . . .	5,000	5,000	10,000	6,000	3,000	6,000	10,000	17,000	19,000	16,000
Bihar and Orissa . . .	(d)	(d)	(d)	(d)	(d)	(d)	(d)	19,000	19,000	19,000
North-West Frontier Province (e)	10,000	13,000	13,000	9,000	12,000	7,000	8,000	12,000	13,000	14,000
Bengal (f)	37,000	33,000	33,000	38,000	35,000	35,000	49,000	25,000	21,000	13,000
Ajmer-Merwara . . .	18,000	5,000	19,000	10,000	9,000	13,000	2,000	12,000	26,000	15,000
Assam . . .	(d)	(d)	(d)	(d)	(d)	(d)	(d)	11,000	10,000	12,000
TOTAL	3,791,000	3,416,000	4,934,000	3,124,000	3,692,000	4,718,000	3,853,000	3,283,000	4,610,000	5,201,000
Net Exports and Consumption (g)	3,941,602	4,168,451	4,854,579	3,782,401	4,200,150	4,923,000	4,303,000	4,004,000	4,563,000	5,797,000

(a) Includes the State of Baroda

(b) The estimates for Madras down to 1906-07 relate only to *raiyatwari* villages; but since that year estimates for *samindari* and *whola inam* villages and Native States have also been included

(c) Includes the Native State of Rampur

(d) Included under Bengal

(e) Includes the Tochi and Kurram Agencies from 1913-14

(f) Includes Bihar and Orissa and Assam down to 1910-11 and the Hill Tippera State from 1906-07

(g) The exports as well as the mill consumption are for the year ending the 30th September. 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 against this item

Note.—Figures for 1913-14 are subject to revision

No. 7.—AREA AND YIELD OF JUTE IN EACH PROVINCE

Area (acres)

Province	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bengal (a)	3,000,700	3,434,000	3,846,500	2,766,300	2,773,100	2,841,600	2,737,600	2,536,900	2,456,600	2,872,600
Bihar and Orissa	(b)	(b)	(b)	(b)	(b)	(b)	258,100	293,300	318,400	330,100
Assam	37,600	48,900	95,800	68,400	83,500	82,200	90,700	95,700	97,000	111,600
Cooch Bihar State	...	...	32,000	22,000	20,000	14,000	20,000	39,600	39,000	44,400
TOTAL	3,128,300	3,482,900	3,974,300	2,853,700	2,876,600	2,937,800	3,106,400	2,970,500	2,911,000	3,358,700

Yield (bales of 400 lbs each)

Province	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Bengal (a)	8,029,000	9,020,500	9,512,100	6,132,700	6,992,500	7,735,300	7,247,600	8,698,300	7,939,900	9,308,000
Bihar and Orissa	(b)	(b)	(b)	(b)	(b)	(b)	705,500	792,900	603,900	693,200
Assam	59,100	106,900	224,100	138,500	180,500	177,800	239,600	226,800	228,300	307,500
Cooch Bihar State	52,800	79,000	81,600	39,600	33,600	18,900	42,000	124,800	122,600	135,200
TOTAL (a)	8,140,900	9,206,400	9,817,800	6,310,800	7,206,600	7,932,000	8,234,700	9,842,800	8,893,900	10,443,900

(a) Includes Bihar and Orissa down to 1910

(b) Included under Bengal

(c) Excluding the figures for Nepal, which are stated below so far as information is available

	Bales	Bales	
1905	91,000	1908	88,000
1906	61,000	1909	81,000
1907	83,000	1910	79,000
		1911	No information.
		1912	No information.
		1913	88,000

Note.—Figures for 1914 are subject to revision

No. 8.—AREA AND YIELD OF LINSEED IN EACH PROVINCE.

Area (acres)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Central Provinces and Berar	959,700	912,100	1,158,200	547,600	954,700	926,200	1,080,400	1,858,800	1,509,000	955,200
United Provinces (a)	634,500	210,900	315,000	57,500	194,700	308,400	472,800	848,800	493,500	237,500
Bihar and Orissa	647,000	567,000	633,000	269,000	499,000	597,000	656,000	747,000	667,000	367,000
Hyderabad State	(b)	(b)	(b)	(b)	(b)	(b)	510,300	537,800	528,000	652,800
Bengal (c)	775,800	604,500	864,300	484,800	555,400	548,900	631,300	603,500	512,400	412,600
Bombay including Native States (d)	829,400	829,500	805,600	589,400	634,600	673,400	196,900	206,800	199,800	195,100
Punjab	548,000	154,800	167,100	151,100	158,600	134,200	194,700	205,300	171,900	139,100
	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	43,300	37,800
Total (a)	3,747,400	2,711,800	3,110,200	1,830,400	2,498,000	2,591,100	3,036,400	4,291,000	3,457,900	2,630,100
	647,000	567,000	633,000	269,000	499,000	597,000	656,000	747,000	667,000	367,000

Yield (tons)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Central Provinces and Berar	80,500	77,300	108,200	23,500	90,900	80,300	124,500	139,000	141,800	70,100
United Provinces (a)	51,800	32,600	156,000	6,500	30,400	62,000	102,900	159,700	95,500	38,200
Bihar and Orissa	49,000	88,000	113,000	30,000	78,000	120,000	142,000	140,000	128,000	59,000
Hyderabad State	(b)	(b)	(b)	(b)	(b)	(b)	102,400	120,100	101,200	149,600
Bengal (c)	33,500	24,700	28,600	13,600	17,200	18,400	30,400	28,800	17,300	16,500
Bombay (including Native States (d)	114,100	127,800	114,600	85,900	72,500	124,200	30,700	39,200	37,400	34,400
Punjab	18,500	2,600	6,800	4,000	8,700	12,900	23,800	15,000	17,400	11,200
	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	3,200
Total (a)	298,400	265,200	312,200	133,500	219,700	307,800	419,200	499,800	410,600	323,200
	49,000	88,000	113,000	30,000	78,000	120,000	142,000	140,000	128,000	59,000

