

**TWENTY-FIRST ISSUE**

**DEPARTMENT OF STATISTICS, INDIA**

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**ESTIMATES**  
OF  
**AREA AND YIELD**  
OF  
**Principal Crops in India**  
**1918-19**

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*Published by order of the Governor-General in Council*

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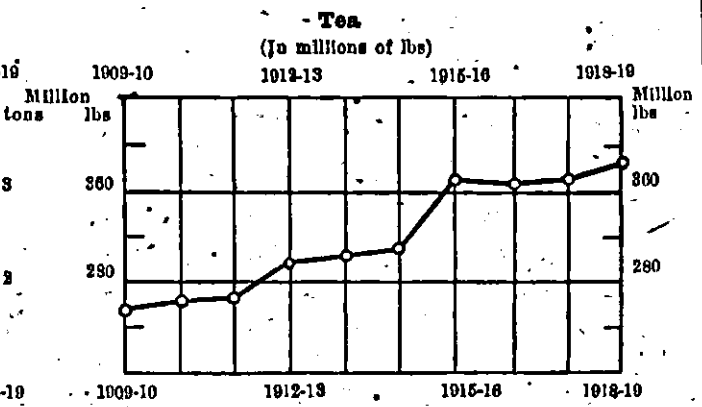
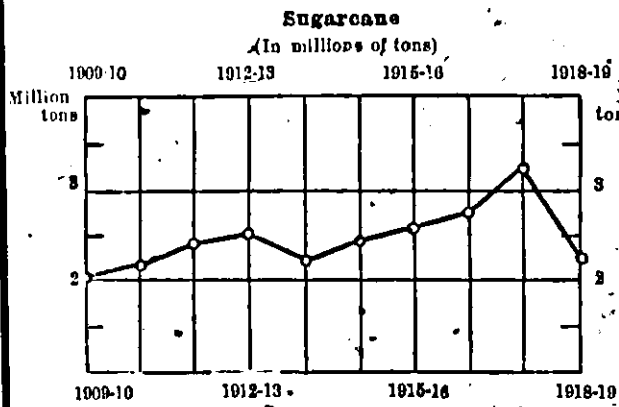
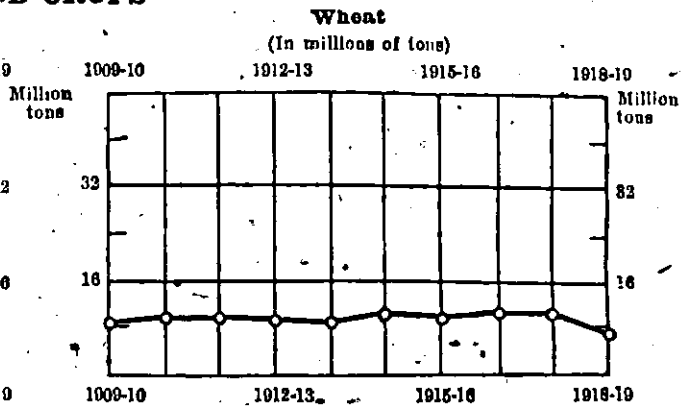
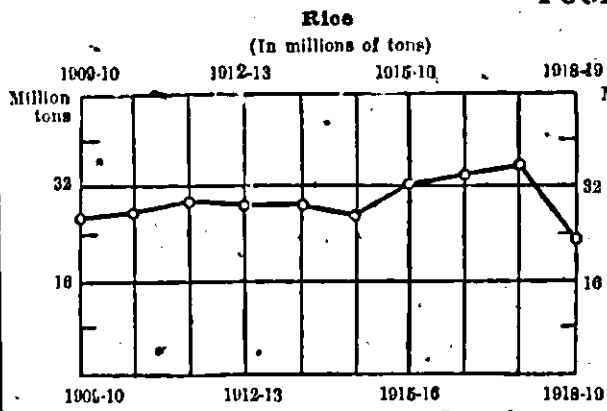
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Linseed, Rape and Mustard (Winter oilseeds)—1st (January), 2nd (March), Final (June).  
Sesamum (*til* or *jinjili*)—1st (September), 2nd (October), Final (January), Supplementary (April).  
Groundnut—1st (October), Final (February).  
Indigo—1st (October), Final (December).  
Sugarcane—1st (August), 2nd (October), Final (February).

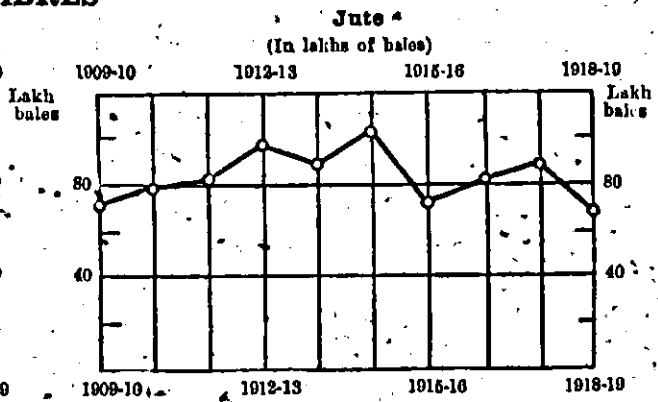
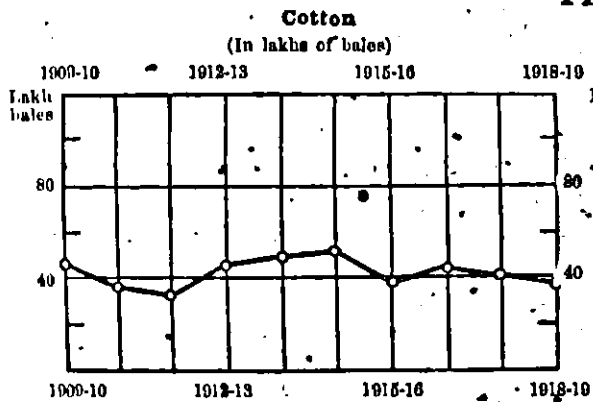
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# Yield of certain principal crops from 1909-10 to 1918-19

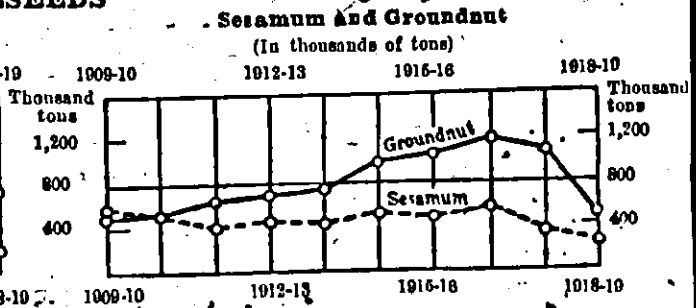
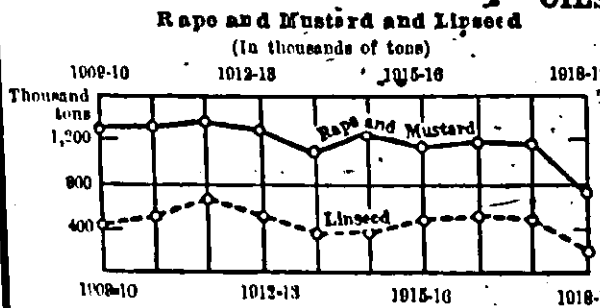
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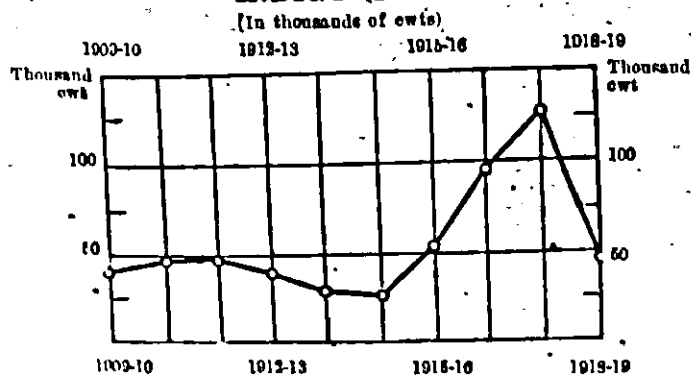
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# Estimates of Area and Yield of Principal Crops in India, 1918-19

## INTRODUCTORY NOTE.

The present issue is the twenty-first of the series and relates to the area and yield of the principal crops for which estimates were made in 1918-19. It is the sixth of the new series that was commenced in 1913-14. A new table (No. 17) showing the condition of weekly rainfall during the monsoon period from June to October, 1918, has been added.

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 dates prescribed for the issue of the forecasts by this Department are given in Appendix III. The figures in the tables in this volume are those given in the final forecasts.\* They show for the last ten years the area sown with, and the estimated yield of, rice, wheat, sugarcane, tea†, cotton, jute, linseed, rape and mustard, sesamum, groundnut, and indigo. The rates of yield per acre of these crops in each of the six years ending 1918-19 are shown in table No. 2, and the standard or normal yields per acre in table No. 3.

The estimates for these crops did not, especially in the earlier years of forecasts in India, relate to all the producing areas, but only to those tracts where the respective crops were grown on an extensive and commercial 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, during the last four years is so small as to be negligible and to afford a comparison of the estimates of the year (1918-19) with those of the three preceding years. 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 Indian 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 the paragraphs below, in footnotes to the tables, and in Appendix II on pages 26-29. It may be noted that, owing chiefly to causes already mentioned, the figures given in this volume do not agree in some instances with those in the Agricultural Statistics of India.

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. 15), the figures being taken from the provincial Season and Crop Reports or specially obtained from local authorities.

Figures showing the reported area and yield of certain crops in foreign countries have been given in table No. 13, the data being collected from the publications of the International Institute of Agriculture, Rome.

The monsoon rains began earlier than usual, but were very weak over nearly the whole country outside Burma and north-east India. The winter rainfall was also greatly defective. These adverse climatic conditions affected both the *kharif* (autumn) and *rabi* (spring) crops. The outturn of tea is the highest on record, but that of other crops is, except in a few instances, the worst on record during the last decade. Conditions with regard to each crop are stated in the following paragraphs. Statistics of normal and actual rainfall are given in table No. 16 and the condition of weekly rainfall during the monsoon period (June to October) of 1918 is shown in Table No. 17.

\* These figures are subsequently revised when finally adjusted figures are available.

† 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.

## Rice.

Rice is generally regarded as a winter crop, being mainly harvested in December and January. It is sown in the months from May to August.\* There are two other varieties of comparatively small importance, namely, autumn rice and summer rice. Autumn rice is sown in May and June and harvested in September, and summer rice is sown in January and February and harvested in May and June. The provinces to which the estimates for rice now relate are Bengal, Bihar and Orissa, Madras, Burma, the United Provinces, the Central Provinces and Berar, Assam, Bombay, Sind, and Coorg. These tracts comprise 99 per cent of the total rice area of British India. The only Indian States for which estimates for rice are prepared are those in the Bombay Presidency. The total area under rice in all these tracts in 1918-19 was reported as 75,864,000 acres, as compared with 80,141,000 acres in the preceding year. The season was unfavourable, owing mainly to scanty rains especially in Bihar and Orissa, Madras, and the United Provinces. The total estimated yield was 23,672,000 tons, as against 36,236,000 tons in 1917-18. To this figure should be added some 273,000 tons in respect of other British provinces† (containing about 870,000 acres under rice), for which no forecasts are made.

## Wheat.

Wheat, which is a *rabi* (spring) crop in India, is sown from October to December and is 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, Delhi, the Central Provinces and Berar, Bombay, Sind, Bengal, Bihar and Orissa, Central India, Rajputana, Hyderabad, and Mysore. These tracts contain practically the whole of the area under wheat in India. The total area under wheat in 1918-19 was reported to be 23,764,000 acres, which is less than the area of the preceding year by 33 per cent. The decrease was due to the unfavourable character of the season and the prevalence of influenza at sowing time. The crop was, on the whole, good in the important wheat growing areas. The total estimated yield was 7,502,000 tons, which is below the yield of 1917-18 by 24 per cent. An addition of some 140,000 tons should be made to the estimated yield in respect of other tracts‡ (containing about 443,000 acres under wheat), for which no reports are made.

## Sugarcane.

The sugarcane crop is planted from February to May and is harvested from November to January. 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 (including Sind), Madras, and the Central Provinces and Berar. These tracts contain 99 per cent of the total area under sugarcane in British India. Reports are also received from the Indian States in the Bombay Presidency (including the Baroda State). No report is received from any other Indian State. The total area reported under sugarcane in 1918-19 was 2,820,000 acres, as compared with 2,809,000 acres in the preceding year. The season was anything but favourable, owing to deficient rainfall, especially in Northern India, and the yield was generally below normal. In parts of the United Provinces, the Punjab, and Bombay a considerable portion of the crop was, owing to the scarcity of fodder, fed to cattle. The estimated yield (2,337,000 tons) was 29 per cent below the final figure (3,311,000 tons) of the preceding year. To this figure should be added approximately 18,000 tons in respect of other British provinces§, for which no separate estimates are made.

## 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 1918 was reported to be 678,500 acres, which is 2 per cent greater than that of the preceding year. The total production of manufactured tea (black and green) was reported to be 380,459,000 lbs in 1918, as against 371,296,300 lbs in the preceding year.

There are two crops of cotton grown in India, namely, the early and the late. Early cotton grows principally in central and northern India, and late

\* Rice is sown to a very large extent in Madras (especially in the south) from September to December and again to a fair extent in February and March.

† Punjab, North-West Frontier Province, Delhi, and Ajmer.

‡ Burma, Madras, and the Kashmir State.

§ Burma, Delhi, and Ajmer.

cotton largely in southern and western India. Taking both the crops together, the sowing season extends from March to August and the harvesting season from October to April. In parts of southern India sowings continue till October and harvesting till July. The estimates given below relate to all the cotton-growing provinces and States in India.

The total reported area under cotton was 20,497,000 acres in 1918-19, as against 25,298,000 acres in 1917-18. The crop was seriously affected by deficient rainfall in many of the important cotton-growing provinces. The

	Thousand bales	
	1916-17	1917-18
Exports . . . . .	2,092	1,436
Mill consumption . . . . .	2,154	2,044
Extra factory consumption (conjectural) . . . . .	750	750
<b>Total</b> . . . . .	<b>4,996</b>	<b>4,230</b>
Less imports . . . . .	11	26
Approximate crop . . . . .	4,985	4,204
Estimated in forecast . . . . .	4,489	4,065

The total estimated outturn was 3,671,000 bales of 400 lbs each, which is 394,000 bales or 10 per cent below the final figure of 1917-18. The marginal statement compares the estimates of yield for the last two years with the sum of net exports and internal consumption (in thousands of bales). It may be noted, however, that the estimates of "carry over" from one year to another are not taken into account.

