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Revenue (1897) Department.

PRESS SERIES.

G.O., No. 767-768

Dated 8th September

[Despatch/Abstract.]

Food Stocks.

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Letter to the Gove
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BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

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O/18 4,000—12-7-97.

Revenue (189) Department.

CURRENT No. 1770

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From The Board of Revenue
Sett.

Order

No. 532.

Dated 27th July 1927

Received

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Enclosures

Spare copies.

SUBJECT.

Submg. report re: the existing food-stocks in the Madras Presy.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 2134, dated Lahore, 31st October / 2nd November 1896.

From—F. A. Robertson, Esquire, Director of Land Records and Agriculture, Punjab,

To—The Revenue Secretary to Government, Punjab.

I have the honor to enclose herewith a copy of a Memo. on the present agricultural outlook which I have drawn up principally for the use of my successor. Mr. Fanshawe asked me to send you a copy of this Memo. as soon as it was prepared, which I have accordingly done. I also enclose copies of two printed pamphlets, the one containing my reports on the last three harvests and the other containing the remarks of the Deputy Commissioner of each district on the last three harvests, with two tables which I think will be very useful, one giving the area irrigated and unirrigated for each tahsíl for the last three harvests and the other giving the total area irrigated and unirrigated of each district for each harvest for the last ten years, with the average area of the last ten years. I have also made a rough calculation of the production of and consumption from the last three harvests and the balance of food stocks which I calculate should still be available. The estimate is of course at least a rough approximation, but personally I believe it to be not far from the truth.

Enclosure to Director of Land Records and Agriculture Punjab's No. 2134, dated 31st Octr. / 2nd Novr. 1896.

Memo. for the use of my Successor.

Scarcity in the Punjab.

I have been through the special reports called for by the Revenue Secretary's No. 992S., dated 1st October 1896, and have returned them all. I have had the notes on the three last harvests—rabi 1896, kharíf 1895, and rabi 1895—brought together and printed with two very useful tables, one showing the total area of crops irrigated and unirrigated in each tahsíl for each of those three harvests and the other giving the district totals, irrigated and unirrigated, for the last ten years for rabi and kharíf, and also the average of the last ten years. These will I think prove useful. They are attached to this note.

Delhi Division.

The tracts in the worst condition are undoubtedly the districts of the Delhi Division.

Hissar—Deputy Commissioner, Muhammad Afzal Khán.

For months past the Deputy Commissioner of *Hissar* has been sending in most gloomy accounts, and he now says that prospects are very gloomy; there is very little irrigation and no fodder. The irrigation on the average is only less than $\frac{1}{20}$ in the kharíf and $\frac{1}{9}$ of the rabi. The rabi area of 1896 was only $\frac{1}{2}$ of the average, and the kharíf of 1895 less than $\frac{1}{3}$. The rabi of 1895 was, however, 50 per cent. above the average or $\frac{3}{2}$. Hissar is really in a bad way, and relief works will be required.

Rohtak—Deputy Commissioner, Captain Egerton.

The special report has not been received. The proportion of irrigation is on the average $\frac{1}{7}$ to $\frac{1}{8}$ in the kharíf and $\frac{1}{6}$ in the rabi. But the capacity for irrigation has much increased, and in rabi 1894, 110,000 acres were irrigated and only 64,000 not irrigated. The total rabi area of 1896 was far below average, rather over $\frac{1}{2}$; the kharíf of 1895 was $\frac{4}{6}$, and the rabi of 1895 much above average, about $\frac{3}{2}$.

28th October 1896.—Report just received. The unirrigated kharíf of 1896 will be only 6 annas. Fodder is scarce. Cattle in fair condition. Gram sufficient for four or five months. If no rain falls, some relief works may be necessary in Jhajjar in November and elsewhere in January.

Gurgaon—Deputy Commissioner, Colonel Rennick.

In Gurgaon the Deputy Commissioner's remarks are far from clear, at one time suggesting a much better harvest than was expected, at another a much worse one. The average of irrigation in the rabi is $\frac{2}{7}$. In the kharíf there is little irrigation as it is seldom required. Average less than $\frac{1}{20}$. Area rabi 1896 about $\frac{2}{3}$ average, about $\frac{3}{7}$ of which was irrigated. Kharíf 1895 was about $\frac{9}{7}$ average, and rabi 1894 was above average, about $\frac{7}{6}$. Condition of the district is far from desperate, but there will be no unirrigated rabi if no rain falls before 15th November. Stocks are ample.