(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) Included under Bengal

(c) Includes Bihar and Orissa down to 1909-10

(d) Includes the state of Baroda also

(e) Not available

Note.—Figures for 1913-14 are subject to revision

No. 9.—AREA AND YIELD OF RAPE AND MUSTARD IN EACH PROVINCE

Area (acres)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
United Provinces (a)	140,100 <i>2,509,000</i>	154,700 <i>2,026,000</i>	153,400 <i>2,210,000</i>	96,800 <i>1,870,000</i>	136,800 <i>2,153,000</i>	176,900 <i>2,269,000</i>	148,200 <i>2,371,000</i>	176,200 <i>2,872,000</i>	145,000 <i>2,373,000</i>	144,700 <i>2,154,000</i>
Punjab (b)	1,210,800	1,614,200	1,402,400	842,800	1,158,900	1,329,900	1,039,000	1,414,100	887,600	976,400
Bengal (c)	1,977,500	1,861,700	2,026,500	1,889,100	1,854,900	2,279,300	1,370,700	1,317,500	1,325,400	1,321,700
Bihar and Orissa	(d)	(d)	(d)	(d)	(d)	(d)	765,700	780,100	723,300	753,500
Assam	157,700	164,400	222,000	261,000	284,300	320,100	318,100	253,100	205,000	301,600
North-West Frontier Province (e)	55,700	65,500	218,800	121,000	226,900	91,700	85,100	94,200	75,700	141,300
Bombay (including Native States)	25,100	43,800	61,400	46,900	80,800	86,900	84,600	17,600	75,700	80,400
Sind (including Native States)	60,100	64,200	67,900	63,100	120,400	69,700	76,200	54,000	43,800	61,800
Hyderabad State	13,000	14,300	10,700	9,500	12,500	8,100	9,300	6,500	11,100	5,600
TOTAL (a)	3,640,000 <i>2,509,000</i>	4,002,800 <i>2,026,000</i>	4,183,100 <i>2,210,000</i>	3,330,200 <i>1,870,000</i>	3,875,500 <i>2,153,000</i>	4,361,600 <i>2,269,000</i>	3,944,900 <i>2,371,000</i>	4,113,300 <i>2,872,000</i>	3,582,800 <i>2,373,000</i>	2,787,000 <i>2,154,000</i>

Yield (tons)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
United Provinces (a)	13,800 <i>336,000</i>	30,000 <i>398,000</i>	30,000 <i>424,000</i>	11,300 <i>217,000</i>	26,900 <i>423,000</i>	36,000 <i>466,000</i>	34,400 <i>561,000</i>	37,200 <i>609,000</i>	33,900 <i>551,000</i>	22,100 <i>327,000</i>
Punjab (b)	119,300	183,000	172,300	110,000	183,900	226,900	155,100	196,600	156,600	162,600
Bengal (c)	360,300	237,300	337,000	275,600	231,900	440,100	238,600	243,900	265,800	268,000
Bihar and Orissa	(d)	(d)	(d)	(d)	(d)	(d)	151,900	154,700	137,100	157,800
Assam	28,000	30,200	43,800	42,700	46,400	60,500	56,000	47,600	58,400	61,800
North-West Frontier Province (e)	8,300	12,200	19,400	12,300	28,600	7,900	9,500	12,100	7,200	15,900
Bombay (including Native States)	3,000	9,300	14,300	12,500	23,200	22,600	15,400	2,600	20,000	20,800
Sind (including Native State)	2,500	11,500	12,400	6,400	23,400	10,100	11,100	4,700	4,600	6,800
Hyderabad State	200	100	100	200	200	100	200	100	200	100
TOTAL (a)	540,400 <i>336,000</i>	563,600 <i>398,000</i>	629,100 <i>424,000</i>	471,000 <i>217,000</i>	564,500 <i>423,000</i>	804,200 <i>466,000</i>	672,200 <i>561,000</i>	699,500 <i>609,000</i>	683,800 <i>551,000</i>	715,900 <i>327,000</i>

(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) Figures for years prior to 1913-14 excluded the districts of Simla, Jalandhar, Kangra, and Gurdaspur

(c) Includes Bihar and Orissa down to 1909-10

(d) Included under Bengal

(e) Figures for years prior to 1906-07 excluded the Kohat District

Note.—Figures for 1913-14 are subject to revision

No. 10.—AREA AND YIELD OF SESAMUM (TIL OR JINJILI) IN EACH PROVINCE

Area (acres)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
United Provinces (a)	304,100 600,000	278,200 700,000	309,200 775,000	323,800 900,000	322,000 1,000,000	481,300 900,000	438,900 900,000	375,000 800,000	317,200 900,000	378,400 850,000
Bombay (including Native States) (b)	793,900	908,100	1,049,500	992,700	979,500	1,037,400	994,800	548,900	793,300	867,900
Central Provinces and Berar	891,100	792,900	807,900	977,600	793,000	942,700	895,300	886,700	778,000	866,600
Madras (c)	674,200	723,300	556,900	647,000	635,900	718,900	573,200	187,200	823,700	835,800
Hyderabad State	780,000	425,900	493,700	510,000	511,900	597,300	677,700	663,900	640,100	612,000
Bengal (d)	403,700	515,000	496,300	419,400	453,400	494,800	489,100	271,800	264,800	239,600
Bihar and Orissa	(f)	(f)	(f)	(f)	(f)	(f)	(f)	214,600	223,700	227,200
Punjab (e)	158,000	146,300	95,500	84,100	164,700	175,600	143,700	92,100	156,800	143,600
Sind (including Native States)	83,700	84,400	65,900	65,600	80,500	67,000	68,300	53,200	72,300	84,700
Ajmer-Merwara	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	11,900
Assam	(g)	(g)	(g)	(g)	(g)	(g)	(f)	9,700	10,600	(h) 1,400
TOTAL (a)	4,178,700 600,000	3,913,800 700,000	3,864,900 775,000	4,016,800 900,000	3,987,900 1,000,000	4,515,000 900,000	4,306,000 900,000	4,008,100 800,000	4,089,500 900,000	4,269,100 850,000