	1918-19	
	Bales	
Oomras . . . . .	1,500,000	
Dholleras . . . . .	109,000	
Bengal-Sind . . . . .	875,000	
Broach . . . . .	161,000	
Western and Northern . . . . .	231,000	
Cocanadas . . . . .	56,000	
Tinnevellys . . . . .	128,000	
Salems and Cambodias . . . . .	258,000	
Coompta-Dharwars . . . . .	227,000	
Comillas, Burmas and other sorts . . . . .	127,000	
<b>Total</b> . . . . .	<b>3,671,000</b>	

according to the recognised trade descriptions of cotton grown in the year 1918-19 are given in the marginal table. Of the total yield, Oomras represent 41 per cent, Bengal-Sind 24 per cent, Salems and Cambodias 7 per cent, Westerns and Northern and Coompta-Dharwars 6 per cent each, Broach 4 per cent and Dholleras and Tinnevellys 3 per cent each.

Jute is an autumn crop, being sown from March to May and harvested in August and September. The provinces where it is grown are Bengal (including the Cooch Bihar State), 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 1918 (2,500,400 acres) was below that of the preceding year by 9 per cent, and the estimated yield (6,955,600 bales of 400 lbs each) fell by 22 per cent. The season was not favourable owing to excessive rainfall. The sum of exports and internal consumption, both in and outside the mills, is compared, at the bottom of table No. 9, with the estimated yield for the last nine years. The area and yield of jute in 1919 are estimated to be 2,821,600 acres and 8,428,000 bales, respectively.

Linseed is a *rabi* (spring) crop, being sown from August to October 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 98.9 per cent of the total area under linseed in British India. Reports are also made by the State of Hyderabad and by the States in the Bombay Presidency. No report is received from any other Indian State. The total area under linseed in all the reporting tracts in 1918-19 was 1,973,000 acres, which is 48 per cent below the final figure of the preceding year. Conditions, on the whole, were not favourable. The prolonged drought, which prevailed from October to December, not only restricted the area sown but also adversely affected the growth of the crop almost everywhere. The total estimated yield (229,000 tons) was below that of the preceding year by 56 per cent. To this figure should be added some 4,000 tons for other British provinces,\* for which no reports are made.

Rape and mustard are also *rabi* (spring) oilseeds, being sown from August 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

\* Assam, Delhi, Ajmer, Madras, and Burma.

Provinces, the North-West Frontier Province, Bombay, and Sind. These tracts contain 98.6 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 other Indian State sends in reports. The total area under rape and mustard in all the reporting tracts in 1918-19 was 4,847,000 acres, as against 7,126,000 acres in the preceding year. The season, on the whole, was not favourable. As in the case of linseed the prolonged drought, in October to December, not only restricted the area sown but also adversely affected the growth of the crops almost everywhere. The total estimated yield (759,000 tons) was 34 per cent below the final figure of the preceding year. To this figure should be added some 13,000 tons in respect of other British provinces,\* for which no reports are made.

## Sesamum.

Sesamum is mainly a *kharif* (autumn) crop, being generally sown from May to July and harvested from October to December; but 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 is 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, the Punjab, and Ajmer-Merwara. These tracts contain about 76 per cent of the total area under sesamum in British India. Reports are also received from the States of Hyderabad and Baroda and those in the Bombay Presidency. No report is received from any other Indian State or from Burma. The total reported area under sesamum in 1918-19 was 3,501,000 acres, against 4,279,000 acres in the preceding year. The season, on the whole, was very unfavourable owing to drought. The total estimated yield was 258,000 tons, as against 381,000 tons in 1917-18, a decrease of 32 per cent. An addition of approximately 90,000 tons should be made to this figure in respect of other British provinces† (containing an aggregate area of about 1,232,000 acres under sesamum), for which no reports are made.

## Groundnut.

The groundnut crop is sown from May to August and is harvested from November to January. The estimates for this crop relate to Madras, Bombay (including Indian 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 1918-19 was reported as 1,312,000 acres, which is 32 per cent less than the figure of the preceding year, the estimated yield (490,000 tons) being 54 per cent less than that of last year. The climatic conditions were not favourable for the crop. The failure of rains at sowing time considerably restricted the area, and the crop since then suffered from drought in Madras and Bombay.

## Indigo.

The indigo crop is sown from February to July and is harvested from August to November. The provinces, to which the estimates for indigo relate, are Bihar and Orissa, Bengal, the United Provinces, the Punjab, Madras, Bombay, and Sind. These tracts contain practically the whole area under indigo in British India. No report is received from any Indian State, except the State of Khairpur in Sind. The total reported area (300,700 acres) in 1918-19 was 58 per cent less than that of the preceding year. The season was not favourable for the crop, owing mainly to deficient rainfall. The total estimated yield of dye was 44,100 cwts, which was less than the figure of the preceding year by 65 per cent.

D. N. GHOSH,

*Offg. Director of Statistics.*

DEPARTMENT OF STATISTICS, INDIA,  
Calcutta, January 19, 1920.

\* Central Provinces and Berar, Madras, Burma, Delhi, and Ajmer.  
† Burma, Assam, North-West Frontier Province, and Coorg.



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## TABLES

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*Note.*—The rates of yield per acre of the crops tabulated in tables Nos. 4 to 14 are given in table No. 2.

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

*Area (acres)*

Crops	Average 1895-98 to 1899-1900	Average 1900-01 to 1904-05	Average 1905-06 to 1909-10	Average 1910-11 to 1914-15	1914-15	1915-16	1916-17	1917-18	1918-19
Rice . . . . .	50,855,000	50,067,000	56,051,000	69,912,000	76,625,000	78,172,000	80,097,000	80,141,000	75,864,000
Wheat . . . . .	22,649,000	25,518,000	26,565,000	30,540,000	32,475,000	30,320,000	32,940,000	35,487,000	23,704,000
Sugarcane . . . . .	(a)	2,258,000	2,302,000	2,385,000	2,311,000	2,391,000	2,416,000	2,809,000	2,820,000
Tea . . . . .	467,000	525,000	540,000	593,000	624,500	634,900	649,000	667,100	678,500
Cotton . . . . .	13,866,000	16,652,000	21,321,000	23,254,000	24,567,000	17,745,000	21,745,000	25,298,000	20,497,000
Jute . . . . .	2,035,000	2,335,000	3,264,000	3,057,000	3,358,700	2,375,900	2,702,700	2,736,000	2,500,400
Linseed . . . . .	2,869,000	3,547,000	3,061,000	3,852,000	3,325,000	3,333,000	3,564,000	3,797,000	1,973,000
Rape and Mustard . . . . .	4,541,000	5,598,000	6,056,000	6,407,000	6,507,000	6,437,000	6,495,000	7,126,000	4,847,000
Sesamum . . . . .	4,019,000	4,903,000	5,016,000	5,177,000	5,565,000	5,108,000	5,023,000	4,279,000	3,501,000
Groundnut . . . . .	(a)	431,000	827,000	1,610,000	2,413,000	1,664,000	2,334,000	1,936,000	1,312,000
Indigo . . . . .	1,280,000	722,000	354,000	216,000	148,400	353,100	770,000	710,200	300,700

*Yield*

Crops	Average 1895-98 to 1899-1900	Average 1900-01 to 1904-05	Average 1905-06 to 1909-10	Average 1910-11 to 1914-15	1914-15	1915-16	1916-17	1917-18	1918-19
Rice . . . tons	21,466,000	21,550,000	22,291,000	23,301,000	27,242,000	32,831,000	34,796,000	36,236,000	23,672,000
Wheat . . . "	6,029,000	7,676,000	8,092,000	9,657,000	10,087,000	8,652,000	10,234,000	9,922,000	7,502,000
Sugarcane . . . "	(a)	2,049,000	2,030,000	2,416,000	2,443,000	2,634,000	2,731,000	3,311,000	2,337,000
Tea . . . lbs	158,375,000	201,389,000	212,386,000	289,995,000	313,301,400	372,202,700	370,313,500	371,296,300	380,459,000
Cotton . . . bales	2,303,000	3,203,000	3,996,000	4,412,000	5,206,000	3,736,000	4,489,000	4,065,000	3,671,000
Jute . . . "	5,771,000	7,036,000	8,136,000	9,069,000	10,443,900	7,340,900	8,305,600	8,864,600	6,955,000
Linseed . . . tons	352,000	416,000	333,000	508,000	397,000	476,000	526,000	515,000	229,000
Rape and Mustard . . . "	915,000	1,011,000	992,000	1,225,000	1,219,200	1,102,100	1,191,200	1,153,200	759,000
Sesamum . . . "	348,000	465,000	458,000	472,000	551,000	482,000	513,000	381,000	258,000
Groundnut . . . "	(a)	(a)	358,000	695,000	947,000	1,058,000	1,196,000	1,057,000	490,000
Indigo . . . cwts	156,000	100,000	40,000	37,000	25,200	55,100	95,700	126,800	44,000

Note.—Figures for 1918-19 are subject to revision  
(a) Not available

No. 2.—YIELD PER ACRE OF CROPS (tabulated in tables Nos. 1 to 14) IN EACH PROVINCE IN EACH OF THE LAST SIX YEARS, 1913-14 to 1918-19

Province	RICE (CLEANED)						WHEAT						SUGARCANE (Raw stalks in cwt)						TEA					
	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces	467	734	604	838	799	481	777	833	917	1,014	893	948	1,583	2,167	2,270	2,203	2,413	1,829	324	297	308	284	294	239
Bihar	878	876	908	1,170	1,154	894	...	...	...	...	...	...	4,019	4,208	4,386	5,240	5,062	4,714	270	320	412	324	293	273
Bihar and Orissa	1,221	838	1,209	1,314	1,275	710	973	638	979	1,024	928	840	2,943	2,333	2,221	2,448	2,461	2,216	191	178	143	112	141	142
Bombay	1,080	1,180	1,064	1,014	1,047	468	539	602	666	584	540	427	5,688	5,073	6,119	6,380	6,203	4,400	...	...	...	...	...	...
Madhya Pradesh	649	614	652	683	608	600	901	987	808	908	811	738	...	...	...	...	...	...	...	...	...	...	...	...
Madhya Pradesh (continued)	637	702	686	651	924	725	703	636	800	605	616	413	2,512	2,903	2,492	2,748	2,604	2,281	514	473	555	607	644	632
Punjab	...	...	...	...	...	...	745	736	543	613	681	750	1,684	1,805	1,775	1,853	1,940	1,431	229	196	139	84	140	185
Central Provinces and Berar	871	729	740	652	708	282	455	514	603	655	440	545	2,353	2,504	2,773	2,727	2,778	2,160	...	...	...	...	...	...
Madhya Pradesh (continued)	899	824	904	970	904	858	...	...	...	...	...	...	...	...	...	...	...	...	51	52	63	51	39	39
Assam	782	786	744	746	983	604	...	...	...	...	...	...	1,828	1,781	1,776	1,694	1,076	1,820	243	554	642	627	615	624
North-West Frontier Province	...	...	...	...	...	...	585	627	635	591	505	583	2,430	2,520	2,385	2,383	2,312	2,613	...	...	...	...	...	...
Ajmer-Merwara	...	...	...	...	...	...	606	689	373	640	1,018	717	...	...	...	...	...	...	...	...	...	...	...	...
Delhi	...	...	...	...	...	...	...	...	680	684	640	1,169	...	...	...	...	...	...	...	...	...	...	...	...
Coorg	956	1,406	1,449	1,440	1,093	1,092	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central India	...	...	...	...	...	...	412	404	400	372	333	377	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana	...	...	...	...	...	...	439	549	400	516	436	501	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad (B)	...	...	...	...	...	...	137	127	161	210	224	147	...	...	...	...	...	...	...	...	...	...	...	...
Mysore	...	...	...	...	...	...	461	363	329	373	318	330	...	...	...	...	...	...	...	...	...	...	...	...
Travancore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	405	413	404	471	419	500
AVERAGE	655	796	911	973	1,013	609	657	696	639	616	626	707	2,016	2,309	2,408	2,631	2,640	1,850	594	562	590	571	567	561

Province	LINSEED						RAPE AND MUSTARD						SABAMUM						GROUNDNUT (NUTS IN SHELL)					
	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces	361	390	448	457	370	414	340	308	420	419	322	343	166	189	207	189	177	91	...	...	...	...	...	...
Bihar	...	...	...	...	...	...	...	...	...	...	...	...	200	200	191	302	304	277	874	698	1,248	1,011	1,074	779
Bihar and Orissa	514	366	459	403	517	369	464	323	423	496	518	371	320	263	313	367	311	173	...	...	...	...	...	...
Bombay	181	302	319	305	297	140	571	567	373	570	601	354	236	346	268	302	219	102	2,109	2,248	2,602	2,110	2,290	1,124
Madhya Pradesh	...	...	...	...	...	...	218	261	168	336	267	216	203	130	132	147	204	140	...	...	...	...	...	...
Madhya Pradesh (continued)	398	320	347	357	342	233	454	395	395	435	410	336	270	259	244	241	279	257	...	...	...	...	...	...
Punjab	190	279	310	310	230	317	369	374	290	339	349	365	291	243	304	273	202	294	...	...	...	...	...	...
Central Provinces and Berar	166	146	177	182	164	65	...	...	...	...	...	...	180	209	225	165	154	150	...	...	...	...	...	...
Madhya Pradesh (continued)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	799	732	962	914	816	900
Assam	...	...	...	...	...	...	459	427	414	347	362	353	310	...	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province	...	...	...	...	...	...	252	314	367	378	276	305	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer-Merwara (a)	...	...	...	...	...	...	...	...	...	...	...	...	19	64	17	172	18	22	...	...	...	...	...	...
Delhi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coorg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central India	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad (B)	90	86	93	112	115	216	40	64	37	78	146	134	82	101	90	123	78	184	...	...	...	...	...	...
Mysore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Travancore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
AVERAGE	285	307	320	321	294	290	309	419	364	411	363	351	179	222	211	229	159	103	792	879	1,104	1,116	1,110	817

(a) The generally low output of cocanum in Ajmer-Merwara is due to the fact that the crop is grown on unirrigated land, which is not so well suited to the crop as the irrigated land. A suitable crop is expected to give a yield sufficiently remunerative.

(b) The question regarding the generally low output in Hyderabad is under investigation.