Delhi—Captain Davies.

Delhi is not in good case, but kharíf 1896 will be Re. 0-8-0 to Re. 0-10-0. There will be no unirrigated rabi unless rain falls by 15th November. The average irrigated area is about $\frac{1}{4}$ of the total, but the irrigated area of 1896 was very nearly half the total, 100,000 acres, the average being 60,000. The possibilities of irrigation have increased. Rabi 1896 in area was $\frac{3}{4}$ of average, kharíf 1895 average, and rabi 1895 above average—$\frac{6}{5}$. Fodder is very scarce. Stocks are sufficient for 3 or 4 months.

Karnál—Mr. Connolly.

The Deputy Commissioner reports very badly of Karnál. There have been no unirrigated rabi sowings, and will be none if no rain falls by 15th November 1896. The cattle graziers are removing their cattle; water is drying up in the tanks; zamíndárs are said to have no stocks, and banias stock for 3 months only. I do not think things are quite so bad as Deputy Commissioner does. In the last rabi 172,000 acres were irrigated; the average is only 98,000. Means of irrigation have increased. Rather more than $\frac{1}{4}$ has been irrigated as the average in rabi and $\frac{1}{7}$ in kharíf. The last rabi area 1896 was rather less than $\frac{2}{3}$, the kharíf 1895 about $\frac{7}{9}$, and the rabi of 1895 much above average—about $\frac{3}{2}$. In rabi 1896 the unirrigated area was very small indeed, about $\frac{1}{5}$ of the average. It is said that relief works will be required in November 1896.

Umballa—Captain Parsons.

The Deputy Commissioner of Umballa has submitted a very good note. He thinks the 1896 kharíf crop Re. 0-9-0 or Re 0-10-0, but the Revenue Assistant puts it at only Re. 0-6-0 or Re 0-7-0. I think the Deputy Commissioner quite as likely to be right. Fodder for four months is in hand, and zamíndárs have stocks for 3 or 4 months. Little or no rabi can be sown unless it rains before the 15th of November. The irrigated area is small, only on the average little more than $\frac{1}{20}$ in rabi and $\frac{1}{30}$ in kharíf. The district depends entirely on rain. Rabi area in 1896 was $\frac{3}{8}$ average, kharíf 1895 nearly average, and rabi 1895 above average, $\frac{11}{10}$. The district is in some difficulty.

Jullundur Division.

The Jullundur Division is not yet in any severe straits. The Commissioner remarks that the present situation is simply a scare on the assumption that the next rabi will fail.

Kángra—Mr. A. Anderson.

Kángra reports a 10-anna or 12-anna crop; about $\frac{1}{4}$ of the rabi and $\frac{2}{7}$ of the kharíf is irrigated. Area of rabi 1896 was nearly average, of kharíf 1895 above it, and of rabi 1895 much above it, $\frac{5}{3}$.

Hoshiárpur—Captain Inglis.

In Hoshiárpur there is about a 10 to 11 anna crop, and half the next rabi has been sown. Stocks are sufficient to next rabi. There is not much irrigation, but usually a good rainfall. Only 25 irrigated in rabi and $\frac{1}{17}$ in kharíf. Rabi 1896 about $\frac{3}{4}$, kharíf 1895 average, and rabi 1895 average in area.

Jullundur—Mr. Renouf.

In Jullundur little rabi has been sown on unirrigated lands, but $\frac{4}{5}$ of the rabi and about the same in the kharíf are irrigated. I believe Jullundur is not so badly off as Mr. Crosthwaite, Officiating Deputy Commissioner, thinks. Area of rabi 1896 $\frac{13}{16}$, kharíf 1895 nearly average, and rabi 1895 above average.

Ludhiána—Mr. Rose.

As to Ludhiána it may be noticed that the whole district is classed as "secure." The Deputy Commissioner takes a very gloomy view, more so than I believe the facts to justify. The kharíf of 1896 all over is put at 6 annas only. Stocks are ample. In the rabi $\frac{1}{4}$ is usually irrigated and in the kharíf $\frac{1}{6}$. The rabi area of 1896 was $\frac{4}{5}$, the kharíf 1895 average, and the rabi of 1895 above average.

Ferozepore—Captain Burlton.