Yield (tons)

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
United Provinces (a)	13,900 35,000	17,500 45,000	36,200 90,000	10,000 30,000	34,000 100,000	48,700 90,000	45,400 90,000	29,000 70,000	34,000 100,000	18,000 42,000
Bombay (including Native States) (b)	52,700	105,100	166,000	61,400	99,500	132,400	109,400	31,700	96,300	90,800
Central Provinces and Berar	69,000	66,900	70,400	55,400	59,900	91,900	76,400	72,300	60,900	70,400
Madras (c)	55,100	55,000	45,800	53,100	57,200	59,700	49,300	78,200	65,500	74,900
Hyderabad State	29,400	18,400	27,300	20,600	18,700	24,500	34,400	25,400	32,500	26,100
Bengal (d)	59,000	61,700	72,200	46,300	50,000	88,900	79,400	41,500	35,100	28,800
Bihar and Orissa	(f)	(f)	(f)	(f)	(f)	(f)	(f)	33,500	25,000	32,400
Punjab (e)	16,000	13,900	8,800	4,700	23,700	18,500	14,900	9,900	16,000	15,700
Sind (including Native States)	5,900	6,300	4,300	4,200	12,300	6,500	12,000	4,800	6,900	9,500
Ajmer-Merwara	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	100
Assam	(g)	(g)	(g)	(g)	(g)	(g)	(f)	1,300	1,800	(h) 200
TOTAL (a)	800,400 35,000	844,800 45,000	451,000 90,000	255,700 30,000	364,300 100,000	470,800 90,000	421,800 90,000	327,600 70,000	374,000 100,000	365,900 42,000

- (a) The figures in italics represent "mixed" crop, i.e., seed sown in the same fields with other crops. The estimates of the mixed crops of the United Provinces are highly conjectural; hence they have been kept separate
 (b) Includes the State of Baroda
 (c) The estimates for Madras down to 1906-07 relate only to *raiyatwari* villages; but since that year estimates for *zamindari* and whole *inam* villages have also been included
 (d) Includes Bihar and Orissa down to 1910-11 and Assam for 1910-11
 (e) Figures for years prior to 1913-14 exclude unimportant districts
 (f) Included under Bengal
 (g) Not available
 (h) Early crop only

Note—Figures for 1913-14 are subject to revision

No. 11.—AREA AND YIELD OF GROUNDNUT IN EACH PROVINCE

Area (acres)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Madras (a)	366,400	393,100	511,000	601,800	718,700	740,100	667,300	806,000	924,200	1,175,200
Bombay (including Native States)	93,300	92,800	111,000	129,800	133,700	162,300	185,800	269,300	242,700	246,800
Burma (c)	(b)	(b)	(b)	137,000	258,600	146,300	98,800	138,800	199,500	241,400
TOTAL	459,700	485,900	622,000	868,600	1,111,000	1,048,700	951,900	1,214,100	1,366,400	1,663,400

Yield (tons) of nuts in shell

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Madras (a)	151,700	174,500	189,000	202,300	243,500	221,900	254,200	306,000	341,100	411,300
Bombay (including Native States)	63,200	36,700	84,700	82,500	129,500	172,700	207,100	243,300	239,500	232,500
Burma (c)	(b)	(b)	(b)	67,700	119,700	64,700	41,900	51,400	89,300	88,100
TOTAL	214,900	211,200	273,700	352,500	495,700	459,300	503,200	605,700	669,900	731,900

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

(b) No information

(c) The figures down to 1911-12 relate to the principal groundnut-growing districts. From 1912-13 estimates for other districts also have been included

Note.—The figures for 1913-14 are subject to revision

No. 12.—AREA AND YIELD OF INDIGO IN EACH PROVINCE

Area (acres)

Province.	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Bihar and Orissa (a)	223,100	161,500	137,800	143,800	135,300	107,400	117,000	109,600	90,100	63,100
Madras	126,300	113,900	180,700	141,900	81,800	98,400	82,800	9,300	61,500	55,300
Punjab (b)	53,000	67,500	62,300	57,900	36,200	43,400	45,400	36,600	37,300	22,400
United Provinces (c)	74,500	40,700	40,400	47,300	30,600	41,900	31,200	29,400	26,900	24,400
Bombay and Sind (d)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	3,300	6,200
Bengal	(f)	(f)	(f)	(f)	(f)	(f)	(f)	1,000	1,000	1,200
TOTAL	476,900	383,600	421,200	393,900	283,900	289,100	276,400	266,900	220,100	172,600

Yield (cwts.) of dye

Province	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14
Bihar and Orissa (a)	24,300	15,800	17,300	17,700	17,000	11,400	13,900	17,800	14,700	7,000
Madras	16,700	17,300	32,300	20,000	12,400	14,400	20,100	21,200	14,800	11,500
Punjab (b)	9,900	10,800	11,000	9,000	5,800	8,300	8,500	5,600	6,000	3,500
United Provinces (c)	8,000	4,300	5,100	5,600	3,800	5,200	8,500	3,000	3,500	3,000
Bombay and Sind (d)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	1,700
Bengal	(f)	(f)	(f)	(f)	(f)	(f)	(f)	100	100	100
TOTAL	58,900	48,200	65,700	52,300	38,800	39,300	46,000	47,700	39,100	26,800