Note.—Figures for 1915-19 are subject to revision.

No. 2.—YIELD PER ACRE OF CROPS (tabulated in tables Nos. 4 to 14) IN EACH PROVINCE IN EACH OF THE LAST SIX YEARS, 1913-14 to 1918-19—*contd.*

Province	COTTON (GINNED)						JUTE						INDIGO (DYE)					
	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
United Provinces . . . . .	122	126	128	104	67	81	...	...	...	...	...	...	14	14	10	10	10	8
Madras . . . . .	45	46	47	64	77	81	...	...	...	...	...	...	23	21	20	14	28	22
Bihar and Orissa . . . . .	63	91	96	94	90	86	757	840	1,296	986	1,200	808	12	16	13	16	13	11
Bombay . . . . .	89	91	84	94	70	45	...	...	...	...	...	...	81	27	16	20	17	16
Sind . . . . .	168	138	119	130	79	144	...	...	...	...	...	...						
Bengal . . . . .	110	151	136	110	107	175	1,292	1,295	1,245	1,258	1,318	1,137	9	17	14	10	8	9
Punjab . . . . .	119	105	66	115	68	128	...	...	...	...	...	...	17	18	14	19	20	19
Central Provinces and Berar . . . . .	81	93	109	63	52	75	...	...	...	...	...	...	...	...	...	...	...	...
Burma . . . . .	74	63	58	72	78	90	...	...	...	...	...	...	...	...	...	...	...	...
Assam . . . . .	145	141	125	137	158	145	941	1,103	826	1,076	980	894	...	...	...	...	...	...
North-West Frontier Province . . . . .	95	93	63	86	53	103	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer-Merwara . . . . .	105	111	35	208	80	187	...	...	...	...	...	...	...	...	...	...	...	...
Delhi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coorg . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central India . . . . .	77	77	66	88	33	70	...	...	...	...	...	...	...	...	...	...	...	...
Rajputana . . . . .	113	158	102	153	50	88	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad (a) . . . . .	44	44	61	62	53	58	...	...	...	...	...	...	...	...	...	...	...	...
Mysore . . . . .	47	51	61	51	54	100	...	...	...	...	...	...	...	...	...	...	...	...
Travancore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>AVERAGE</b> . . . . .	<b>81</b>	<b>85</b>	<b>64</b>	<b>83</b>	<b>64</b>	<b>73</b>	<b>1,222</b>	<b>1,244</b>	<b>1,236</b>	<b>1,229</b>	<b>1,266</b>	<b>1,113</b>	<b>17</b>	<b>19</b>	<b>17</b>	<b>14</b>	<b>20</b>	<b>16</b>

NOTE.—Figures for 1918-19 are subject to revision  
 (a) The question regarding the generally low outturn in Hyderabad is under investigation

No. 3.—STANDARD OR NORMAL YIELDS PER ACRE OF THOSE CROPS FOR WHICH FORECASTS ARE PREPARED

Province	Rice (cleaned)	Wheat	Sugar-cane (gur)	Cotton (ginned)	Jute	Linseed	Rape and mustard	Seesamum	Ground-nut (nuts in shell)	Indigo (dye)
	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
Bengal . . . . .	(a) 1,036 (b) 871 (c) 1,179	698	2,963	155	1,800	443	450	504	...	12
Bihar and Orissa . . . . .	(a) 1,334 (b) 823 (c) 823	(d) 984 (e) 451 (f) 661	2,464	155	1,200	494	494	350	...	20
Assam . . . . .	(a) 952 (b) 706 (c) 1,008	...	2,016	153	1,320	448	594	...	...	...
United Provinces . . . . .	900	1,050	2,600	170	...	500	600	280	...	18
Madras . . . . .	1,120	...	5,040	66	...	...	...	299	1,120	28
Bombay . . . . .	1,230	575	6,950	103	...	360	635	400	{(i) 1,500 {(j) 1,300	...
Sind . . . . .	1,316	{(d) 1,366 {(e) 874	8,143	170	...	...	{(i) 393 {(j) 379	242	...	...
Punjab . . . . .	...	791	1,933	135	...	...	429	...	...	...
Central Provinces and Berar . . . . .	624	600	2,569	85	...	226	...	224	...	...
North-West Frontier Province . . . . .	(g) 1,034	595	2,685	86	...	...	310	...	...	...
Burma . . . . .	(h) 1,083	...	...	84	...	...	...	225	870	...
Ajmer-Merwara . . . . .	...	...	...	170	...	...	...	...	...	...
Delhi . . . . .	...	758	...	...	...	...	...	...	...	...
Coorg . . . . .	1,425	...	...	...	...	...	...	...	...	...
Mysore . . . . .	920	450	2,658	175	...	...	...	...	...	...

\* Not available.  
 (a) Winter Rice  
 (b) Autumn Rice  
 (c) Summer Rice  
 (d) Bihar  
 (e) Chota Nagpur  
 (f) Orissa  
 (g) For Upper Burma  
 (h) For Lower Burma  
 (i) Irrigated  
 (j) Unirrigated

## No. 4.—AREA AND YIELD OF RICE IN EACH PROVINCE

## Area (acres)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Bengal (a)	42,977,000	42,793,000	20,437,000	20,639,000	19,846,000	20,450,000	20,916,000	21,120,000	20,956,000	21,303,000
Bihar and Orissa	(b)	(b)	17,363,000	16,196,000	16,223,000	16,130,400	16,255,000	16,258,000	15,803,000	15,160,000
Madras	10,359,000	10,754,000	10,288,000	10,944,000	10,678,000	10,876,000	11,230,000	11,333,000	11,675,000	9,711,000
Burma (d)	7,467,000	7,449,000	7,373,000	9,966,000	10,056,000	9,093,000	10,406,000	10,570,000	10,708,000	10,672,000
United Provinces	(c)	(c)	5,220,000	6,811,000	6,062,000	6,200,000	6,376,000	7,182,000	7,485,000	6,660,000
Central Provinces and Berar	(c)	(c)	(c)	(c)	4,986,000	5,083,000	5,007,000	5,086,000	5,226,000	5,231,000
Assam (A)	(b)	(b)	4,045,000	4,272,000	3,752,000	4,045,000	4,280,000	4,385,000	4,428,000	4,230,000
Bombay (including Indian States) (e)	(c)	(c)	(c)	1,624,000	2,628,000	2,650,000	2,336,000	2,590,000	2,622,000	1,923,000
Sind (including Indian States) (f)	(c)	(c)	(c)	1,089,000	1,112,000	1,117,000	1,191,000	1,280,000	1,167,000	876,000
Coorg	81,000	82,000	82,000	83,000	82,000	81,000	82,000	84,000	84,000	80,000
<b>TOTAL</b>	<b>60,884,000</b>	<b>61,078,000</b>	<b>64,808,000</b>	<b>71,623,000</b>	<b>75,425,000</b>	<b>76,025,000</b>	<b>79,172,000</b>	<b>80,097,000</b>	<b>80,141,000</b>	<b>75,864,000</b>

## Yield (tons)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Bengal (a)	(g) 21,780,000	(g) 21,848,000	8,635,000	8,856,000	7,412,000	6,411,000	8,276,000	8,029,000	8,649,000	6,001,000
Bihar and Orissa	(b)	(b)	8,906,000	8,969,000	8,120,000	8,947,000	8,771,000	8,408,000	8,901,000	4,807,000
Madras	3,472,000	4,037,000	3,889,000	4,435,000	4,186,000	4,247,000	4,552,000	6,022,000	6,002,000	3,876,000
Burma (d)	3,209,000	2,875,000	3,325,000	4,501,000	4,037,000	3,675,000	4,200,000	4,575,000	4,750,000	4,050,000
United Provinces	(c)	(c)	1,779,000	1,994,000	1,264,000	2,032,000	2,280,000	2,486,000	2,671,000	1,411,000
Central Provinces and Berar	(c)	(c)	(c)	(c)	625,000	1,655,000	1,705,000	1,481,000	1,647,000	659,000
Assam (A)	(b)	(b)	1,596,000	1,948,000	1,310,000	1,420,000	1,421,000	1,461,000	1,943,000	1,256,000
Bombay (including Indian States) (e)	(c)	(c)	(c)	820,000	1,279,000	1,390,000	1,110,000	1,177,000	1,226,000	416,000
Sind (including Indian States) (f)	(c)	(c)	(c)	405,000	323,000	406,000	454,000	504,000	317,000	239,000
Coorg	52,000	58,000	40,000	53,000	35,000	53,000	53,000	54,000	41,000	29,000
<b>TOTAL</b>	<b>28,513,000</b>	<b>28,818,000</b>	<b>28,170,000</b>	<b>28,485,000</b>	<b>28,700,000</b>	<b>27,242,000</b>	<b>32,831,000</b>	<b>34,796,000</b>	<b>36,236,000</b>	<b>28,672,000</b>

(a) Includes Bihar and Orissa and Assam down to 1910-11

(b) Included under Bengal

(c) Not available

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

(e) Figures for Baroda and other Indian States have been added from 1913-14

(f) Includes Indian States from 1913-14

(g) Season very favourable

(h) The estimate relate only to the chief rice-growing districts

Note.—(1) Estimates of area and yield of the rice crop of the Mysore State are available for a few years. These are included after the issue of the All-India forecasts of the rice crop, and are therefore not included therein. The available figures are:

Area (acres)	1916-17	1917-18	1918-19
Yield (tons)	8,400	7,000	13,000
	22,000	26,000	14,000

(2) Figures for 1918-19 are subject to revision

## No. 5.—AREA AND YIELD OF WHEAT IN EACH PROVINCE

## Area (acres)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Punjab (including Indian States)	9,142,000	9,981,000	11,018,000	9,316,000	9,588,000	11,336,000	10,246,000	10,737,000	11,271,000	8,536,000
United Provinces	6,491,000	7,342,000	7,578,000	7,382,000	6,406,000	7,801,000	6,599,000	6,764,000	7,248,000	5,411,000
Central Provinces and Berar (a)	3,176,000	3,585,000	3,739,000	3,743,000	3,384,000	3,393,000	3,616,000	3,996,000	4,007,000	2,881,000
Central India States	2,313,000	2,460,000	2,563,000	3,216,000	2,695,000	3,096,000	2,949,000	3,517,000	4,382,000	2,296,000
Bombay (including Indian States) (b)	1,820,000	1,855,000	1,284,000	1,735,000	2,102,000	2,253,000	2,252,000	2,250,000	2,681,000	1,048,000
Bihar and Orissa	(c)	1,312,000	1,285,000	1,270,000	1,842,000	1,218,000	1,330,000	1,308,000	1,195,000	965,000
North-West Frontier Province (d)	1,008,000	1,033,000	1,203,000	879,000	992,000	1,183,000	869,000	1,050,000	1,143,000	872,000
Hyderabad State	1,097,000	1,104,000	970,000	851,000	702,000	898,000	1,045,000	1,344,000	1,262,000	623,000
Rajputana States	1,085,000	1,187,000	963,000	1,014,000	622,000	902,000	649,000	1,147,000	1,407,000	603,000
Sind (including Indian States)	471,000	500,000	331,000	487,000	490,000	706,000	588,000	629,000	698,000	349,000
Bengal	(e)	143,000	143,000	146,000	144,000	134,000	134,000	129,000	124,000	114,000
Delhi	(f)	(f)	(g)	(g)	(g)	32,000	28,000	36,000	42,000	23,000
Ajmer-Merwara	(g)	(g)	(g)	(g)	5,000	19,000	12,000	28,000	22,000	6,000
Mysore State	3,000	3,000	4,000	4,000	3,000	4,000	4,000	5,000	5,000	4,000
<b>TOTAL</b>	<b>28,106,000</b>	<b>30,565,000</b>	<b>31,141,000</b>	<b>30,043,000</b>	<b>29,475,000</b>	<b>32,475,000</b>	<b>30,320,000</b>	<b>32,940,000</b>	<b>35,487,000</b>	<b>23,764,000</b>

## Yield (tons)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Punjab (including Indian States)	3,434,000	3,709,000	3,809,000	2,989,000	3,189,000	3,725,000	2,481,000	2,937,000	3,425,000	2,893,000
United Provinces	2,975,000	2,919,000	3,032,000	2,938,000	2,221,000	3,042,000	2,700,000	3,061,000	2,889,000	2,304,000
Central Provinces and Berar (a)	992,000	973,000	904,000	1,062,000	688,000	778,000	973,000	1,183,000	787,000	701,000
Central India States	514,000	582,000	686,000	1,049,000	496,000	642,000	645,000	893,000	651,000	489,000
Bombay (including Indian States) (b)	451,000	506,000	265,000	543,000	506,000	605,000	569,000	587,000	653,000	200,000
Bihar and Orissa	(c)	570,000	557,000	520,000	583,000	347,000	581,000	593,000	495,000	360,000
North-West Frontier Province (d)	235,000	266,000	280,000	195,000	259,000	331,900	246,000	277,000	304,000	227,000
Hyderabad State	68,000	97,000	43,000	48,000	43,000	51,000	75,000	126,000	126,000	41,000
Rajputana States	266,000	265,000	204,000	241,000	122,000	217,000	116,000	264,000	274,000	135,000
Sind (including Indian States)	132,000	136,000	97,000	204,000	197,000	311,000	212,000	255,000	222,000	115,000
Bengal	(e) 566,000	33,000	47,000	51,000	51,000	32,000	40,000	40,000	83,000	22,000
Delhi	(f)	(f)	(g)	(g)	(g)	(g)	11,000	11,000	12,000	12,000
Ajmer-Merwara	(g)	(g)	(g)	(g)	2,000	5,000	2,000	11,000	10,000	2,000
Mysore State	400	500	500	1,000	1,000	1,000	1,000	1,600	1,000	1,000
<b>TOTAL</b>	<b>9,633,400</b>	<b>10,061,500</b>	<b>9,941,500</b>	<b>9,853,000</b>	<b>8,353,000</b>	<b>10,087,000</b>	<b>8,652,000</b>	<b>10,234,000</b>	<b>9,922,000</b>	<b>7,502,000</b>

(a) Includes the States of Khairagarh and Nandgaon

(b) Includes also the State of Baroda. Estimates for non-reporting tracts have been added from 1912-13