In Ferozepore the Deputy Commissioner takes a gloomy view, but the Commissioner thinks it too gloomy; so do I. Kharíf 1896 is classed as annas 6 to annas 8. Fodder is said to be available for two months only; grain stocks till April. Relief works not required before January 1897. There is a great deal of irrigation in Ferozepore. More than $\frac{1}{3}$ in rabi irrigated on the average and nearly half in 1896 and about $\frac{1}{4}$ in the kharíf. Area of rabi 1896 was about $\frac{19}{20}$, of kharíf 1895 $\frac{3}{3}$, and rabi 1895 about $\frac{6}{5}$, above average.

Lahore Division.

In the Lahore Division the Commissioner considers that the only tracts causing anxiety are Sharakpur and the high lands between the Sutlej and the Ravi. The high prices caused in great measure by grain gambling are, he considers, the main cause for anxiety.

Mooltan—Mr. T. J. Kennedy.

In Mooltan the crops are nearly all irrigated, $\frac{4}{6}$ of the rabi and nearly all the kharíf. There is no trouble in this district.

Jhang—Captain Douglas.

In Jhang also there is no cause for anxiety. Rain is always scanty, and the new canal and railway give abundance of employment. Fodder is scarce. Here also most of the crops are irrigated—$\frac{3}{4}$ in rabi and $\frac{2}{3}$ in kharíf.

Montgomery—Diwan Narindra Nath.

In Montgomery the sailába area has failed owing to scarcity of water in the rivers, and fodder is very scarce. The people to a large extent are nomadic graziers, and will go elsewhere in search of fodder. The district is not to any extent dependent on rainfall, and the gloomy report is rather difficult to understand, but there are large herds of cattle which will suffer for want of fodder. More than $\frac{2}{3}$ of the rabi and $\frac{7}{8}$ of the kharíf is irrigated. I do not believe there is much cause for anxiety in Montgomery. Relief works not likely to be required.

Lahore—Mr. A. E. Hurry.

The Lahore District is suffering. The rabi 1896 was poor, and small relief works were opened in Sharakpur. The kharíf on baráni lands will be almost *nil*. Fodder is scarce and cattle much overworked in wells. Stocks with traders are large. Small relief works will soon be required. There is, however, a very large area of irrigation: $\frac{2}{3}$ of the rabi and $\frac{4}{7}$ of the kharíf are irrigated. This is worth remembering. The unirrigated portion in the west only can be really in distress. The area of rabi 1896 was rather over $\frac{2}{3}$ ($\frac{13}{18}$), the kharíf of 1895 about $\frac{3}{4}$, and the rabi of 1895 above average.

Amritsar—Captain Dallas.

In Amritsar there is not yet anything like real distress. The kharíf of 1896 is nearly as good as that of 1895. There has been some portion even of baráni lands sown for the next rabi, and stocks are ample. About half of the crops in each harvest are irrigated.

Gurdáspur—Mr. Love.

In Gurdáspur the kharíf of 1896 is good on low-lying lands. Stocks are ample, and a brisk export is going on from Batála. It is said that relief works will be required in November. The special report says nothing about rabi sowings. About $\frac{1}{5}$ of the rabi and $\frac{1}{4}$ of the kharíf is irrigated, but much of the district usually suffers from too much water.

SUMMARY FOR LAHORE DIVISION.—The districts of Montgomery, Mooltan and Jhang are not very dependent on rain; Lahore and Amritsar have much irrigation, and Gurdáspur is submontane and generally does well in dry years. Except in the restricted area mentioned by the Commissioner, there is no real cause for anxiety in the Lahore Division.

Rawalpindi Division.

In parts of the Ráwalpindi Division there is more cause for apprehension. There is comparatively little irrigation, and there are tracts which have suffered somewhat severely.

Siálkot—Major Egerton.

In Siálkot there is a large amount of well irrigation which cannot always be depended on in bad years, as the cattle get worn out from scanty food and overwork. About half of the year's crop is irrigated. The rabi area of 1896 was not much below average; the kharíf 1895 was average, and the rabi of 1895 was also average. More than half of the crops are irrigated in the rabi and rather less than half in the kharíf. I have seen no special report from Siálkot.

Gujrát—Kazi Muhammad Aslam Khán.

In Gujrát the proportion of irrigation, mostly wells, is smaller,—rather more than $\frac{1}{3}$ in rabi and $\frac{1}{4}$ in kharíf. I regret that no special report has been forwarded to me. I believe that there is trouble in parts of Phálian, where small relief works are open. The rabi of 1896 was about 13 annas, more than $\frac{3}{4}$; the kharíf of 1895 was nearly average, and the rabi of 1895 above average. I am not very well informed as to the present condition of Gujrát.

Gujránwála—Mr. Drummond.