(a) Includes Bengal down to 1910-11

(b) Figures for years prior to 1913-14 exclude unimportant districts

(c) In estimating the yield in the United Provinces it is assumed that one-tenth of the whole area is annually set aside for seed

(d) Includes Native States from 1913-14

(e) No information

(f) Included under Bihar and Orissa

No. 13.—YIELD (lbs) PER ACRE OF CROPS (tabulated in tables 1 to 12) IN EACH PROVINCE

Province	Rice (a)		Wheat		Sugarcane (b)		Tea		Cotton (c)	
	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14
	lb	lb	lb	lb	lb	lb	lb	lb	lb	lb
United Provinces . . .	657	467	892	775	2,045	1,582	841	322	148	122
Madras	908	857	...	...	4,636	4,324	310	270	78	79
Bihar and Orissa . . .	812	1,121	933	973	2,464	2,464	117	142	83	88
Bombay	1,131	1,136	701	556	5,098	5,595	...	...	89	89
Sind	834	715	938	531	...	...	...	...	166	160
Bengal	906	838	782	793	2,658	2,512	469	500	165	102
Punjab . . . . .	...	...	719	836	1,674	1,627	208	229	95	116
C. P. and Berar . . . .	...	...	636	452	...	...	...	...	81	82
Burma	1,012	938	...	...	...	...	49	51	79	69
Assam	1,021	783	...	...	1,941	1,884	550	543	114	145
North-West Frontier Province	...	...	497	585	2,509	2,480	...	...	93	95
Ajmer-Merwara . . . . .	...	...	...	895	...	...	...	...	208	105
Coorg	1,430	956	...	...	...	...	...	...	...	...
Central India . . . . .	...	...	731	411	...	...	...	...	63	77
Rajputana . . . . .	...	...	539	439	...	...	...	...	127	112
Hyderabad . . . . .	...	...	126	137	...	...	...	...	42	44
Mysore . . . . .	...	...	560	747	...	...	...	...	49	69
AVERAGE	891	894	735	682	2,290	2,011	503	501	84	85

Province	Jute		Linseed		Sesamum		Rape and Mustard		Groundnut (d)		Indigo	
	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14	1912-13	1913-14
	lb	lb	lb	lb	lb	lb	lb	lb	lb	lb	lb	lb
United Provinces . . .	...	...	431	360	247	109	520	340	...	784	15	14
Madras . . . . .	...	...	...	...	178	201	...	...	827	...	27	23
Bihar and Orissa . . .	757	840	429	513	250	319	425	469	...	2,110	18	12
Bombay . . . . .	...	...	227	180	272	234	592	530	2,210	...	...	29
Sind . . . . .	...	...	...	...	214	251	235	246	...	...	...	...
Bengal	1,293	1,298	419	395	297	269	449	454	...	...	11	9
Punjab . . . . .	...	...	...	190	229	245	395	373	...	...	18	17
C. P. and Berar . . . .	...	...	210	164	175	182	...	...	...	...	...	...
Burma . . . . .	...	...	...	...	...	...	...	...	1,003	818	...	...
Assam	941	1,102	...	...	880	320	443	459	...	...	...	...
North-West Frontier Province	...	...	...	...	...	...	213	252	...	...	...	...
Ajmer-Merwara . . . . .	...	...	...	...	...	19	...	...	...	...	...	...
Coorg . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Central India . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad . . . . .	...	...	76	90	112	92	40	40	...	...	...	...
Mysore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
AVERAGE	1,222	1,244	292	286	213	178	396	393	1,008	986	20	17

(a) Cleaned rice (b) Raw sugar or gur (c) Cleaned, i.e., ginned cotton (d) Nuts in shell

No. 14.—SUPPLEMENTARY TABLE—AREA AND YIELD OF BARLEY, JAWAR, BAJRA, MAIZE, AND GRAM IN EACH PROVINCE.

Area (acres).

Province	Barley			Jawar			Bajra		
	1911-12	1912-13	1913-14	1911-12	1912-13	1913-14	1911-12	1912-13	1913-14
United Provinces	5,163,000	4,591,000	4,376,000	1,633,000	2,169,000	2,063,000	2,880,000	2,618,000	2,188,000
Madras	3,000	3,000	3,000	5,166,000	5,220,000	5,790,000	3,384,000	3,606,000	3,273,000
Bihar and Orissa	1,340,000	1,261,000	1,306,000	95,000	94,000	132,000	67,000	74,000	75,000
Bombay	36,000	28,000	23,000	5,878,000	6,850,000	6,606,000	4,362,000	5,153,000	4,906,000
Sind	19,000	20,900	28,000	389,000	602,000	689,000	415,000	1,141,000	1,110,000
Bengal	95,000	95,000	94,000	2,000	3,000	2,000	6,000	7,000	6,000
Punjab	1,339,000	1,007,000	(a)	554,000	1,212,000	(a)	1,155,000	2,677,000	(a)
C. P. and Berar	(b)23,000	(b)16,000	(a)	4,043,000	3,991,000	4,015,000	117,000	154,000	146,000
Burma	...	...	...	472,000	492,000	531,000	247,000	240,000	225,000
Assam	1,000	1,000	(a)	...	...	...	...	...	...
North-West Frontier Province.	206,000	214,000	291,000	53,000	95,000	103,000	76,000	205,000	193,000
TOTAL	8,815,000	7,236,000	6,121,000	18,290,000	27,728,000	19,931,000	12,709,000	15,880,000	12,122,000

Yield (tons)