(c) Included under Bengal

(d) Includes the Techi and the Kurram Agencies

(e) Includes Bihar and Orissa

(f) Included under Punjab

(g) Not available

## No. 6.—AREA AND YIELD OF SUGARCANE IN EACH PROVINCE

## Area (acres)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces	1,087,600	1,047,100	1,840,600	1,425,400	1,379,900	1,192,000	1,261,000	1,302,000	1,480,000	1,547,000
Punjab (a)	403,800	387,900	284,800	367,000	410,900	308,000	347,000	414,000	500,000	457,000
Bihar and Orissa	(b)	(b)	263,000	266,100	262,800	268,000	262,000	278,000	263,000	274,000
Bengal (c)	507,800	515,000	223,300	221,800	218,300	233,000	231,000	204,000	207,000	219,000
Bombay (including Indian States)(e)	89,200	83,400	84,700	79,400	81,400	90,000	100,000	115,000	180,000	112,000
Madras	67,600	94,900	107,700	98,800	83,000	74,000	95,000	114,000	127,000	116,000
Assam	(b)	(b)	34,700	86,200	46,500	39,000	37,000	36,000	84,000	32,000
North-West Frontier Province (f)	80,600	82,700	81,500	80,000	81,700	82,000	81,000	80,000	81,000	86,000
Central Provinces and Berar	(d)	(d)	(d)	(d)	20,400	19,000	21,000	23,000	25,000	22,000
<b>TOTAL</b>	<b>2,156,600</b>	<b>2,161,600</b>	<b>2,380,300</b>	<b>2,526,700</b>	<b>2,545,500</b>	<b>2,311,000</b>	<b>2,391,000</b>	<b>2,416,000</b>	<b>2,800,000</b>	<b>2,820,000</b>

## Yield (tons) of raw sugar (gúr)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces	955,200	1,042,900	1,269,300	1,301,500	974,500	1,153,000	1,278,000	1,182,000	1,604,000	997,000
Punjab (a)	328,700	262,600	161,200	274,800	308,900	295,000	275,000	348,000	487,000	296,000
Bihar and Orissa	(b)	(b)	308,800	292,700	289,100	277,000	280,000	305,000	289,000	271,000
Bengal (c)	495,800	563,500	256,300	268,200	244,800	250,000	250,000	212,000	241,000	223,000
Bombay (including Indian States)(e)	232,300	226,000	214,600	180,700	228,000	240,000	291,000	328,000	360,000	233,000
Madras	169,800	179,200	198,000	204,500	150,000	139,000	186,000	267,000	287,000	212,000
Assam	(b)	(b)	28,000	33,100	39,400	31,000	20,000	29,000	30,000	26,000
North-West Frontier Province (f)	33,100	35,700	31,900	33,600	35,100	36,000	33,000	32,000	32,000	42,000
Central Provinces and Berar	(d)	(d)	(d)	(d)	21,700	22,000	26,000	28,000	31,000	27,000
<b>TOTAL</b>	<b>2,214,900</b>	<b>2,309,900</b>	<b>2,451,100</b>	<b>2,583,600</b>	<b>2,291,500</b>	<b>2,443,000</b>	<b>2,634,000</b>	<b>2,731,000</b>	<b>3,311,000</b>	<b>2,837,000</b>

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

(b) Included under Bengal

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

(d) Not available

(e) Includes also the State of Baroda. Up to 1911-12 the figures related to the chief sugarcane-growing districts only; from 1912-18 those for other districts and for Sind have been added

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

Note.—(1) Estimates of area and yield of the sugarcane crop of the Mysore State are available for a few years. These are received after the issue of the All-India forecasts of the sugarcane crop and are therefore not included therein. The available figures are:—

Area (acres)	1916-17	1917-18	1918-19
Area (acres)	36,000	48,000	40,000
Yield (tons)	32,000	46,000	35,000

(2) Figures for 1918-19 are subject to revision

## No. 7.—AREA AND YIELD OF TEA IN EACH PROVINCE

## Area (acres)

Province	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
Assam	348,000	350,200	354,800	361,700	367,800	376,400	382,800	389,200	399,700	405,000
Bengal	143,200	146,900	146,800	150,500	156,100	159,300	161,300	166,300	167,700	169,100
Travancore State	26,300	30,400	32,000	34,100	37,400	38,000	40,900	42,000	47,900	44,500
Madras	15,700	18,100	20,900	24,400	26,300	26,900	27,100	30,500	35,000	38,500
United Provinces	8,100	7,900	7,600	7,800	8,000	8,000	7,900	8,000	7,800	8,000
Punjab	9,400	9,400	9,400	9,300	9,300	9,000	9,900	7,500	7,500	7,500
Bihar and Orissa (a)	...	...	2,300	2,300	2,200	2,200	2,200	2,200	2,200	2,200
Barma	1,700	1,700	1,700	1,700	3,000	3,000	3,800	3,800	3,800	3,800
<b>TOTAL</b>	<b>555,300</b>	<b>563,600</b>	<b>574,200</b>	<b>591,800</b>	<b>610,100</b>	<b>624,500</b>	<b>634,900</b>	<b>640,000</b>	<b>637,100</b>	<b>678,600</b>

## Yield (lbs)

Province	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
Assam	173,851,300	176,093,100	179,083,000	199,796,300	199,722,000	209,552,300	215,781,900	244,373,100	245,823,900	277,270,100
Bengal	60,920,700	64,674,300	64,653,600	70,524,200	80,106,700	78,373,200	89,526,100	92,546,700	91,532,300	89,293,800
Travancore State	13,353,700	14,323,100	14,714,500	16,052,000	15,165,600	16,310,200	20,245,000	17,366,900	19,396,200	22,619,200
Madras	5,325,700	5,845,200	5,795,400	7,535,000	7,482,100	8,307,600	11,311,200	11,304,600	10,465,200	10,516,600
United Provinces	2,206,600	2,045,300	2,534,700	2,656,800	2,579,100	2,379,200	2,905,000	2,354,700	2,204,100	2,274,000
Punjab	1,418,700	1,418,900	1,409,200	1,931,000	2,129,000	1,941,200	1,309,600	1,520,100	1,050,200	1,299,700
Bihar and Orissa (a)	...	...	285,500	269,100	211,000	222,400	222,200	240,100	200,200	223,000
Barma	64,800	67,600	76,500	63,300	152,000	152,200	145,500	144,400	100,000	110,300
<b>TOTAL</b>	<b>256,136,400</b>	<b>266,366,400</b>	<b>278,992,700</b>	<b>297,578,100</b>	<b>307,240,700</b>	<b>313,301,400</b>	<b>372,373,700</b>	<b>370,312,200</b>	<b>371,205,800</b>	<b>396,149,000</b>

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

Note.—Figures for 1918 are subject to revision

## No. 8.—AREA AND YIELD OF COTTON IN EACH PROVINCE

## Area (acres)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Bombay (including Indian States) (a)	6,469,000	7,334,000	5,788,000	6,826,000	7,323,000	7,796,000	5,005,000	7,037,000	8,611,000	6,851,000
Central Provinces and Berar	4,167,000	4,487,000	4,048,000	4,493,000	4,754,000	4,708,000	4,061,000	4,402,000	4,582,000	4,211,000
Hyderabad State	3,401,000	3,562,000	3,234,000	2,888,000	3,653,000	3,605,000	2,064,000	3,200,000	3,451,000	2,406,000
Madras (b)	2,029,000	2,317,000	2,878,000	2,414,000	2,725,000	2,087,000	2,060,000	2,168,000	2,700,000	3,118,000
Punjab (including Indian States)	1,436,000	1,385,000	1,582,000	1,575,000	2,053,000	1,857,000	902,000	1,163,000	1,800,000	1,541,000
United Provinces (c)	1,241,000	1,347,000	921,000	1,158,000	1,586,000	1,551,000	834,000	1,185,000	1,315,000	968,000
Central India States	1,068,000	1,349,000	1,400,000	1,314,000	1,426,000	1,519,000	999,000	1,419,000	1,454,000	1,233,000
Rajputana States	464,000	465,000	263,000	393,000	470,000	421,000	244,000	334,000	435,000	250,000
Sind (including Khairpur State)	214,000	279,000	343,000	298,000	341,000	336,000	161,000	240,000	267,000	299,000
Burma	198,000	167,000	186,000	233,000	290,000	270,000	187,000	223,000	247,000	347,000
Mysore	81,000	101,000	101,000	154,000	93,000	109,000	92,000	126,000	155,000	124,000
Bihar and Orissa	(d)	(d)	88,000	92,000	73,000	70,000	67,000	68,000	69,000	79,000
North-West Frontier Province (e)	82,000	33,000	58,000	56,000	59,000	60,000	26,000	28,000	38,000	39,000
Bengal (including Hill Tipperah State) (f)	106,000	169,000	63,000	51,000	87,000	90,000	88,000	73,000	71,000	73,000
Ajmer-Merwara	39,000	45,000	27,000	50,000	57,000	54,000	23,000	47,000	70,000	30,000
Assam (h)	(d)	(d)	36,000	35,000	33,000	34,000	32,000	32,000	33,000	33,000
<b>TOTAL</b>	<b>21,005,000</b>	<b>23,040,000</b>	<b>21,615,000</b>	<b>22,028,000</b>	<b>25,023,000</b>	<b>24,567,000</b>	<b>17,745,000</b>	<b>21,745,000</b>	<b>25,298,000</b>	<b>20,497,000</b>

## Yield (bales of 400 lbs each)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Bombay (including Indian States) (a)	1,661,000	1,450,000	695,000	1,520,000	1,614,000	1,773,000	1,051,000	1,646,000	1,642,000	658,000
Central Provinces and Berar	1,070,000	629,000	913,000	910,000	961,000	1,097,000	1,106,000	691,000	591,000	789,000
Hyderabad State	461,000	293,000	300,000	300,000	400,000	400,000	450,000	500,000	450,000	350,000
Madras (b)	240,000	270,000	335,000	471,000	308,000	242,000	243,000	347,000	518,000	633,000
Punjab (including Indian States)	396,000	306,000	241,000	373,000	612,000	486,000	195,000	335,000	305,000	493,000
United Provinces (c)	384,000	348,000	251,000	428,000	484,000	486,000	262,000	309,000	193,000	175,000
Central India States	221,000	237,000	228,000	206,000	273,000	293,000	216,000	311,000	116,000	216,000
Rajputana States	148,000	143,000	73,000	125,000	132,000	166,000	62,000	128,000	54,000	55,000
Sind (including Khairpur State)	104,000	97,000	124,000	123,000	135,000	116,000	48,000	78,000	53,000	108,000
Burma	32,000	28,000	32,000	46,000	54,000	42,000	27,000	40,000	48,000	78,000
Mysore	6,000	10,000	17,000	19,000	11,000	14,000	14,000	16,000	21,000	31,000
Bihar and Orissa	(d)	(d)	19,000	19,000	17,000	16,000	16,000	16,000	17,000	17,000
North-West Frontier Province (e)	7,000	8,000	12,000	13,000	14,000	14,000	4,000	6,000	5,000	10,000
Bengal (including Hill Tipperah State) (f)	35,000	49,000	25,000	21,000	21,000	34,000	30,000	20,000	19,000	32,000
Ajmer-Merwara	13,000	20,000	12,000	26,000	15,000	15,000	2,000	35,000	14,000	14,000
Assam (h)	(d)	(d)	11,000	10,000	12,000	12,000	10,000	11,000	13,000	12,000
<b>TOTAL</b>	<b>4,778,000</b>	<b>3,898,000</b>	<b>3,288,000</b>	<b>4,610,000</b>	<b>5,066,000</b>	<b>5,206,000</b>	<b>3,736,000</b>	<b>4,489,000</b>	<b>4,065,000</b>	<b>3,671,000</b>
Net Exports and Consumption (g)	4,928,000	4,303,000	3,985,000	4,483,000	5,913,000	4,889,000	5,109,000	4,985,000	4,204,000	(i)

(a) Includes also the State of Baroda

(b) Includes Indian States

(c) Includes the State of Rampur

(d) Included under Bengal

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

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

(g) The exports as well as the mill consumption are for the year ending September up to 1910-11; from 1911-12 these figures relate to the year ending August. The mill consumption is estimated from 1916-17 on the basis of returns furnished by mills to the Bombay Mill Owners' Association; prior to 1916-17 the estimates were based on returns of yarn produced by mills. 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 up to 1913-14. The consumption was estimated for 1914-15 at 1,000,000 bales, and that for 1915-16, 1916-17 and 1917-18 at 750,000 bales each year by the Association.

(h) Relates to the chief cotton-growing districts only

(i) Not yet available

Note.—Figures for 1918-19 are subject to revision



## No. 9.—AREA AND YIELD OF JUTE IN EACH PROVINCE

## Area (acres)

Province	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Bengal	(a) 2,841,600	2,737,600	2,536,000	2,456,600	2,572,000	2,486,300	2,351,800	2,376,200	2,219,200	2,450,000
Bihar and Orissa	(b) 82,200	258,100	298,300	318,400	330,100	188,100	124,000	224,300	149,300	203,000
Assam	14,000	90,700	95,700	97,000	111,000	71,000	95,100	100,300	102,100	120,000
Cooch Bihar State	14,000	20,000	39,600	39,000	44,400	27,500	31,800	30,200	29,800	39,200
TOTAL (c)	2,937,900	3,106,400	2,970,500	2,911,000	3,358,700	2,375,900	2,702,700	2,736,000	2,500,400	2,821,600

## Yield (bales of 400 lbs each)

Province	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Bengal	(a) 7,735,800	7,247,600	8,698,800	7,939,900	9,308,000	6,506,100	7,429,900	7,854,000	6,318,800	7,507,800
Bihar and Orissa	(b) 177,800	705,500	792,900	603,900	603,200	609,600	534,000	669,800	835,300	405,900
Assam	18,900	239,600	228,800	228,300	307,500	152,000	255,700	245,800	228,200	294,500
Cooch Bihar State	18,900	42,000	124,800	123,600	135,200	72,300	68,000	95,000	43,300	69,800
TOTAL (a)	7,932,000	8,234,700	9,842,800	8,893,900	10,413,900	7,340,900	8,305,600	8,864,600	6,956,600	8,128,000
Exports and consumption (d)	8,143,000	9,004,000	10,027,000	9,309,000	8,489,000	9,427,000	9,018,000	7,702,000	7,840,000	(e)

(a) Includes Bihar and Orissa

(b) Included under Bengal

(c) Excluding Nepal, for which no estimate of area or yield is available. The figures of imports from Nepal are, however, stated below:—

	Bales		Bales		Bales
1910	79,000	1913	105,000	1916	70,000
1911	57,000	1914	87,000	1917	41,000
1912	96,000	1915	92,000	1918	73,000

(d) The exports as well as mill consumption are for the year ending June. The mill consumption and the extra-factory consumption (the latter being 500,000 bales for each year) are the trade estimates