In Gujránwála there is a very large proportion of irrigation,—$\frac{3}{4}$ in rabi and $\frac{1}{2}$ in kharíf,—and the amount is increasing with the extension of the canal system. Fodder is scarce. Grain is sufficient to next rabi. The canal colony has a good crop, and the new canal and railway will give plenty of employment. No relief works will be required before February next. The kharíf of 1896 is about 8 annas. The area of rabi 1896 was not much below average, $\frac{38}{43}$; the kharíf 1895 was below average, about $\frac{11}{13}$, and rabi 1895 was above it, about $\frac{6}{5}$.

Shahpur—Mr. Bridges.

In Shahpur there has been a moderate kharíf of 1896, but it has not been a failure. Fodder is scarce, and little rabi has been sown except on well lands. The Deputy Commissioner considers the stock of grain to be insufficient, but this does not matter, as there is a railway through Khusháb and down to Bhera. The district is not well off, but there is no famine, and

relief works are not expected to be necessary. There is a large irrigated area in this district,—over ½ of the rabi crop and ⅓ of the kharíf is irrigated. As to area, the rabi of 1896 was ⅘, the kharíf 1895 was above average, ⅘, and the rabi of 1895 was slightly above average.

Jhelum—Mr. Silcock.

Jhelum is much better off than might have been expected, especially in Chakwál and Talagang, where timely thunderstorms enabled the people to sow a good deal of rabi. Kharíf 1896 poor. Cattle gone off in search of fodder. If good winter rains fall no trouble need be anticipated. Jhelum Tahsíl is worst off. Stocks exist for six months at least, but are supposed to belong in part to traders in Amritsar and Delhi. There is little irrigation in this district,—only $\frac{1}{20}$ in rabi and less in kharíf, mostly from wells.

Ráwalpindi—Mr. J. Wilson.

Parts of Ráwalpindi are really in trouble, probably more so than any other part in the Division. Pindigheb, Fatahjang and half of Attock are hot dry tracts, entirely dependent on rain, which has failed. In these parts fodder is very scarce. The Mari-Attock Railway gives a lot of employment, but work for non-professional labourers is required. It is not, however, expected that any relief works, except this and possibly a road to Chauntra, may be required. The eastern half of the district is much better off than the western. There is very little irrigation, and that is mostly in the north from cuts, but $\frac{1}{40}$ only is irrigated. The area of rabi 1896 was less than ⅘ of the average, the kharíf of 1895 was nearly average, and the rabi 1895 a good deal above average.

Peshawar Division.

In the Pesháwar Division there is nothing like famine. High prices obtain, but there is no other sign of scarcity.

Hazára—Mr. Bunbury.

In Hazára the kharíf 1896 is very fair, and good rain fell in September and there have been full rabi sowings. There is surplus fodder in parts which is being exported. Hazára need not be discussed further.

Pesháwar—Major Leigh.

In Pesháwar the baráni kharíf has been poor, but the crop was mainly irrigated. Fodder is scarce, but gram is sufficient. There is much irrigation here: ⅘ of the rabi and more than ⅔ of the kharíf is irrigated. The rabi 1896 was ¾ average, kharíf 1895 average, and rabi 1895 above it. There is no real trouble here.

Kohát—Captain Rawlinson.

In Kohát an average area has been sown for rabi 1897, and beyond a scarcity of fodder there is nothing to note. About ¼ of the rabi and ⅓ of the kharíf is irrigated.

Derajat Division.

There is little that is abnormal in the condition of the Deraját Division. The only difficulty appears to be in obtaining seed for sowing owing to high rates. Takkávi is urgently asked for throughout the Division.*

Bannu—Mr. Younghusband.

In Bannu there was good rain in the end of September, and rabi sowings are complete. Cattle are in much better condition than six months ago. There is plenty of gram. Fodder of course is scarce, but there is a good deal of *bhusa*. About ¼ of the crops are irrigated. The area of rabi 1896 was about $\frac{19}{20}$, kharíf 1895 about $\frac{17}{19}$, and rabi 1895 about average.

Dera Ismail Khan—Mr. Homan.

In Dera Ismail Khan the condition is much the same. The special report is very colorless and gives little information. Between ⅛ and ¼ is irrigated in rabi and $\frac{1}{16}$ in kharíf from river overflow and hill torrents. The area of rabi 1896 was about ⅚, kharíf 1895 average, and rabi 1895 average.

Dera Gházi Khan—Captain C. P. Thompson.