Province.	Barley			Jawar			Bajra		
	1911-12	1912-13	1913-14	1911-12	1912-13	1913-14	1911-12	1912-13	1913-14
United Provinces	(a)	(a)	(a)	355,000	598,000	227,000	601,000	611,000	269,000
Madras	(a)	(a)	(a)	(a)	943,000	1,082,000	(a)	551,000	535,000
Bihar and Orissa	579,000	523,000	557,000	(a)	(a)	(a)	(a)	(a)	(a)
Bombay	9,000	10,000	7,000	910,000	1,418,000	1,375,000	340,000	560,000	655,000
Sind	5,000	7,000	10,000	105,000	196,000	202,000	196,000	253,000	181,000
Bengal	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Punjab	382,000	280,000	(a)	68,000	163,000	(a)	97,000	315,000	(a)
C. P. and Berar	(a)	(a)	(a)	988,000	980,000	918,000	(a)	(a)	(a)
Burma	...	...	...	35,000	55,000	68,000	14,000	27,000	33,000
Assam	(a)	(a)	(a)	...	...	...	...	...	...
North-West Frontier Province.	(a)	58,000	140,000	(a)	15,000	16,000	(a)	33,000	37,000
TOTAL (c)	975,000	878,000	714,000	2,459,000	4,368,000	3,608,000	1,158,000	2,350,000	1,710,000

(a) Not available (b) Taken from Agricultural statistics (c) Incomplete
 N. B.—No forecast is prepared for the crops dealt with in this table. The figures are taken from the provincial Season and Crop Reports
 [Continued on next page]

No. 14.—SUPPLEMENTARY TABLE—AREA AND YIELD OF BARLEY, JAWAR, BAJRA, MAIZE, AND GRAM IN EACH PROVINCE—*contd.*

Area (acres).

Province.	Maize			Gram		
	1911-12	1912-13	1913-14	1911-12	1912-13	1913-14
United Provinces	1,791,000	2,205,000	2,136,000	6,873,000	5,507,000	3,037,000
Madras	118,000	134,000	124,000	135,000	138,000	163,000
Bihar and Orissa	1,661,000	1,699,000	1,715,000	1,052,000	915,000	1,082,000
Bombay	163,000	162,000	159,000	372,000	475,000	453,000
Sind	2,000	2,000	2,000	76,000	75,000	98,000
Bengal	95,000	97,000	92,000	177,000	184,000	198,000
Punjab	955,000	1,098,000	(a)	4,100,000	3,401,000	(a)
C. P. and Berar	(d) 144,000	(d) 15,000	(a)	(c) 818,000	(c) 808,000	(c) 829,000
Burma	165,000	172,000	170,000	40,000	34,000	42,000
Assam	19,000	19,000	18,000	1,000	1,000	(a)
North-West Frontier Province	410,000	419,000	431,000	174,000	169,000	199,000
TOTAL	5,523,000	6,157,000	4,847,000	13,818,000	11,707,000	6,104,000

Yield (tons).

Province.	Maize			Gram		
	1911-12	1912-13	1913-14	1911-12	1912-13	1913-14
United Provinces	703,000	920,000	721,000	2,493,000	1,817,000	551,000
Madras	(a)	(a)	(a)	(a)	8,000	(a)
Bihar and Orissa	549,000	530,000	542,000	436,000	361,000	448,000
Bombay	27,000	54,000	60,000	39,000	64,000	61,000
Sind	1,000	1,000	1,000	11,000	10,000	9,000
Bengal	(a)	(a)	(a)	(a)	(a)	(a)
Punjab	366,000	413,000	(a)	1,126,000	735,000	(a)
C. P. and Berar	(a)	(a)	(a)	244,000	280,000	189,000
Burma	63,000	75,000	68,000	7,000	(a)	(a)
Assam	(a)	(a)	(a)	(a)	(a)	(a)
North-West Frontier Province	184,000	188,000	228,000	(a)	29,000	36,000
TOTAL (b)	1,893,000	2,181,000	1,620,000	4,356,000	3,324,000	1,294,000

(a) Not available

(b) Incomplete

(c) Excludes Gram sown with other crops

(d) Taken from Agricultural statistics

N.B.—No forecast is prepared for the crops dealt with in this table. The figures are taken from the provincial Season and Crop Reports.

APPENDIX I

METHOD OF FRAMING ESTIMATES OF CROPS

There are three factors necessary for framing an estimate of outturn, namely, the area, the standard normal outturn per acre, and the fraction representing the relation of the crop reported on to the normal crop per acre.

As regards area, there exists in the villages of most provinces an agency capable of reporting the acreage of crops with great accuracy, wherever the fields have been mapped and surveyed. The tracts for which statistics are ordinarily not obtainable are yearly diminishing in extent; but owing to the absence of maps or the non-existence of trained village establishments they still represent a considerable aggregate area. These tracts consist chiefly of permanently settled estates, lands held on privileged tenure, and unsurveyed areas. For these tracts the acreage as well as the outturn cannot be more than a rough estimate. Such estimates of areas, once framed, are liable to become stereotyped and repeated year after year without regard to the influence of exceptional seasons or changes in the economic condition of the tracts. In order to prevent this, provision has been made for the annual revision of these area estimates by careful comparison with the conditions prevailing in those adjoining areas of a similar character for which accurate information is available, and by means of such special enquiries as may be possible.

In dealing with the calculation of the areas under crops, two other matters demand consideration, namely, (1) whether the area returned should be the area sown or that successfully cropped, and (2) whether, when the forecast crop is sown mixed with other crops, it is preferable that the total area covered by the mixed crops should be exhibited, or that such area only should be shown as is estimated to represent the acreage covered by the forecast crop only. As regards (1) the general rule is that the returns should exhibit the areas actually sown whether the crop comes to maturity or not, the principle underlying this rule being that the failure of crop should affect not its area, but its outturn. An exception to this rule is, however, made when fields, owing to the failure of the first sowings, have been devoted to other crops. In this case the area first sown with the forecast crop may be omitted. As to (2) 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 in individual cases, as it has not been found practicable to prescribe one uniform method of calculation. For purposes of the forecasts the area to be returned must be the area covered by the forecast crop, exclusive of the area covered by the other crops with which it is mixed.