(e) Not yet available

Note.—The figures for 1919 are subject to revision

## No. 10.—AREA AND YIELD OF LINSEED IN EACH PROVINCE

## Area (acres).

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Central Provinces and Berar	926,200	1,080,400	1,858,800	1,509,000	952,100	1,224,000	1,048,000	1,176,000	1,257,000	619,000
United Provinces (a)	{ 308,400	472,800	848,500	493,500	240,800	206,000	295,000	330,000	359,000	69,000
	{ 597,000	656,000	747,000	667,000	367,000	620,000	630,000	675,000	693,000	321,000
Bihar and Orissa	(b) 510,300	510,300	567,800	528,000	652,900	624,000	663,000	704,000	730,000	295,000
Hyderabad State	548,900	631,300	603,500	512,400	412,800	334,000	284,000	321,000	341,000	216,000
Bengal	(c) 673,400	196,900	206,800	199,800	193,700	182,000	181,000	167,000	144,000	144,000
Bombay (including Indian States)	134,200	194,700	205,300	171,900	173,100	120,000	175,000	169,000	226,000	80,000
Punjab	(d)	(d)	(d)	43,300	39,000	49,000	32,000	32,000	39,000	32,000
TOTAL (a)	{ 2,591,100	3,086,400	4,291,000	3,457,900	2,664,000	2,795,000	2,683,000	2,589,000	3,102,000	1,652,000
	{ 597,000	656,000	747,000	667,000	367,000	620,000	630,000	675,000	693,000	321,000
GRAND TOTAL	3,188,100	3,742,400	5,038,000	4,124,900	3,031,000	3,325,000	3,333,000	3,564,000	3,797,000	1,973,000

## Yield (tons)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Central Provinces and Berar	90,300	124,500	139,000	141,800	70,700	60,000	83,000	99,000	93,000	15,000
United Provinces (a)	{ 62,000	102,900	159,700	95,500	34,800	48,000	59,000	67,000	69,000	13,000
	{ 120,000	142,000	140,000	128,000	59,000	110,000	130,000	134,000	117,000	69,000
Bihar and Orissa	(b) 18,400	112,500	125,200	104,700	141,700	102,000	136,000	135,000	170,000	94,000
Hyderabad State	18,400	30,400	26,500	17,300	16,500	9,000	12,000	16,000	19,000	21,000
Bengal	(c) 124,200	30,700	39,200	37,400	34,200	26,000	28,000	25,000	22,000	15,000
Bombay (including Indian States)	12,900	28,300	15,000	17,400	14,000	17,000	25,000	24,000	30,000	5,000
Punjab	(d)	(d)	(d)	(d)	3,300	5,000	3,000	2,000	4,000	2,000
TOTAL (a)	{ 307,500	429,300	504,900	414,100	327,200	277,000	346,000	378,000	328,000	170,000
	{ 120,000	142,000	140,000	128,000	59,000	110,000	136,000	134,000	117,000	69,000
GRAND TOTAL	427,500	671,300	644,500	542,100	386,200	397,000	476,000	526,000	515,000	229,000

(a) The figures in italics represent "mixed" crop, i.e., seed sown in the same fields with other crops. The estimates for 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

(d) Not available

Note.—Figures for 1918-19 are subject to revision

No. 11.—AREA AND YIELD OF RAPE AND MUSTARD IN EACH PROVINCE

Area (acres)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces (a)	176,900 <i>2,269,000</i>	146,200 <i>2,371,000</i>	176,200 <i>2,872,000</i>	145,000 <i>2,378,000</i>	150,400 <i>2,154,000</i>	190,000 <i>2,350,000</i>	181,000 <i>2,400,000</i>	153,000 <i>2,500,000</i>	149,000 <i>2,815,000</i>	92,000 <i>1,318,000</i>
Punjab (b)	1,329,900	1,089,000	1,414,100	887,800	1,002,900	1,047,000	1,129,000	1,016,000	1,259,000	672,000
Bengal (c)	2,278,300	1,370,700	1,317,500	1,325,400	1,312,600	1,303,000	1,322,000	1,225,000	1,154,000	1,125,000
Bihar and Orissa (d)		765,700	780,100	723,800	751,000	681,000	725,000	792,000	805,000	683,000
Assam	320,100	318,100	258,100	205,000	299,200	304,000	325,000	278,000	264,000	269,000
North-West Frontier Province	91,700	85,100	94,200	75,700	141,300	114,000	110,000	163,000	138,000	51,000
Bombay (including Indian States)(e)	80,000	84,600	17,800	75,700	83,500	83,000	36,000	55,000	72,000	19,000
Sind (including Khairpur State)(f)	60,700	76,200	54,000	43,800	305,000	428,000	203,000	307,000	462,000	83,000
Hyderabad State	8,100	9,300	6,500	11,100	5,600	7,000	6,000	6,000	8,000	5,000
TOTAL (a)	4,361,600 <i>2,269,000</i>	3,944,900 <i>2,371,000</i>	4,118,300 <i>2,872,000</i>	3,582,800 <i>2,378,000</i>	4,112,400 <i>2,154,000</i>	4,157,000 <i>2,350,000</i>	4,037,000 <i>2,400,000</i>	3,995,000 <i>2,500,000</i>	4,311,000 <i>2,815,000</i>	2,999,000 <i>1,318,000</i>
GRAND TOTAL	6,630,600	6,318,900	6,900,300	5,955,800	6,266,400	6,507,000	6,437,000	6,495,000	7,126,000	4,847,000

Yield (tons)

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces (a)	36,000 <i>466,000</i>	84,400 <i>561,000</i>	87,200 <i>609,000</i>	83,900 <i>551,000</i>	23,000 <i>327,000</i>	43,000 <i>530,000</i>	84,000 <i>450,000</i>	28,000 <i>468,000</i>	21,000 <i>405,000</i>	14,000 <i>253,000</i>
Punjab (b)	220,000	155,100	196,600	156,600	165,000	175,000	140,000	154,000	106,000	114,000
Bengal (c)	440,100	238,600	243,000	265,800	266,200	230,000	233,000	238,000	211,000	169,000
Bihar and Orissa (d)		168,800	171,900	143,500	165,700	98,000	137,000	175,000	186,000	113,000
Assam	60,500	50,000	47,600	58,400	61,300	58,000	60,000	48,000	45,000	40,000
North-West Frontier Province	7,900	9,500	12,100	7,200	15,900	16,000	19,000	20,000	17,000	9,000
Bombay (including Indian States)(e)	22,600	15,400	2,600	20,000	21,300	21,000	6,000	14,000	19,000	3,000
Sind (including Khairpur State)(f)	16,100	11,100	4,700	4,000	42,000	48,000	17,000	46,000	53,000	8,000
Hyderabad State	100	200	100	200	100	200	100	200	200	300
TOTAL (a)	804,200 <i>466,000</i>	689,100 <i>561,000</i>	716,700 <i>609,000</i>	690,200 <i>551,000</i>	760,500 <i>327,000</i>	689,200 <i>530,000</i>	652,100 <i>450,000</i>	723,200 <i>468,000</i>	748,200 <i>405,000</i>	476,300 <i>253,000</i>
GRAND TOTAL	1,270,900	1,250,100	1,325,700	1,241,200	1,087,500	1,219,200	1,102,100	1,191,200	1,153,200	759,300

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

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

(c) Includes Bihar and Orissa.

(d) Included under Bengal.

(e) Includes also the State of Baroda; up to 1911-12 the estimates related to chief rapeseed-growing districts; those for other districts have been added from 1912-13.

(f) Estimates for jambo (*Eruca Sativa*) grown in Sind have been added from 1913-14.

Note.—Figures for 1918-19 are subject to revision.

No. 12.—AREA AND YIELD OF SESAMUM (*Til or Jinjili*) IN EACH PROVINCE

*Area (acres)*

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces (a)	481,300 900,000	438,900 900,000	375,000 800,000	317,200 900,000	378,400 850,000	372,000 1,000,000	299,000 1,100,000	278,000 1,100,000	188,000 850,000	207,000 925,000
Bombay (including Indian States) (b)	1,037,400	994,800	548,900	793,300	851,200	1,055,000	820,000	905,000	758,000	241,000
Central Provinces and Berar	942,700	895,300	880,700	778,000	865,700	878,000	927,000	759,000	602,000	461,000
Madras	974,000	815,100	687,200	823,700	809,300	861,000	823,000	772,000	831,000	656,000
Hyderabad State	597,300	677,700	663,900	649,100	612,000	599,000	548,000	569,000	589,000	512,000
Bengal (c)	494,800	489,100	271,800	264,800	241,000	251,000	248,000	213,000	225,000	218,000
Bihar and Orissa	(e)	(e)	214,600	223,700	219,700	208,000	190,000	189,000	144,000	203,000
Punjab (d)	175,000	148,700	92,100	150,800	144,100	222,000	127,000	216,000	122,000	55,000
Sind (including Khairpur State)	67,000	88,300	58,200	72,300	91,300	80,000	17,000	36,000	41,000	15,000
Ajmer-Merwara	(f)	(f)	(f)	(f)	11,000	35,000	5,000	39,000	25,000	3,000
Assam	(f)	(e)	9,700	10,600	(g) 1,400	(i)	(i)	(i)	(i)	(i)
TOTAL (a)	4,770,100 900,000	4,547,900 900,000	4,008,100 800,000	4,089,500 900,000	4,226,000 850,000	4,565,000 1,000,000	4,008,000 1,100,000	4,023,000 1,100,000	3,429,000 650,000	3,570,000 925,000
GRAND TOTAL	5,670,100	5,447,900	4,808,100	4,089,500	5,076,000	5,565,000	5,108,000	5,023,000	4,279,000	3,501,000

*Yield (tons)*

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces (a)	48,700 90,000	45,400 90,000	29,000 70,000	31,000 100,000	18,000 42,000	31,000 65,000	30,000 90,000	28,000 80,000	15,000 67,000	8,000 38,000
Bombay (including Indian States) (b)	132,400	109,400	31,700	98,300	89,700	164,000	98,000	122,000	74,000	11,000
Central Provinces and Berar	91,900	76,400	72,300	60,900	69,400	82,000	93,000	56,000	30,000	31,000
Madras	83,900	70,900	78,200	65,500	72,100	77,000	70,000	107,000	113,000	81,000
Hyderabad State	24,500	34,400	25,400	32,500	25,100	27,000	22,000	31,000	19,000	42,000
Bengal (c)	88,600	79,400	41,500	35,100	29,000	29,000	27,000	24,000	28,000	25,000
Bihar and Orissa	(e)	(e)	33,500	25,000	31,400	26,000	30,000	31,000	20,000	16,000
Punjab (d)	18,500	14,900	9,900	16,000	15,800	24,000	15,000	30,000	11,000	5,000
Sind (including Khairpur State)	6,500	12,600	4,800	6,900	10,700	5,000	1,000	3,000	4,000	1,000
Ajmer-Merwara	(f)	(f)	(f)	(f)	100	1,000	(h)	3,000	200	(h)
Assam	(f)	(e)	1,300	1,300	(g) 200	(i)	(i)	(i)	(i)	(i)
TOTAL (a)	495,000 90,000	413,400 90,000	327,600 70,000	374,000 100,000	361,500 42,000	476,000 65,000	392,000 90,000	433,000 60,000	311,000 67,000	220,000 34,000
GRAND TOTAL	585,000	533,100	397,600	474,000	403,500	551,000	492,000	513,000	391,000	259,000

- (a) The figures in italics represent "mixed" crop, i.e., seed sown in the same fields with other crops. The estimates for the mixed crop of the United Provinces are highly conjectural; hence they have been kept separate.
- (b) Includes also the State of Baroda. Estimates for non-reporting tracts have been added from 1912-13.
- (c) Includes Bihar and Orissa down to 1910-11 and Assam for 1910-11.
- (d) Figures for years prior to 1913-14 exclude unimportant districts.
- (e) Included under Bengal.
- (f) Not available.
- (g) Early crop only.
- (h) Less than 100 tons.
- (i) Forward discontinued.

Note.—Figures for 1918-19 are subject to revision.

## No. 13.—AREA AND YIELD OF GROUNDNUT IN EACH PROVINCE

*Area (acres)*

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Madras	740,100	667,300	806,000	924,200	1,605,200	1,866,000	1,138,000	1,793,000	1,415,000	952,000
Bombay (including Indian States) (a)	162,300	185,800	269,300	242,700	254,100	278,000	266,000	276,000	272,000	118,000
Burma (b)	146,300	98,800	138,800	199,500	246,600	269,000	262,000	265,000	249,000	244,000
<b>TOTAL</b>	<b>1,048,700</b>	<b>951,900</b>	<b>1,214,100</b>	<b>1,366,400</b>	<b>2,105,900</b>	<b>2,413,000</b>	<b>1,664,000</b>	<b>2,334,000</b>	<b>1,936,000</b>	<b>1,312,000</b>

*Yield (tons) of nuts in shell*

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Madras	221,900	254,200	308,000	341,100	411,300	580,000	633,000	825,000	681,000	331,000
Bombay (including Indian States) (a)	172,700	207,100	248,300	239,500	249,500	279,000	309,000	260,000	272,000	61,000
Burma (b)	64,700	41,900	51,400	89,300	88,000	68,000	116,000	111,000	104,000	98,000
<b>TOTAL</b>	<b>459,300</b>	<b>503,200</b>	<b>605,700</b>	<b>669,900</b>	<b>748,800</b>	<b>947,000</b>	<b>1,058,000</b>	<b>1,196,000</b>	<b>1,057,000</b>	<b>490,000</b>

(a) Up to 1913-14 the figures related to chief groundnut-growing districts; those for other districts have been added from 1914-15

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

Note.—Figures for 1918-19 are subject to revision

## No. 14.—AREA AND YIELD OF INDIGO IN EACH PROVINCE

*Area (acres)*

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Bihar and Orissa (a)	107,400	117,000	109,600	90,100	63,100	38,500	60,800	80,600	86,700	64,200
Madras	96,400	82,800	90,300	61,500	55,300	71,700	222,000	459,700	324,000	149,100
Punjab (b)	43,400	43,400	36,600	37,300	22,400	20,400	21,400	60,300	90,700	19,000
United Provinces	41,900	31,200	29,400	26,900	24,400	12,300	43,200	159,300	100,200	50,700
Bombay and Sind (including Indian States)	(c)	(c)	(c)	(c)	6,200	4,200	4,100	7,900	11,600	7,600
Bengal	(d)	(d)	1,000	1,000	1,200	1,800	1,600	2,200	7,000	10,100
<b>TOTAL</b>	<b>289,100</b>	<b>276,400</b>	<b>266,900</b>	<b>216,800</b>	<b>172,600</b>	<b>148,400</b>	<b>353,100</b>	<b>770,000</b>	<b>710,200</b>	<b>300,700</b>