In Dera Gházi Khan the state of affairs is better, indeed better than usual. There are stocks for 9 or 10 months, and no relief will be required. Nearly one-half of the crop is irrigated in rabi and a slightly smaller proportion in kharíf, but in all these Pesháwar and Deraját Districts the irrigated is far the most important part. Area of rabi 1896 $\frac{9}{10}$, kharíf 1895 about $\frac{9}{10}$, and rabi 1895 average.

Muzaffargarh—Captain Bradshaw.

In Muzaffargarh the condition of affairs is in no way unusual. No relief works will be required. More than ⅜ of the rabi and practically the whole of the kharíf is irrigated, and the last three harvests have all been about average.

* Orders have been issued as regards granting Takkávi in such cases in the Deraját and elsewhere.

Summary.

Taking the Province as a whole, we have two patent facts to face,—very high prices and a scarcity of fodder. The high prices are produced by a number of causes. Scarcity in other parts of the country, gambling, and the possibility of a failure of the next rabi are the principal ones. The reports of the Deputy Commissioners and my own calculations and whatever information I have been able to collect show to my mind conclusively that stocks, particularly in the hands of traders, are still large, ample for the Provincial consumption from 6 to 10 months if not depleted by export elsewhere. Seed grain is dear and difficult to get in places, mainly because the owners are holding up for high prices. Takkávi is urgently called for in several districts.* Cattle are suffering from want of fodder and are being moved about to river sides, hills, &c., where more grazing can be got, but on the whole the account of the cattle is better than might have been expected, and it is remarkable that there is hardly any disease among them. A good deal more of the rabi crop for 1897 appears to have been sown than would have been supposed, and the situation really resolves itself into this, that if good rain falls in the winter, I mean at the ordinary time in December and January, there will be no famine, but only some scarcity, and should it fall by any extraordinary good luck by 15th November, there will be a fall in prices at once and very little trouble. Looking at special localities, we may say that if it were not for scarcity elsewhere and high prices there is nothing unusual in the condition of the Pesháwar and Deraját Divisions, which have much irrigation and mainly depend on their irrigated crops. The same may be said of the districts of Mooltan and Jhang. Montgomery is said to be worse off, and one part of Lahore is no doubt in difficulties. There is nothing alarming at present in Shahpur, Jhelum or Siálkot, but the western portion of Ráwalpindi is in as bad a state as any in the Province. Gujránwála is fairly safe with a large area of irrigation; in Amritsar there is nothing like serious distress, and a good deal has been sown for rabi 1896. Gurdáspur is not in bad case, and stocks of grain are large. Hoshiárpur and Kángra are not suffering. Jullundur, Ferozepore and Ludhiána are all spoken of in somewhat gloomy terms by their Deputy Commissioners, all very junior officers, but the Commissioner does not take the same view.† The Delhi Division is really the only one which is seriously threatened. Hissar is suffering severely, and Karnál seems to be in a precarious state. Umballa wants watching, and neither Rohtak nor Gurgaon are in a very good condition.

Famine has certainly not reached us yet, and if the winter rains come in due course, even if we get no more till December or January, it will not come next spring, but there will be serious difficulty in places. If the winter rains fail, and there is no reason why they should, the situation will undoubtedly be a very grave one indeed. It may be as well to note here, however, that of the whole area of the Province ⅔ is irrigated in the rabi and ¼ area in the kharíf. Over four millions of acres are produced on irrigated land each rabi. The rabi of 1896 for the Punjab was 13 annas, the kharíf of 1895 was above 13 annas, and the rabi of 1895 was above average, rather more than 17 annas. Taking the Province as a whole the rabi of 1896 was not a good one. The kharíf of 1895 was a bad one, and there was a great lack of fodder. It was estimated at a 12-anna crop. The rabi of 1895, though it varied a good deal from place to place, was on the whole a good one and above average.

STOCKS AND CONSUMPTION.

As regards stocks in hand, to make any calculations of the actual produce of a large Province like the Punjab, and also of the actual consumption is obviously a very difficult matter and one into which large errors may very easily creep. The figures of the multiplicand are so large that a very trifling alteration in the calculation of individual consumptions must make an enormous difference in the Provincial total. Still it seems to be worth while to make some calculation of the total outturn of the last three harvests, the home consumption during that period, and the export, and to see what it leaves.

The first factor to consider in this calculation is the rate of yield to be assumed. I have made two calculations on different lines, and put up both for what they are worth.