Next with regard to the standard normal outturn. A normal crop may be defined as "that crop which past experience has shown to be the most generally recurring crop in a series of years; the typical crop of the local area; the crop which the cultivator has a right (as it were) to expect, and with which he is (or should be) content, while if he gets more he has reason to rejoice, and if less he has reason to complain." Briefly, it is stated to be the average yield on average soil in a year of average character. This normal or average yield will not necessarily correspond with the average of a series of years' figures, which is an arithmetical average. The Agricultural Department in each province maintains a statement of the normal or average yield per acre of land of average quality (under the two major heads of irrigated and unirrigated land) for the several crops in each district. In order to test the accuracy of these standards of normal or average yield and to revise them, if necessary, a system of crop cutting experiments is in force in all the provinces. Under this system plots of land of average quality are selected and the crops grown on them are cut and weighed in the presence of responsible officers of the District staff or of the Provincial Agricultural Department. These experiments have to be carried out every year in respect of all the principal crops, and in accordance with rules specially framed by the several provincial authorities. The results of the experiments are reported to the head of the provincial Agricultural Department, who on a careful scrutiny of all the reports received by him, and after such further investigations as he may deem necessary, revises or verifies the standards previously adopted for the districts or the province. This revision is ordinarily made once in five years.

The third factor—the fraction representing the relation of the crop reported on to the normal crop per acre—is what is known as the "anna estimate" or the "percentage estimate." In many parts of India the cultivators estimate the crop outturn in annas or sixteenthths, as there are sixteen annas in a rupee. They take a certain number of annas to represent the normal outturn, and estimate the outturn of the year of report as so many annas higher or lower than that normal. But in some tracts sixteen annas express a bumper crop, while in others the same term expresses a normal crop, and the number of annas taken to represent a normal outturn varies between 12 and 16. Consequently the anna estimate of one tract is not always amenable to comparison or combination with that of another tract. The percentage estimate is the American system under which 100 is taken to denote a normal crop and the estimated outturn of the year of report is stated as a percentage of that crop. In 1897 a question arose as to whether the anna notation or the American notation should be used in making crop estimates, and it was strongly urged upon the Government of India that as the cultivators and village officers entrusted with the duty of collecting data for crop reports were mostly accustomed to the Indian system, *i.e.*, the anna notation, the adoption of any other system

would tend to confuse the estimate. Local Governments and Administrations were permitted to adopt such scale of notation as might be suited to local conditions, the object being to secure that the returns should be in terms of a normal crop. But since the anna standard thus adopted would not possess any fixed or uniform value, it was laid down that in published forecasts the anna notation should not be used, the American notation being used in its stead, *i.e.*, 100 being taken to represent a normal crop and the estimated outturn being stated as a percentage of that crop, and the conversion of the anna estimate into the percentage estimate being made either by the district officer or by the provincial authorities.

When these three factors have been determined, they are multiplied into each other to arrive at the required quantitative estimate of outturn. Thus, if the area be 60,000 acres, the standard of normal outturn 500 lbs, and the percentage estimate 80, the required quantitative estimate would be $60,000 \times 500 \times \frac{80}{100} = 24,000,000$ lbs.

APPENDIX II.

METHODS OF COLLECTING THE STATISTICS PROVINCE BY PROVINCE.

The estimates prepared by the United Provinces include all the districts of the province, except Almora and Garhwal, for which the required particulars are not available as no regular village papers are kept up by patwaris (village accountants) in these two districts. The area is taken from the crop statements based on field to field inspections, which are compiled 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 annually 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-cutting experiments, and are applied to the condition of the crops reported by district officers and selected land-holders whose number exceeds six hundred.

United Provinces,
(Total cultivated area
35,968,000 acres.)

In the Madras Presidency, the estimates relate to all districts in which the respective crops are grown. Approximately two-thirds of the cultivated land in the Presidency is Government or *raiyatwari* land, and has been carefully surveyed. All the village officers therein are appointed and controlled by Government officials. In the ordinary course of his work the village accountant sends every month to the Revenue Inspector (the officer in charge of a group of villages varying in number) a detailed statement of the sowings in his village. For those crops for which forecasts are prepared, the Revenue Inspector, who is himself a touring officer, reports to his Tahsildar, the area in his range under that crop, with his estimates of the average yield expressed in so many annas of the normal crop, when outturns are required. The Tahsildar consolidates all these figures and reports the total direct to the Director of Agriculture with, in the case of outturn, his estimated yield (also expressed in annas of the normal). The remaining third of the Presidency is *zamindari* (consisting of large proprietary estates), of which only a part has been accurately surveyed, and for which somewhat similar returns are prepared and dealt with accordingly. In other cases the Tahsildar or Deputy Tahsildar estimates the area and yield as well as he can from his own knowledge, and from reports of the estate officials. The figures for these zamindari areas are included but shown separately in the reports sent by the Tahsildars to the Provincial Director of Agriculture. The Native States of Pudukkottai and Banganapalle send similar reports direct to the Director for cotton only. No other Native State in the Presidency prepares any crop forecast. Thus for each forecast return 232 separate reports are received in the Director's office, where they are scrutinized and tabulated. More accurate figures of areas cultivated are obtainable at the end of the year after all the village accounts have been checked. These figures are published later in the provincial Season and Crop Report. The figures reported by Tahsildars in their final forecasts—particularly those from zamindari areas—are checked by a comparison with the forecast reports and the season and crop reports of previous years and the returns from neighbouring Government areas, and thus an attempt is made to rectify obviously inaccurate reporting. Standard rates of outturn have been determined for each crop on a consideration of the latest crop-cutting experiments and of the results on the Government farms. The Director checks the rate of yield reported by Tahsildars by estimates received from non-officials interested in a particular crop.