*Yield (cwts) of dye*

Province	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Bihar and Orissa (a)	11,400	13,900	17,800	14,700	7,000	5,500	7,100	10,900	10,200	6,300
Madras	14,400	20,100	21,200	14,800	11,500	13,600	40,500	59,100	60,400	28,800
Punjab (b)	8,300	8,500	5,600	6,000	3,500	3,400	2,700	10,000	16,500	3,300
United Provinces	5,200	3,500	3,000	3,500	3,000	1,500	4,000	14,100	17,400	3,800
Bombay and Sind (including Indian States)	(c)	(c)	(c)	(c)	1,700	1,000	600	1,400	1,800	1,100
Bengal	(d)	(d)	100	100	100	200	200	200	500	800
<b>TOTAL</b>	<b>39,300</b>	<b>46,000</b>	<b>47,700</b>	<b>39,100</b>	<b>26,800</b>	<b>25,200</b>	<b>55,100</b>	<b>95,700</b>	<b>126,800</b>	<b>44,100</b>

(a) Includes Bengal down to 1910-11

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

(c) No information

(d) Included under Bihar and Orissa

Note.—(1) In estimating the yield of indigo an allowance of 10 per cent of the area sown is made for seed in the United Provinces, Bombay, and Madras. In the Punjab the rate varies widely from district to district. In Bihar no deduction is made as the seed is imported from the United Provinces and the Punjab

(2) Figures for 1918-19 are subject to revision

No. 15.—SUPPLEMENTARY TABLE—AREA AND YIELD OF BARLEY, JAWAR, BAJRA, MAIZE, AND GRAM IN EACH PROVINCE

Area (acres)

Province	BARLEY							JAWAR						
	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces	4,591,000	4,378,000	4,576,000	5,030,000	5,000,000	5,092,000	5,831,000	2,169,000	2,061,000	2,413,000	2,540,000	2,612,000	1,912,000	1,932,000
Bihar	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,230,000	8,700,000	8,102,000	8,528,000	8,761,000	8,800,000	8,060,000
Bihar and Orissa	1,261,000	1,305,000	1,287,000	1,314,000	1,263,000	1,311,000	1,237,000	84,000	129,000	107,000	103,000	60,000	66,000	71,000
Bombay	28,000	23,000	25,000	43,000	25,000	32,000	31,000	6,850,000	6,606,000	6,504,000	7,068,000	7,200,000	8,161,000	7,271,000
Madhya Pradesh	20,000	28,000	31,000	26,000	23,000	27,000	17,000	605,000	680,000	530,000	430,000	781,000	667,000	348,000
Bengal	95,000	94,000	95,000	94,000	99,000	97,000	94,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Punjab	1,007,000	970,000	1,308,000	1,040,000	1,153,000	1,475,000	865,000	1,212,000	1,248,000	1,276,000	1,001,000	1,494,000	815,000	863,000
Central Provinces and Berar	(b)16,000	(b)8,000	(b)11,000	(b)19,000	(b)24,000	(b)22,000	(b)11,000	3,991,000	3,919,000	4,299,000	4,934,000	4,168,000	3,830,000	4,652,000
Uttar Pradesh	...	...	...	...	...	...	...	732,000	756,000	651,000	634,000	666,000	193,000	274,000
Madhya Pradesh	1,000	...	...	...	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province	314,000	291,000	423,000	314,000	348,000	267,000	267,000	95,000	103,000	130,000	60,000	107,000	93,000	61,000
Mer-Merwara	(b)59,000	(b)46,000	(b)63,000	53,000	45,000	(b)81,000	25,000	(b)61,000	(b)69,000	(b)77,000	66,000	89,000	(b)56,000	15,000
Chhatisgarh	(a)	(a)	(a)	(a)	(a)	(a)	13,000	(a)	(a)	(a)	(a)	(a)	(a)	8,000
<b>TOTAL</b>	<b>7,295,000</b>	<b>7,144,000</b>	<b>7,921,000</b>	<b>7,924,000</b>	<b>7,883,000</b>	<b>8,407,000</b>	<b>8,304,000</b>	<b>21,029,000</b>	<b>21,274,000</b>	<b>21,167,000</b>	<b>22,903,000</b>	<b>21,820,000</b>	<b>21,025,000</b>	<b>20,304,000</b>

Yield (tons)

Province	BARLEY							JAWAR						
	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces	(a)	1,679,000	2,048,000	2,350,000	2,350,000	2,286,000	1,669,000	806,000	227,000	630,000	665,000	823,000	273,000	198,000
Bihar	(a)	(a)	(a)	(a)	(a)	(a)	(a)	943,000	1,063,000	1,154,000	1,286,000	1,442,000	1,304,000	1,242,000
Bihar and Orissa	823,000	557,000	420,000	482,000	546,000	492,000	440,000	(a)	(a)	(a)	23,000	26,000	31,000	20,000
Bombay	10,000	7,000	9,000	18,000	9,000	10,000	10,000	1,418,000	1,375,000	1,663,000	2,097,000	1,707,000	1,707,000	1,684,000
Madhya Pradesh	7,000	10,000	11,000	8,000	6,000	6,000	4,000	196,000	202,000	231,000	129,000	202,000	81,000	69,000
Bengal	(a)	(a)	(a)	29,000	31,000	22,000	24,000	(a)	(a)	(a)	1,000	1,000	1,000	1,000
Punjab	280,000	288,000	377,000	229,000	266,000	424,000	233,000	163,000	119,000	116,000	106,000	120,000	59,000	61,000
Central Provinces and Berar	(a)	(a)	(a)	(a)	(a)	(a)	(a)	980,000	918,000	1,274,000	1,445,000	961,000	747,000	6,000
Uttar Pradesh	...	...	...	...	...	...	...	82,000	101,000	61,000	62,000	69,000	75,000	54,000
Madhya Pradesh	(a)	...	...	...	...	...	...	...	...	...	...	...	...	...
North-West Frontier Province	58,000	140,000	190,000	126,000	89,000	89,000	103,000	18,000	16,000	19,000	9,000	17,000	16,000	10,000
Mer-Merwara	(a)	(a)	(a)	18,000	11,000	(a)	8,000	(a)	(a)	(a)	2,000	11,000	(a)	600
Chhatisgarh	(a)	(a)	(a)	(a)	(a)	(a)	4,000	(a)	(a)	(a)	(a)	(a)	(a)	1,000
<b>TOTAL (a)</b>	<b>673,000</b>	<b>2,681,000</b>	<b>3,061,000</b>	<b>3,164,000</b>	<b>3,231,000</b>	<b>3,228,000</b>	<b>2,721,000</b>	<b>4,396,000</b>	<b>4,740,000</b>	<b>4,181,000</b>	<b>4,907,000</b>	<b>5,119,000</b>	<b>4,667,000</b>	<b>3,606,000</b>

Note.—No forecast is prepared for the crops dealt with in this table. The figures are taken from the provincial Returns and Crop Reports or specially obtained from local authorities.

No. 15.—SUPPLEMENTARY TABLE—AREA AND YIELD OF BARLEY, JAWAR, BA MAIZE, AND GRAM IN EACH PROVINCE—*contd.*

*Area (acres)*

Province	BAJRA							MAIZE					
	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18
United Provinces	2,618,000	2,165,000	2,770,000	2,808,000	2,548,000	2,200,000	2,088,000	2,205,000	2,136,000	2,376,000	2,612,000	2,426,000	2,321,000
Madras	3,006,000	3,273,000	3,462,000	3,673,000	3,411,000	3,300,000	3,030,000	134,000	124,000	154,000	124,000	118,000	102,000
Bihar and Orissa	74,000	75,000	73,000	73,000	70,000	67,000	64,000	1,600,000	1,714,000	1,492,000	1,656,000	1,681,000	1,667,000
Bombay	5,158,000	4,900,000	5,110,000	4,992,000	4,527,000	3,142,000	2,584,000	162,000	159,000	166,000	173,000	176,000	197,000
Sind	1,141,000	1,110,000	1,090,000	638,000	1,139,000	1,019,000	410,000	2,000	2,000	1,000	2,000	2,000	2,000
Bengal	7,000	6,000	6,000	6,000	6,000	6,000	4,000	97,000	92,000	95,000	96,000	89,000	89,000
Punjab	2,077,000	2,820,000	2,738,000	1,907,000	3,033,000	2,543,000	1,562,000	1,098,000	1,082,000	1,047,000	1,184,000	1,270,000	1,219,000
Central Provinces and Berar	154,000	146,000	140,000	185,000	118,000	125,000	126,000	(a) 150,000	(a) 151,000	(a) 156,000	(a) 155,000	(a) 159,000	(a) 158,000
Burma	...	...	...	...	...	...	...	172,000	170,000	168,000	167,000	168,000	158,000
Assam	...	...	...	...	...	...	...	19,000	18,000	19,000	19,000	19,000	(a) 1,000
North-West Frontier Province	205,000	193,000	239,000	72,000	262,000	228,000	67,000	419,000	431,000	419,000	431,000	451,000	463,000
Ajmer-Merwara	(a) 31,000	(a) 30,000	(a) 30,000	31,000	52,000	(a) 23,000	24,000	(a) 66,000	(a) 67,000	(a) 71,000	60,000	60,000	(a) 65,000
Delhi	(a)	(a)	(a)	(a)	(a)	(a)	2,000	(a)	(a)	(a)	(a)	(a)	(a)
<b>Total</b>	<b>15,671,000</b>	<b>14,750,000</b>	<b>15,702,000</b>	<b>14,563,000</b>	<b>15,166,000</b>	<b>12,671,000</b>	<b>11,161,000</b>	<b>6,225,000</b>	<b>6,146,000</b>	<b>6,144,000</b>	<b>6,679,000</b>	<b>6,516,000</b>	<b>6,442,000</b>

*Yield (tons)*

Province	BAJRA							MAIZE					
	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18
United Provinces	611,000	269,000	612,000	620,000	469,000	407,000	293,000	920,600	721,000	1,050,000	1,154,000	953,000	1,026,000
Madras	561,000	535,000	698,000	748,000	925,000	900,000	701,000	(a)	(a)	(a)	(a)	(a)	48,000
Bihar and Orissa	(a)	(a)	(a)	27,000	23,000	25,000	18,000	530,000	541,000	395,000	480,000	523,000	612,000
Bombay	500,000	653,000	734,000	704,000	670,000	328,000	208,000	54,000	60,000	72,000	63,000	107,000	100,000
Sind	253,000	181,000	168,000	116,000	336,000	117,000	48,000	1,000	1,000	1,000	1,000	1,000	1,000
Bengal	(a)	(a)	(a)	2,000	1,000	2,000	1,000	80,000	24,000	27,000	28,000	26,000	23,000
Punjab	318,000	302,000	346,000	180,000	514,000	313,000	105,000	413,000	441,000	283,000	464,000	461,000	319,000
Central Provinces and Berar	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Burma	...	...	...	...	...	...	...	75,000	68,000	51,000	70,000	35,000	37,000
Assam	...	...	...	...	...	...	...	(a)	(a)	(a)	(a)	(a)	(a)
North-West Frontier Province	33,000	37,000	46,000	12,000	44,000	36,000	9,000	188,000	226,000	203,000	237,000	219,000	240,000
Ajmer-Merwara	(a)	(a)	(a)	300	6,000	(a)	4,000	(a)	(a)	(a)	6,000	19,000	(a)
Delhi	(a)	(a)	(a)	(a)	(a)	(a)	40	(a)	(a)	(a)	(a)	(a)	(a)
<b>Total</b>	<b>2,323,000</b>	<b>1,679,000</b>	<b>2,006,000</b>	<b>2,379,300</b>	<b>2,800,000</b>	<b>2,133,000</b>	<b>1,367,400</b>	<b>2,311,000</b>	<b>2,064,000</b>	<b>2,062,000</b>	<b>2,502,000</b>	<b>2,344,000</b>	<b>2,415,000</b>

Note.—(a) Not available. (b) Incomplete. (c) Taken from Agricultural Statistics obtained from local authorities. The figures are taken from the provincial Season and Crop Reports or

No. 15.—SUPPLEMENTARY TABLE—AREA AND YIELD OF BARLEY, JAWAR, BAJRA, MAIZE, AND GRAM IN EACH PROVINCE—*concl'd.*

*Area (acres)*

Province	GRAM						
	1912-13	1913-14	1914-15	1915-16*	1916-17	1917-18	1918-19
United Provinces . . . . .	5,507,000	3,037,000	5,343,000	6,023,000	6,461,000	6,457,000	2,727,000
Madras . . . . .	139,000	166,000	134,000	150,000	175,000	119,000	112,000
Bihar and Orissa . . . . .	915,000	1,079,000	1,205,000	1,407,000	1,308,000	1,448,000	1,031,000
Bombay . . . . .	475,000	453,000	486,000	524,000	627,000	775,000	310,000
Sind . . . . .	75,000	98,000	111,000	141,000	163,000	150,000	58,000
Bengal . . . . .	181,000	108,000	182,000	177,000	163,000	188,000	156,000
Punjab . . . . .	3,401,000	2,649,000	5,193,000	3,635,000	5,116,000	6,101,000	2,049,000
Central Provinces and Berar . . . . .	(b) 808,000	(b) 929,000	(b) 852,000	(b) 783,000	(b) 604,000	(b) 645,000	(b) 619,000
Burma . . . . .	34,000	42,000	48,000	64,000	68,000	63,000	46,000
Assam . . . . .	1,000	—	—	—	—	—	—
North-West Frontier Province . . . . .	109,000	190,000	203,000	145,000	210,000	226,000	207,000
Ajmer-Merwara . . . . .	(c) 9,000	(c) 1,000	(c) 21,000	19,000	9,000	(c) 30,000	18,000
Delhi . . . . .	(a)	(a)	(a)	(a)	(a)	(a)	2,000
<b>TOTAL</b>	<b>11,716,000</b>	<b>8,951,000</b>	<b>12,776,000</b>	<b>13,224,000</b>	<b>15,207,000</b>	<b>16,255,000</b>	<b>7,307,000</b>

*Yield (tons)*

Province	GRAM						
	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
United Provinces . . . . .	1,817,000	(d) 551,000	1,773,000	2,025,000	2,268,000	1,822,000	773,000
Madras . . . . .	9,000	(a)	(a)	(a)	(a)	37,000	23,000
Bihar and Orissa . . . . .	361,000	447,000	357,800	526,000	607,000	551,000	306,000
Bombay . . . . .	84,000	61,000	66,000	101,000	123,000	140,000	29,000
Sind . . . . .	10,000	9,000	31,000	20,000	18,000	23,000	6,000
Bengal . . . . .	53,000	65,000	44,000	45,800	49,000	61,000	31,000
Punjab . . . . .	734,000	578,000	1,280,000	644,000	858,000	1,409,000	645,000
Central Provinces and Berar . . . . .	250,000	190,000	247,000	226,000	206,000	216,000	147,000
Burma . . . . .	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Assam . . . . .	(a)	—	—	—	—	—	—
North-West Frontier Province . . . . .	29,000	36,000	34,000	16,000	26,000	36,000	23,000
Ajmer-Merwara . . . . .	(a)	(a)	(a)	2,000	1,000	(a)	2,000
Delhi . . . . .	(a)	(a)	(a)	(a)	(a)	(a)	600
<b>TOTAL (e)</b>	<b>2,374,000</b>	<b>1,937,000</b>	<b>2,860,800</b>	<b>2,426,800</b>	<b>2,314,900</b>	<b>2,427,000</b>	<b>1,929,000</b>

(a) Not available

(b) Excludes gram sown with other crops

(c) Taken from Agricultural Statistics

(d) Crop lost owing to unfavorable season

(e) Incomplete

*Notes.*—No forecast is prepared for the crops dealt with in this table. The figures are taken from the provincial Season and Crop Reports or specially obtained from local authorities

No. 16.—NORMAL AND ACTUAL RAINFALL (IN INCHES) IN EACH PROVINCE METEOROLOGICAL SUBDIVISION IN INDIA.