First, we have simply taken the rates of yield calculated in our office in 1892 and submitted to Government in reply to Government of India Circular No. 3—45, dated 20th February 1892, in regard to the principal crops. These were taken mainly from assessment reports and, being used for assessment, are unquestionably under-estimates. For wheat we have in this calculation taken the figures published in the various yearly final forecasts.

As regards exports, figures are not available after June 1896, but as export from the harvest treated of could not commence before June 1895, we have equalized matters by adding in April, May and June 1895. The figures taken are from 1st April 1895 to 30th June 1896. So much for the calculation of outturn and export.

Next we have to consider the question of consumption. I do not propose to make any new calculation, but to take the estimate given in the Decennial Material Progress Report of the Punjab, page 14. This gives the consumption per head at 6 maunds per annum for the whole population, a much higher rate than the Famine Code ratio.

* See above.

† His Honor is inclined to think that the Commissioner, with whom he has discussed the position within the last few days, takes a somewhat too sanguine view.

The result of taking the figures in this way is as follows :—

Total outturn of the three harvests, rabi 1895, kharíf 1895 and rabi 1896, is 205,383,402 maunds. Total export from 1st April 1895 to 30th June 1896 is 18,722,668 maunds, leaving for consumption 186,660,742 maunds. The consumption for the period 15th June 1895, on which date the produce of the rabi harvest may be assumed to have been first indented on to 15th June 1896, on the above calculation comes to 145,779,691 maunds, leaving, on 15th June 1896, 40,881,051 maunds, which at the above rate gives sufficient for 3½ months, or up to 1st October only, to which must be added the entire produce of the present kharíf, which may be assumed as at least sufficient for three months. Thus even calculating at the higher rate of consumption, which includes allowance for cattle, seed grain, &c., &c., this would show a surplus which would last up to 1st January.

We have, however, now got more data than we had in 1892 on which to calculate the outturn of various crops, and a revision of our estimated rates has been ordered to be made in 1897. We have for the last three years been making careful experiments on the outturn of various crops in all parts of the Province, and the result is to give a very materially higher rate than those hitherto assumed. Thus we find as the result of our three years' experiments taking simply the arithmetical average, an outturn which compares as follows, omitting odd seers, with the rates assumed in the calculations given above :—

RESULT OF EXPERIMENTS.

	Irrigated.	*Unirrigated.*	*Assumed in estimate.*
	Mds.	Mds.	Mds.
Wheat ...	15¼	11½	7½
Gram ...	17½	13¼	6¾
Barley ...	18	13¾	7¾
Maize ...	24½	14½	10½
Jowár ...	8¾	5	5½
Bájra ...	9¼	6½	4½

These experiments are free from much of the suspicion attaching to experiments made during Settlement operations. These experiments were made in 14 typical districts and tracts, and consequently I think we are quite safe in deducing the following rates, which are still moderate, from them on which to calculate the outturn: Wheat 10 maunds, gram 11 maunds, barley 11 maunds, maize 14 maunds, jowár 6 maunds, and bájra 6 maunds. These rates are still, I think, moderate. The result of the calculations made at these rates are as follows :—

OUTTURN.

	Mds.
Rabi 1895	128,014,331
Kharíf 1895	49,763,464
Rabi 1896	90,834,806
Total ...	268,612,601
Deduct export from 1st April 1895 to 30th June 1896	18,722,660
Deduct consumption by population 15th June 1895 to 15th June 1896	125,382,610
Consumption for seed, cattle, &c.	20,578,505
Total consumption ...	164,683,775
Balance on 15th June 1896 ...	103,928,826

This balance gives sufficient for 8½ months' consumption at ordinary rates and 11¾ months at Famine Code rates. But the assumption that there was no balance in hand on 15th June 1895 is hardly justified, as will be seen :—

	Mds.
Outturn of rabi 1894	137,936,020
„ kharíf 1894	54,596,736
Total ...	192,53 ,756
Total of one year's consumption of all kinds	145,961,115
Export between 1st April 1894 and 30th March 1895	29,132,720
Total consumption ...	175,093,835
Balance	17,438,921

which would be sufficient for the consumption at ordinary rates of 1½ months, that is to say at ordinary rates stocks should be sufficient for ten months or at Famine Code rates

for rather more than 13 months. This calculation allows for all kinds of consumption, and is I believe not very far from the truth. Ten months from 15th June 1896 would carry us on to 15th April, and we have the entire kharíf crop of 1896 to add to this, which would take us on to 15th July 1897 without taking account of the rabi 1897.