Madras.
(Total cultivated area
33,810,000 acres.)

The estimates for Bihar and Orissa relate to all the districts of the province where the respective crops are grown. Survey and settlement operations have been completed in all districts except five, and in these districts the settlement figures serve as a check on the estimates of acreage based on the information furnished by the police. In the absence of any Revenue agency in the province, 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. In the district of Sambalpur, the acreages under crops are revised annually by the Land Records staff by field-to-field inspection. The system of making crop-cutting tests, 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 some twenty years, but sufficiently trustworthy figures of yield have not yet been obtained from these tests to enable Government to accept them as standards. The estimates, therefore, of yield given in the forecasts are based on standards adopted provisionally by the provincial Department of Agriculture on the basis of information obtained from other sources.

Bihar and Orissa.
(Total cultivated area
27,396,000 acres.)

The estimates for the Bombay Presidency include all British districts and Native States where the respective crops are grown to any extent. In the British districts of the Presidency proper 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 office of the Director of Agriculture of the province. 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 188 in the Presidency proper, 60 in Sind, and 33 in the Native States. No standard of yield has yet been fixed. Local estimates of crop condition are converted to quantitative

Bombay and Sind
(Total cultivated
area 23,161,000
acres.)

figures on the basis of a formula showing the average yield of crops, which has been adopted provisionally. This formula is now being revised, 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 of the condition of crops 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 district officer through the sub-divisional officer, who sends his remarks, if any, to the district officer, forwarding a copy of the same to the Director. The district officer 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 formulæ, and all the necessary information is obtained from the district officers in the form of estimate on the basis of twelve annas for a normal crop, together with quantitative equivalents gathered from general experience. For the Native States condition estimates are obtained, and the formulæ for adjoining British districts are applied.

Bengal. (Total cultivated area 25,149,000 acres.) crops are grown. In the absence of any revenue agency in the province, 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-cutting experiments, 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 nineteen years, but sufficiently trustworthy figures of yield have not yet been obtained from these cuttings to enable Government to accept them as standards. The quantitative estimates therefore of yield given in the forecasts are based on standards adopted provisionally on the basis of information obtained from other sources.

Punjab. (Total cultivated area 23,741,000 acres.) crops are grown. As regards the Native States of the province, reports on wheat and cotton are furnished by all the States in which the two crops are grown to any considerable extent. No estimates for any other crop are prepared by any Native State. The figures of area for all the British districts up to 1912-13 were based on actual measurements by the village revenue staff. Estimates of yield were recorded by district officers after personal enquiry from tahsildars and leading agriculturists. The total number of agriculturists consulted by the district officers and tahsildars must amount to several thousands. From 1913-14, however, this method is followed only in districts in which the respective crops are grown to a considerable extent. For other districts the provincial Director of Land Records prepares conventional forecasts based on the actual average area figures for the previous five years, and an assumed average outturn is determined by him to meet the character of the harvest.

Central Provinces and Berar. (Total cultivated area 24,859,000 acres.) The estimates for the Central Provinces and Berar relate to all the British districts of the province in which the respective crops reported on are grown. As regards the Native States of the province, reports on wheat only are furnished by the two States of Khairagarh and Nandgaon. No information is available for any other State. The figures of acreage 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 these crops as disclosed by 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. 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 provincial Director of Land Records and Settlements from the year's figures furnished by the District officers, who are supposed to bear in mind the standards when estimating the yield of the season.

Burma. (Total cultivated area 13,549,000 acres.) The estimates for Burma relate to all the districts of the province in which the respective crops reported on are grown. The figures for the districts in which the crops are grown to a considerable extent are based on regular reports, furnished by district officers, while those for the remaining districts are based on rough estimates prepared by the Commissioner of Settlements and Land Records. For the districts from which regular reports are received, the figures of 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 of both area and yield are tabulated by the Superintendent of Land Records and checked by the District officer. 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.

The estimates for Assam relate to all the districts in which the respective crops reported on are grown to any extent, excluding some of the unimportant hill districts in certain cases. The information is received from district officers, who in their turn obtain figures from mandals (headmen) in the case of the temporarily-settled areas and from zamindars in the case of the permanently-settled tracts. These figures are said to be checked by the sub-divisional and district officers, but, except where the District officer is himself able to do it, there is no valid check at all, and sometimes figures returned by the District officers are more or less inaccurate and inconsistent.

Assam.
(Total area cultivated acres.) 5,699,000

The estimates for the North-West Frontier Province relate to all the districts of the province in which the respective crops reported on are grown, including the Tochi agency in the case of wheat, cotton, and sugarcane, and the Kurram agency in the case of wheat and cotton. 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 crop-cutting experiments made during the progress of settlement operations. 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 of condition of crops 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 necessarily be several hundreds.

North-West Frontier Province. (Total cultivated area 2,279,000 acres).

The estimates for Ajmer-Merwara relate to the whole of the district. So far as *khalsa** *jagir* and minor *istamrari* villages are concerned, the patwari is responsible for making field-to-field inspections of every village in his circle at each harvest. These inspections commence on 1st September for the autumn harvest and on 1st February for the spring harvest. The patwari notes down the results of his local inquiries and inspections in his field book. A certain percentage of the entries made by the patwari is checked and corrected, when necessary, by the girdawar or kanungo, who also inspects the crops at each harvest. The tahsil officers further test a certain number of entries, and the sub-divisional officer also makes a general inspection of crops at each harvest. As soon as the inspection of the harvest is complete an abstract statement of area and outturn is compiled separately for each girdawar's circle and tahsil, and these statements are then consolidated for the three sub-divisions in the district office. An assumed normal outturn per acre for each crop has been fixed at settlement. Crop estimates are annually made by the revenue officers and the results recorded. These sets of figures give a useful check on the outturn estimates made by the patwaris. The exact area sown in the sub-divisions is obtained from the abstract statements. In the large *istamrari* estates the preparation of the field books is done by the estate officials. These field books contain fairly accurate information in regard to wheat, the outturn of which in maunds is generally appraised for the purpose of payment of the cultivators' rent; but as regards cotton and sesamum the figures are conjectural, as no crop-cutting experiments are made, the rents being charged in cash. The Government agency does not supervise the collection of figures in large *istamrari* estates.