Provinces and Subdivisions	Normal rainfall	ACTUAL RAINFALL										Variation of 1918 rainfall from normal
		1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	
	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
United Provinces— United Provinces, East	30.2	42.02	41.49	41.96	33.46	30.39	38.02	53.7	47.2	46.3	23.3	-15.9
United Provinces, West	37.5	42.23	42.62	33.13	34.86	23.30	39.89	37.4	47.7	50.9	19.2	-18.3
Madras— Malabar	127.2	138.00	121.78	114.42	151.14	111.61	134.04	119.9	131.2	123.1	106.0	-21.2
Madras, South-east	35.5	36.15	36.35	32.24	34.81	35.89	37.93	38.8	34.0	36.8	35.3	-0.2
Madras, Deccan	24.3	28.84	33.55	18.66	25.87	20.52	21.92	31.7	40.1	34.1	19.8	-4.5
Madras Coast, North	40.0	38.28	49.63	36.25	40.11	36.91	43.02	61.5	52.7	54.2	35.9	-4.1
Bombay— Gujarat	32.5	34.86	35.82	13.73	41.89	41.30	39.73	16.7	32.6	54.0	11.8	-20.7
Konkan	108.7	111.40	99.82	81.50	110.90	103.99	137.20	93.9	128.6	136.1	70.9	-37.8
Bombay, Deccan	30.8	28.65	34.87	21.27	31.37	28.02	39.38	34.5	40.9	35.8	17.9	-12.9
Sind	6.5	6.28	9.00	1.03	5.12	18.79	6.10	1.8	11.1	14.1	1.6	-4.9
Bihar and Orissa— Orissa	57.4	59.70	59.28	49.85	54.07	61.23	61.80	61.9	57.7	73.8	46.5	-10.9
Chota Nagpur	50.7	55.07	47.88	54.53	44.81	63.24	43.11	39.3	50.1	66.4	42.9	-7.8
Bihar	48.5	53.67	53.09	58.94	43.41	60.43	44.30	49.5	58.7	53.7	52.7	+4.2
Bengal— Eastern	75.0	96.66	94.76	100.85	79.76	83.96	69.39	80.7	88.3	80.4	82.1	+7.1
Western		69.96	59.07	55.11								
Central Provinces and Berar— Berar	32.3	31.23	40.59	23.78	25.93	33.93	40.75	36.5	47.2	41.7	19.2	-13.1
Central Provinces, West	44.7	39.91	47.59	40.42	40.99	39.98	44.15	50.4	57.5	60.1	33.6	-11.1
Central Provinces, East	52.3	50.39	56.46	55.11	54.89	47.72	54.55	55.2	54.1	64.5	53.3	+1.0
Punjab— East and North	23.2	31.85	26.37	21.63	22.30	22.71	31.89	18.3	26.8	41.8	13.2	-10.0
South-west	9.6	11.51	9.27	9.25	8.51	12.59	18.67	4.9	12.3	21.5	6.8	-2.8
Burma— Lower Burma	132.6	132.58	117.61	128.31	129.83	122.43	140.92	135.1	125.5	129.8	148.6	+16.0
Upper Burma	45.5	47.21	43.49	43.30	43.67	43.47	49.54	46.7	40.9	48.1	46.0	+0.5
Assam	99.2	89.26	105.20	117.14	101.28	105.89	67.03	112.3	96.6	104.9	110.3	+11.1
North-West Frontier Province	16.8	18.65	22.95	20.00	15.78	14.66	30.30	15.0	20.3	20.2	14.5	-2.3
Central India— Central India, West	32.0	34.08	37.85	25.80	32.71	30.22	32.94	27.0	46.9	50.3	20.7	-11.3
Central India, East	33.5	39.74	41.41	44.84	37.93	31.16	40.77	38.7	48.3	54.6	20.2	-18.3
Rajputana— Rajputana, West	11.8	18.29	12.35	5.84	12.53	10.10	12.54	6.9	17.3	32.0	2.8	-9.0
Rajputana, East	24.2	29.12	28.72	18.29	27.39	15.65	26.36	17.4	33.6	53.0	10.3	-13.9
Hyderabad— Hyderabad, North	34.4	30.02	43.24	24.94	23.39	27.10	42.70	40.8	44.4	43.9	23.2	-11.2
Hyderabad, South	30.4	23.02	31.35	21.11	25.05	19.76	33.71	40.2	50.9	39.9	22.3	-8.1
Mysore	36.1	41.14	43.85	33.94	44.02	32.40	33.68	37.7	46.6	41.5	27.9	-8.2



17.—CONDITION OF WEEKLY RAINFALL DURING THE MONSOON PERIOD FROM JUNE TO OCTOBER, 1918

(Abbreviations—S—Scanty, F—Fair, N—Normal, Ex—Excess)

Province and Sub-division	JUNE week ending			JULY week ending				AUGUST week ending				SEPTEMBER week ending				OCTOBER week ending					
	11th	18th	25th	2nd	9th	16th	23rd	30th	6th	13th	20th	27th	3rd	10th	17th	24th	1st	8th	15th	22nd	29th
... ..	S	S	S	F	EX	S	S	S	S	S	S	S	EX	S	S	S	S	S	S	S	S
... ..	S	F	EX	S	F	S	S	F	F	F	N	F	N	S	S	N	S	S	S	S	S
... ..	S	S	F	S	F	S	S	S	F	S	N	F	S	S	F	EX	S	F	S	S	S
... ..	S	S	S	S	S	S	S	S	S	S	S	S	EX	S	S	S	S	N	S	N	S
... ..	EX	EX	EX	F	EX	EX	N	F	EX	EX	N	EX	F	N	EX	S	EX	S	N	S	S
... ..	EX	N	N	F	N	EX	EX	F	EX	N	EX	EX	N	N	EX	F	N	S	F	N	N
... ..	EX	EX	F	F	F	S	S	N	F	F	EX	F	F	EX	S	S	F	S	S	S	S
... ..	EX	EX	F	N	N	S	S	F	F	F	N	EX	N	EX	F	S	S	S	S	S	S
... ..	EX	F	EX	S	EX	EX	S	S	N	EX	N	EX	F	EX	EX	S	S	S	S	S	F
... ..	EX	EX	F	S	N	S	S	S	N	F	F	N	F	EX	N	S	S	S	S	S	S
... ..	EX	N	S	S	F	S	S	S	S	S	EX	EX	F	F	S	S	S	S	S	S	S
... ..	EX	F	S	S	S	S	S	S	S	S	EX	EX	S	S	S	S	F	S	S	S	S
... ..	EX	F	EX	S	S	EX	S	S	S	S	S	S	EX	EX	S	S	S	EX	S	S	S
... ..	S	F	S	EX	F	S	S	F	N	S	N	S	S	S	F	S	S	S	S	S	S
... ..	S	EX	N	N	S	S	S	F	EX	S	N	N	N	N	S	S	S	S	S	S	S
... ..	F	EX	N	N	F	S	S	EX	EX	F	EX	F	EX	F	S	S	S	S	S	S	S
... ..	S	N	EX	N	EX	S	S	S	N	S	EX	S	N	N	S	S	S	S	S	S	S
... ..	EX	F	S	S	N	S	S	S	S	S	F	EX	N	EX	S	S	S	S	S	S	S
... ..	S	S	S	S	S	S	S	S	S	S	F	F	S	S	S	S	S	S	S	S	S
... ..	S	F	EX	F	F	S	S	S	S	S	EX	EX	F	F	S	S	S	S	S	S	S
... ..	S	F	F	F	S	S	S	S	F	F	EX	F	N	S	S	S	N	S	F	F	F
... ..	F	EX	S	F	S	S	N	EX	S	N	S	F	F	S	N	F	S	S	S	F	S
... ..	S	S	S	N	S	S	S	N	F	EX	N	S	S	S	EX	EX	F	S	S	S	S
... ..	F	N	F	EX	S	S	S	EX	F	EX	EX	F	N	S	F	F	EX	S	S	S	S
... ..	N	N	N	N	N	F	F	N	N	N	N	EX	N	N	F	EX	EX	N	EX	S	F
... ..	N	EX	N	N	N	EX	N	F	N	F	EX	N	EX	F	EX	F	EX	F	EX	S	EX
... ..	EX	F	N	EX	S	S	S	F	S	EX	F	EX	EX	S	S	EX	F	N	F	S	EX
... ..	S	S	F	F	EX	S	S	F	N	S	F	F	S	S	S	F	S	N	S	S	S
... ..	S	S	F	F	F	S	S	F	F	S	F	S	S	S	N	EX	F	S	S	S	S
... ..	S	S	S	F	S	S	EX	S	S	EX	EX	S	F	S	N	EX	N	F	S	F	S
... ..	S	S	N	S	S	S	N	F	S	N	S	F	EX	N	S	S	F	EX	F	S	S
... ..	S	S	S	S	S	S	S	S	S	S	S	S	EX	S	S	EX	N	S	S	S	S

Note.—The redder the Statement, the scantier the monsoon. On the other hand, the thicker the type in the Statement

No. 18.—COMPARATIVE STATEMENT SHOWING REPORTED AREA AND YIELD OF CERTAIN PRINCIPAL CROPS IN FOREIGN COUNTRIES IN 1916, 1917, AND 1918

## Area (acres)

Countries	Rice			Wheat			Cotton		
	1916	1917	1918	1916	1917	1918	1916	1917	1918
Algeria	...	...	...	3,271,000	3,120,000	3,185,000	...	...	...
Argentina	...	...	...	16,082,000	17,868,000	16,961,000	...	...	...
Australia	...	...	...	11,525,000	9,853,000	8,645,000	...	...	...
Bessarabia	...	...	...	(a)	(a)	1,690,000	...	...	...
Canada	...	...	...	12,899,000	14,795,000	17,846,000	...	...	...
Denmark	...	...	...	151,000	198,000	140,000	...	...	...
Egypt	150,000	276,000	(a)	1,447,000	1,116,000	1,286,000	1,718,000	1,740,000	1,365,000
France	...	...	...	12,850,000	10,893,000	10,845,000	...	...	...
Italy	358,000	348,000	342,000	11,674,000	10,552,000	10,783,000	...	...	...
Japan	7,540,000	7,553,000	7,577,000	1,281,000	1,235,000	1,389,000	5,000	7,000	7,000
Luxemburg	...	...	...	27,000	22,000	24,000	...	...	...
Netherlands	...	...	...	134,000	(a)	143,000	...	...	...
New Zealand	...	...	...	219,000	294,000	222,000	...	...	...
Norway	...	...	...	(a)	14,000	41,000	...	...	...
Roumania	...	...	...	(a)	(a)	3,992,000	...	...	...
Spain	100,000	108,000	110,000	10,144,000	10,130,000	10,224,000	...	...	...
Sweden	...	...	...	307,000	329,000	310,000	...	...	...
Switzerland	...	...	...	124,000	139,000	203,000	...	...	...
Tunis	...	...	...	1,482,000	1,309,000	1,413,000	...	...	...
Union of South Africa	...	...	...	755,000	924,000	953,000	...	...	...
United Kingdom	...	...	...	2,051,000	2,097,000	2,792,000	...	...	...
United States of America	878,000	964,000	1,112,000	52,783,000	45,922,000	59,085,000	35,221,000	33,827,000	35,993,000
Uruguay	...	...	...	779,000	1,013,000	865,000	...	...	...

## Yield

Countries	Wheat (tons)			Wheat (tons)			Cotton (bales of 400 lbs)		
	1916	1917	1918	1916	1917	1918	1916	1917	1918
Algeria	...	...	...	779,000	775,000	...	...	...	...
Argentina	...	...	...	1,877,000	5,844,000	4,925,000	...	...	...
Australia	...	...	...	4,065,000	3,277,000	2,161,000	...	...	...
Bessarabia	...	...	...	(a)	(a)	81,000	...	...	...
Canada	...	...	...	5,890,000	6,248,000	5,054,000	...	...	...
Denmark	...	...	...	161,000	115,000	169,000	...	...	...
Egypt	(a)	358,000	(a)	977,000	797,000	870,000	1,490,000	1,579,000	(a)
France	...	...	...	5,737,000	3,853,000	6,249,000	...	...	...
Italy	511,000	505,000	514,000	4,712,000	3,742,000	4,890,000	...	...	...
Japan	10,013,000	9,690,000	9,715,000	757,000	691,000	829,000	5,000	(a)	(a)
Luxemburg	...	...	...	12,000	10,000	14,000	...	...	...
Netherlands	...	...	...	126,000	(a)	129,000	...	...	...
New Zealand	...	...	...	135,000	168,000	167,000	...	...	...
Norway	...	...	...	(a)	6,000	29,000	...	...	...
Roumania	...	...	...	(a)	(a)	493,000	...	...	...
Spain	237,000	232,000	204,000	4,072,000	3,814,000	3,627,000	...	...	...
Sweden	...	...	...	240,000	183,000	210,000	...	...	...
Switzerland	...	...	...	115,000	122,000	190,000	...	...	...
Tunis	...	...	...	192,000	188,000	226,000	...	...	...
Union of South Africa	...	...	...	161,000	236,000	229,000	...	...	...
United Kingdom	...	...	...	1,021,000	1,719,000	2,490,000	...	...	...
United States of America	642,000	727,000	810,000	17,104,000	17,397,000	21,514,000	14,515,000	13,653,000	2,564,000
Uruguay	...	...	...	144,000	844,000	(a)	...	...	...