This corresponds very fairly with the views generally expressed by Deputy Commissioners. It must also be remembered that in this calculation only cereals and pulses have been taken into consideration. I may note that the food crops grown on irrigated lands alone in the next rabi would in my opinion not fall short of 45,000,000 maunds, which is equal to three months' consumption, inclusive of seed, cattle, &c., and to about 4½ months at Famine Code rates. This is assuming that there is no baráni rabi at all, which is a very gratuitous assumption.

This according to my calculation, allowing for a minimum rabi, there should be enough food to last up to the kharíf of next year, 1897. This of course takes no account of possible export, which cannot be calculated.

30-10-96. F. A. ROBERTSON.

Punjab Government Press, Lahore—25-11-96—36.

CHARACTER OF THE PRECEDING AND PROSPECTS OF THE COMING HARVEST.

Character of the preceding and Prospects of the coming Harvest.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue.		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								DELHI DIVISION.						
Hissar ... (6)	Average ... 148	Very poor... 30	Very poor... 46	Failed everywhere, with the exception of some villages in various tracts where the harvest yielded a very poor outturn. No crops on báráni lands.	Rabi prospects unfavourable. Canal crops in fair condition, while crops on sailába lands are very poor. Rice crops will for the most part be destroyed owing to cessation of floods	Exhausted ...	Sufficient at present, but if no rain falls within a fortnight tank water is likely to be exhausted in báráni villages.	Bad ...	Rs. 13,011	Rs 1,75,000	Insufficient. In some parts of the district almost exhausted	Almost immediately.	...	
Rohtak ... (10)	Good. Outturn 18 annas on unirrigated and 16 annas on irrigated lands. 144	The outturn varied from 2 annas in parts of the Rohtak Tahsíl to 8 annas in Gohána, 12 annas in Sámpla and 14 annas in Jhajjar. 77	Very bad: 2 annas crop only on unirrigated lands. Average crop on irrigated lands. 54	Expected to be the same as last year: the average quality of outturn on baráni lands 6 annas. On irrigated lands the outturn is expected to be below average.	Unless rain falls in November, there will be an entire failure of unirrigated rabi crops; but if rain falls there is no reason why there should not be an excellent crop of wheat and barley, but the time for sowing gram has passed.	Dry fodder stocks sufficient for 4 months. No grass on baráni land, but sufficient on canal-irrigated land.	Tanks drying up, and unless rain falls in November, cattle will be in great straits.	In fair condition.	Rs. 22,664	Rs. 2,50,000	Sufficient for the needs of the people for 4 or 5 months, provided there is no large demand from outside.	In November in the Jhajjar Tahsíl and in January in Rohtak and Sámpla unless rain falls.	...	
Gurgaon... (14)	... 117	... 87	... 76	With the exception of bájra and jowár, the crop has almost been a failure on rain lands. On well land the outturn promises to be good and on canal lands above the average.	Unless there is rain before 15th November, there will be no rabi sowings this year, except on irrigated lands.	Sufficient to last till February or March If no rain falls in December, there will be a great scarcity of fodder.	Tanks drying up. Well water running low in portions of the Rewári and Gurgaon Tahsíls.	Good at present, but not likely to continue so under present conditions.	Rs. 20,839	Rs. 34,000.	Sufficient for a year or two if not exported in most of the big villages. Generally grain will last four or five months.	At once ...	For from 900 to 1,200 laborers.	
Delhi ... (19)	Good—if not above, up to the average. 122	The area sown was considerably below the average; so ws the yield. 94	Very unfavourable in the southern part of the Delhi Tahsíl and in the whole of the Ballabgarh Tahsíl. 76	The estimate of the rain crop is from 8 to 10 annas An area above the average was sown, but crops have suffered from drought and hot dry winds.	The present position of the crops is bad. No sowings can take place on land not served by wells or by canals without further rainfall, and it seems very unlikely that rain will fall in time to allow of rabi sowings.	Grass is getting very scarce, and there is little bhusa and no old stock of charri The present kharíf will give a sufficient supply for two or three months	Sufficient ...	Condition fair, but distress may make itself felt soon owing to short supply of grain and fodder. No cattle disease and no deaths from starvation have been reported.	Rs. 36,253.	Rs. 71,000	Stocks of grain in hands of villagers are probably small. It is believed that except in parts of Ballabgarh stocks in the hands of traders are sufficient for three or four months.	Relief works except on a very small scale will probably not be required before the end of November.	Extent of relief works will depend on whether rain sufficient for sowings will fall before end of November.	