Ajmer-Merwara. (Total cultivated area 312,000 acres.)

Estimates for wheat and cotton are received from the Native States in Central India; but they are in many cases imperfect. In the States of Indore, Gwalior, Rajgarh, Narsingarh, Kilchipur, Kurwai, Piploda, Bagli, Sitamau, Sailana, Jaora, Rutlam, Dewas, (Senior and Junior), Dhar, Barwani, and Jhabua, the figures of area are based on crop statements prepared by patwaris under the supervision of superior Revenue or Land Records officers. The returns include areas held revenue-free or on privileged tenure, but the figures for these areas are based on imperfect data in most cases and can be taken as rough estimates only. In the States of Pathari, Mahammadgarh, and Alirajpur the figures are based on rough estimates. As regards yield, the estimates are for the most part conjectural, no standard of average yield having been framed except in the States of Narsingarh, Dhar, Jhabua, Kurwai, Pathari, and Mahammadgarh.

Central India.

The estimates for wheat and cotton furnished by the States in Rajputana are generally defective in consequence of the absence of figures for unsurveyed areas and privileged tenures in many cases.

Rajputana.

The estimates for wheat, cotton, and oilseeds furnished by the Hyderabad State excluded until 1902-03 *jagir* and other revenue-free lands or privileged tenures; since then estimates for these areas have been procured as far as possible and included in the statement.

Hyderabad.

The estimates furnished by the Mysore State relate to all the districts of the State in which the respective crops are grown. As regards area the information is based on the entries made by the *shanbog* (village accountant) in his crop inspection book and checked by the higher revenue officers. The outturn is noted by the *shanbog* in terms of annas (16 annas being taken for a normal or 100 per cent crop) from which the total yield is determined by reference to the standard normal outturn per acre fixed for each taluk. The figures are finally scrutinized and consolidated in the Revenue Commissioner's office.

Mysore. (Total area cultivated acres.) 6,185,000

* *Khalsa* villages are those which pay full revenue to Government

INDEX.

	Pages.		Pages.
American Notation	19, 20	Method of framing estimates of crops	19, 20
Anna estimate	ib.	Methods of collecting statistics	21—23
Area—		Mixed crop, treatment of—	19
Bajra (<i>Pennisetum typhoides</i>)	16	Mustard (see Rape and Mustard)	
Barley (<i>Hordeum vulgare</i>)	16	Normal crop, definition of—	19
Cotton (<i>Gossypium sp.</i>)	10	Notation for making crop estimates	19, 20
Gram (<i>Cicer arictinum</i>)	17	Percentage estimate	19, 20
Groundnut (<i>Arachis hypogæa</i>)	14	Rape and Mustard—	
Indigo (<i>Indigofera tinctoria</i>)	ib.	Area	12
Jawar (<i>Sorghum vulgare</i>)	16	Yield	ib.
Jute (<i>Corchorus sp.</i>)	11	Rice—	
Linseed (<i>Linum usitatissimum</i>)	11	Area	7
Maize (<i>Zea Mays</i>)	17	Yield	ib.
Rape and Mustard (<i>Brassica sp.</i>)	12	Season, leading features of—	1-4
Rice (<i>Oryza sativa</i>)	7	Sesamum—	
Sesamum (<i>Sesamum indicum</i>)	13	Area	13
Sugarcane (<i>Saccharum officinarum</i>)	9	Yield	ib.
Tea (<i>Camellia theifera</i>)	9	Source and scope of the estimates	1
Wheat (<i>Triticum sativum</i>)	8	Standard normal outturn	19
Area of crops, how ascertained	19, 21, 22, 23	Sugarcane—	
Bajra—		Area	9
Area	16	Yield	ib.
Yield	ib.	Tea—	
Barley—		Area	9
Area	16	Yield	ib.
Yield	ib.	Wheat—	
Charts	<i>frontispiece</i>	Area	8
Cotton—		Yield	ib.
Area	2, 10	Yield—	
Consumption	2, 10	Bajra	16
Exports	2, 10	Barley	16
Yield	2, 10	Cotton	6, 10
Crop-cutting experiments	19	Gram	17
Development of the estimates	1	Groundnut	6, 14
Gram—		Indigo	6, 14
Area	17	Jawar	16
Yield	ib.	Jute	6, 11
Groundnut—		Linseed	6, 11
Area	14	Maize	17
Yield	ib.	Rape and mustard	6, 12
Indian Notation	19	Rice	6, 7
Indigo—		Sesamum	6, 13
Area	14	Sugarcane	6, 9
Yield	ib.	Tea	6, 9
Jawar—		Wheat	6, 8
Area	16	Yield per acre—	
Yield	ib.	Cotton	15
Jute—		Groundnut	ib.
Area	11	Indigo	ib.
Yield	ib.	Jute	ib.
Linseed—		Linseed	ib.
Area	11	Rape and Mustard	ib.
Yield	ib.	Rice	ib.
Maize—		Sesamum	ib.
Area	17	Sugarcane	ib.
Yield	ib.	Tea	ib.
		Wheat	ib.

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OF

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OF

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