(a) Not available

No. 19.—COMPARATIVE STATEMENT SHOWING REPORTED AREA AND YIELD OF CERTAIN PRINCIPAL CROPS IN FOREIGN COUNTRIES IN 1916, 1917, AND 1918—*contd.*

*Area (acres)*

Countries	Barley			Maize			Linsed		
	1916	1917	1918	1916	1917	1918	1916	1917	1918
Algeria . . . . .	3,008,000	2,838,000	2,793,000	...	...	...	...	...	...
Argentina . . . . .	388,000	(a)	(a)	8,005,000	(a)	(a)	(a)	(a)	3,232,000
Australia . . . . .	180,000	(a)	(a)	...	...	...	...	...	...
Bessarabia . . . . .	(a)	(a)	1,509,000	(a)	(a)	1,433,000	(a)	(a)	1,000
Canada . . . . .	1,661,000	2,403,000	3,152,000	173,000	234,000	230,000	603,000	917,000	1,068,000
Denmark . . . . .	632,000	594,000	550,000	...	...	...	...	...	...
Egypt . . . . .	439,000	445,000	334,000	(a)	1,734,000	(a)	...	...	...
France . . . . .	1,547,000	1,474,000	1,355,000	812,000	867,000	840,000	13,000	20,000	21,000
Italy . . . . .	595,000	469,000	478,000	3,829,000	3,873,000	3,856,000	44,000	41,000	40,000
Japan . . . . .	3,108,000	2,737,000	2,890,000	157,000	142,000	144,000	39,000	61,000	87,000
Luxemburg . . . . .	561,000	(a)	7,000	...	...	...	...	...	...
Netherlands . . . . .	60,000	(a)	58,000	...	...	...	37,000	30,000	14,000
New Zealand . . . . .	30,000	31,000	(a)	6,000	8,000	(a)	...	...	...
Norway . . . . .	98,000	(a)	156,000	...	...	...	...	...	...
Roumania . . . . .	(a)	(a)	610,000	(a)	(a)	4,243,000	(a)	(a)	185,000
Spain . . . . .	3,884,000	3,837,000	4,208,000	1,154,000	1,175,000	1,169,000	2,000	4,000	4,000
Sweden . . . . .	421,000	437,000	452,000	...	...	...	...	...	...
Switzerland . . . . .	18,000	19,000	22,000	4,000	5,000	7,000	...	...	...
Tunis . . . . .	1,232,000	1,037,000	1,237,000	...	...	...	(a)	(a)	4,000
Union of South Africa . . . . .	57,000	58,000	54,000	2,607,000	(a)	2,949,000	...	...	...
United Kingdom . . . . .	1,651,000	1,795,000	1,838,000	...	...	...	91,000	110,000	63,000
United States of America . . . . .	7,671,000	8,831,000	9,675,000	108,575,000	119,705,000	107,449,000	1,604,000	1,808,000	1,937,000
Uruguay . . . . .	(a)	(a)	6,000	...	...	...	(a)	(a)	36,000

*Yield (tons)*

Countries	Barley			Maize			Linsed		
	1916	1917	1918	1916	1917	1918	1916	1917	1918
Algeria . . . . .	769,000	673,000	(a)	...	...	...	...	...	...
Argentina . . . . .	46,000	(a)	(a)	1,468,000	(a)	(a)	...	...	...
Australia . . . . .	90,000	(a)	(a)	...	...	...	...	...	...
Bessarabia . . . . .	(a)	(a)	59,000	(a)	(a)	158,000	(a)	(a)	...
Canada . . . . .	884,000	1,177,000	1,653,000	157,000	194,000	355,000	200,000	149,000	161,000
Denmark . . . . .	523,000	382,000	459,000	...	...	...	...	...	...
Egypt . . . . .	282,000	291,000	211,000	(a)	1,958,000	(a)	...	...	...
France . . . . .	843,000	846,000	601,000	(a)	403,000	218,000	3,000	3,000	(a)
Italy . . . . .	316,000	169,000	207,000	1,964,000	2,161,000	1,911,000	9,000	7,000	12,000
Japan . . . . .	(a)	2,047,000	1,707,000	102,000	62,000	94,000	7,000	(a)	16,000
Luxemburg . . . . .	3,000	(a)	3,000	...	...	...	...	...	...
Netherlands . . . . .	51,000	(a)	47,000	...	...	...	9,000	6,000	4,000
New Zealand . . . . .	16,000	18,000	...	7,000	11,000	(a)	...	...	...
Norway . . . . .	65,000	(a)	120,000	...	...	...	...	...	...
Roumania . . . . .	(a)	(a)	47,000	(a)	(a)	623,000	(a)	(a)	7,000
Spain . . . . .	1,857,000	1,867,000	1,935,000	715,000	733,000	662,000	(a)	1,000	2,000
Sweden . . . . .	313,000	251,000	250,000	...	...	...	...	...	...
Switzerland . . . . .	13,000	15,000	14,000	4,000	6,000	9,000	...	...	...
Tunis . . . . .	147,000	177,000	196,000	...	...	...	(a)	(a)	2,000
Union of South Africa . . . . .	31,000	(a)	(a)	573,000	(a)	664,000	...	...	...
United Kingdom . . . . .	1,178,000	1,291,000	1,353,000	...	...	...	(a)	(a)	(a)
United States of America . . . . .	3,869,000	4,469,000	5,452,000	64,445,000	78,821,000	64,435,000	356,000	211,000	268,000
Uruguay . . . . .	...	...	...	...	...	...	...	...	...

(a) Not available

## 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;" or in other words, it is the "figure which in existing circumstances might be expected to be attained in the year if the rainfall and seasons were of a character ordinary for the tract under consideration, that is, neither very favourable nor the reverse." 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 sixteenths, 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, therefore, 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. per acre, and the percentage estimate 80, the required quantitative estimate would be  $60,000 \times 500 \times \frac{80}{100} = 24,000,000$  lbs.

The question of improving the method of framing estimates of outturn is now under the consideration of the Government of India.

## APPENDIX II.

## METHODS OF COLLECTING THE STATISTICS PROVINCE BY PROVINCE

United Provinces.  
(Total cultivated area  
36,172,000 acres.)

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.

Madras.  
(Total cultivated area  
31,274,000 acres.)

In the Madras Presidency, the estimates relate to all the 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 where some sort of accounts are maintained in *Zamindari* and whole *inam* villages, 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 areas are included but shown separately under estimates in the reports sent by the *Tahsildar* to the Director of Agriculture. In the remaining cases where estates have not been surveyed and where no sort of account is maintained at all, the estimating is done in the office of the Director of Agriculture with reference to previous year's final audited figures, the state of the season, and the figures of neighbouring Government areas. The States of Pudukkottai and Banganapalle send similar reports direct to the Director for cotton only. No other Indian State in the Presidency prepares any crop forecast. Thus, for each forecast return, separate reports (242 for cotton and 240 for other crops) 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 are checked by a comparison with the forecast reports and the Season and Crop reports of previous years, 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 his subordinate officers and from non-officials interested in a particular crop.

Bombay and Sind  
(Total cultivated  
area 31,331,000  
acres.)

The estimates for the Bombay Presidency include all British districts and Indian 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 circles 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 Indian 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 Indian States. No standard of yield has yet been fixed. Local estimates of crop condition 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, 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 *taluka* 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. For Sind there are no formulæ, and all the necessary information is obtained from the district officers in the form of estimates on the basis of twelve

\* A sub-divisional officer

\*\* A sub-division of a district under the management of a *tahsildar*

† The chief revenue and police officer in charge of a *taluk*

‡ A revenue or police officer in charge of a sub-division of a *taluk*

Note.—The cultivated area shown in the margin represents the average net area actually sown with all crops in each province during the three years ending 1917-18.

annas for a normal crop, together with quantitative equivalents gathered from general experience. For Indian States condition estimates are obtained, and the formulae for adjoining British districts are applied.

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 the districts except two, 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-five 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  
25,881,000 acres)

The estimates for the Punjab relate to all the British districts in which the respective crops are grown. As regards Indian States of the province, reports on wheat and cotton are furnished by all the States in which these two crops are grown to any considerable extent. No estimates for any other crop are prepared by any 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 as determined by him to meet the character of the harvest.

Punjab.  
(Total cultivated area  
23,423,000 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 Indian 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, sesamum, rice, and sugarcane 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 235 revenue inspectors with, on an average, 22 *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 10 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.

Central Provinces  
and Berar.  
(Total cultivated area  
21,961,000 acres)

The estimates for Bengal relate to all the districts of the Presidency where the respective 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 quantitative estimates of yield hitherto given in the forecasts are based on standards provisionally adopted. The standards have now been revised on the basis of the results obtained from crop-cutting experiments conducted over a series of areas and seasons.

Bengal.  
(Total cultivated area  
24,521,000 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 Officers. 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.

Burma.  
(Total cultivated area  
16,527,000 acres)

\* Village accountants.

† Sub-division of a district.

<p>Assam. (Total area acres.)</p>	<p>cultivated 5,853,000</p>	<p>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 the district Land Records staffs in the case of the temporarily-settled areas, and from zamindars in the case of the permanently-settled portion of Goalpara, with the exception in the latter district of jute the estimate for which is compiled by the village <i>choukidari panchayats</i>. In the permanently settled part of Sylhet the figures for jute are those submitted after actual inspection by the village <i>choukidari panchayats</i>, and for tea those reported by the garden managers, while for all other crops estimates have been framed by the District Officer from the actual areas in the surveyed parts, being applied to the rest of the district. The figures are checked only in the temporarily settled tracts by the circle Sub-Deputy Collectors; in the permanently settled districts of Sylhet and Goalpara there is no valid check at all. The estimates of outturn are based on the normal yield obtained from the results of crop-cutting experiments.</p>
<p>North-West Frontier Province. (Total cultivated area 2,303,000 acres.)</p>		<p>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 <i>patwaris</i> in their field-to-field inspection at 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 (<i>sailab</i>) 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.</p>
<p>Ajmer-Merwara. (Total cultivated area 359,000 acres.)</p>		<p>The estimates for Ajmer-Merwara relate to the whole of the district. So far as <i>khalsa</i>,* <i>jagir</i>,† and minor <i>istamrari</i>‡ villages are concerned, the <i>patwari</i> 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 <i>patwari</i> notes down the results of his local inquiries and inspections in his field book. A certain percentage of the entries made by the <i>patwari</i> is checked and corrected, when necessary, by the <i>girdawar</i> or <i>kanungo</i>§ 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 <i>girdawar's</i> 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 <i>patwaris</i>. The exact area sown in the sub-divisions is obtained from the abstract statements. In the large <i>istamrari</i> 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 <i>istamrari</i> estates.</p>
<p>Coorg. (Total cultivated area 142,000 acres.)</p>		<p>The estimates for rice furnished by Coorg are based on the results of annual crop inspections and experiments. Crop inspections are made by each <i>shambog</i> (1) for his circle under the supervision of the <i>parpattigar</i>   and the detailed particulars entered in the crop inspection registers and summarised in the crop abstracts, the totals of which are compiled in the office of the Deputy Director, Land Records and Agriculture. About 50 crop experiments are conducted annually by subordinates of the Revenue Department and <i>subedars</i> (2) (<i>tahsildars</i>) and also a few by the Deputy Director of Land Records and Agriculture, in whose office the estimates of yield, given in the forecast, are calculated on the basis of the average for the province.</p>
<p>Central India.</p>		<p>In the Central India States estimates are framed for wheat and cotton. The methods differ with different States. In most States the acreage returns are prepared by <i>tahsils</i> from the field measurements of the <i>patwaris</i> and then compiled for the whole State. In some cases the outturn estimates are similarly compiled after check on the spot by the higher revenue officials in consultation with the cultivators; in others they are merely an approximation from the acreage figures; in a few States fields are selected in the different circles as bearing an average yield, the crop is cut and weighed, the outturn for the circle is calculated from the result, and the totals of the circles form the return for the State. Finally, each Political Agent compiles the returns of the States in his political charge into an Agency return, each of which is shown separately in the return for Central India.</p>
<p>Rajputana.</p>		<p>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.</p>

\* *Khalsa* villages are those which pay full revenue to Government  
† Land granted revenue-free on condition of military service or as a charitable endowment  
‡ A tenure which, though the revenue is assigned, is charged with a permanently fixed quit rent  
§ Circle inspector  
|| A revenue officer in charge of a sub-division of a taluk  
(1) Village accountant (2) Revenue officer in charge of a taluk



The estimates for wheat, cotton, and oilseeds furnished by the Hyderabad State excluded Hyderabad, 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.

The estimates furnished by the Mysore State relate to all the districts of the State Mysore. in which the respective crops are grown. As regards area the information is based on the (Total cultivated 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 6,150,000 (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.

## APPENDIX III

## DATES PRESCRIBED FOR THE ISSUE OF THE ALL-INDIA FORECASTS OF CROPS BY THE DEPARTMENT OF STATISTICS, INDIA

## RICE—

1st forecast	October	20
2nd „	December	20
Final „	February	20

## WHEAT—

1st forecast	January	31
2nd „	March	15
3rd „	May	30
Final „	August	10

## COTTON—

1st forecast	August	15
2nd „	October	15
3rd „	December	15
Final „	February	15

## LINSEED, RAPE AND MUSTARD—

1st forecast	January	1
2nd „	March	15
Final „	June	1

SESAMUM (*til or jinjili*)—

1st forecast	September	1
2nd „	October	20
Final „	January	15
Supplementary forecast	April	20

## GROUNDNUT—

1st forecast	October	20
Final „	February	15

## INDIGO—

1st forecast	October	15
Final „	December	20

## SUGARCANE—

1st forecast	August	20
2nd „	October	20
Final „	February	16

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**TWENTY-FIRST ISSUE**

**DEPARTMENT OF STATISTICS, INDIA**

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**ESTIMATES**  
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● OF  
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