NOTE—The figures in brackets in Column 1 represent the proportion of total crops which receive irrigation annually on an average area of the last ten years. The figures in Columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average harvest of ten years

Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 10th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								DELHI						
Karnál ... (20)	Good. An 18 anna crop. 138	Average. (A 12 anna harvest.) 74	Poor; 10-anna crop wheat; gram crop failed. 60	In the southern part of the Kaith l Tahsíl the bárání crops are a complete failure. In the canal and well irrigated circle of Pawádh the harvest is average. In the Andarwár and Naili Circles the outturn is very poor. In the Karná Tahsíl the bárání crops are also a failure, except about Indri Harvest especially bad in the Nardak. In canal villages the harvest is below the average owing to short supplies of water In the Khádir it is very poor. In Pánipat the crops in the Khádir are average, but in the Bangar below average	No gram can be sown owing to failure of rains in September. If rain falls before end of month wheat can be sown. If no rain falls there will be no rabi harvest on bárání lands. In canal lands rabi sowings are in progress, but there is a deficiency of water in the Jamna, and the outlook is a very bad one.	Sufficient in canal lands for two or three months. In the bárání tracts the grass is withered up and cattle are on the move to the Jumna. In the Naili there is a certain amount of grazing which is not expected to last long.	Sufficient for two months in tanks.	Cattle are on the move to the Jamna. Well buffaloes in bad condition.	DIVISION— Rs. 19,853	CONCLUDED. Rs. 1,27,000	As a rule, villagers have no stocks left, nearly all the grain being in the hands of banias. Said to be sufficient for three months only.	Early in November.	Depends on whether rain falls before November or not, but programme will probably be exhausted if rain does not fall.	
Umballa... (4)	Nearly a bumper (14 annas) 113	Average (12 annas). 94	Bad (6 or 7 annas). 76	Average outturn between a 9 and 10 anna crop, varying from 5 annas in Northern Chachra to 14 annas in the Khádir.	Extremely bad. There have been no rains for rabi sowings except in low lying lands. Actual bárání sowings up to date not worth considering, except in bet and khádir lands.	Stocks likely to last for four months. The grazing now available is poor, and without rain none will exist to speak of in two months' time The zamíndárs have attempted hay-making and have stacked hay and grown charri.	Sufficient from wells. Tanks expected to be dry by March or April if no rain falls.	Have sufficient fodder for four months and water till March. Mortality from hunger among healthy cattle need not be anticipated with a timely monsoon. Advances will be wanted.	Rs. 48,700	Rs 12,000	Rural tracts are provided for generally speaking. The zamíndárs have their maize now threshed, and this should last them for three to four months if they do not sell rashly. They are at present holding up their stocks of maize Towns on communications are depleted by trade, while those off the channels still hold stocks.	In March next in rural tracts. For towns it may be necessary to provide relief works very soon. Gratuitous relief at kitchens may have to be started any day in and near towns.		

NOTE.—The figures in brackets in Column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of average of ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average the last ten years.

Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue.		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								JULLUNDUR						
								DIVISION.						
Kángra ... (27)	Good ... 136	Good, especially in maize The rice crop was slightly less than in the previous year, but was up to the average. 107	The cropped area showed a shrinkage of 34 per cent., almost entirely in unirrigated tracts owing to deficient winter rains. As a consequence, large suspensions and remissions of revenue have been made. 89	In irrigated tracts the crops are good. In unirrigated tracts one-half an average crop is the most favourable forecast which can be made. In several large tracts it will be less than ¼rd. On the whole the outturn of grain will probably be a 10-anna crop.	There is no immediate cause for alarm, but the main danger arises from the fact that buyers from Amritsar and other centres are sending round agents to secure the maize and rice before it is actually cut. This may lead to a clearing out of the good stuffs, which will be disastrous if the rabi fail Should rain fail, there will be serious distress.	Sufficient to last for six months.	Sufficient at present	No present difficulty or cause for apprehension.	Rs. 50,104	Rs. 50,000	Short in Hamírpur, moderate in Dera and Núrpur, and sufficient elsewhere.	Not before January, and then only if rabi promises to be a failure.	For present purposes the District Boards Funds will suffice. If by January next the situation becomes acute, provision will have to be made to feed about 60,000 people.	Commissioner feels sure that, as far as Kángra is concerned, we need anticipate no famine unless the absence of rainfall up to the end of December shows that the rabi will be an absolute failure on the unirrigated tracts
Hoshiárpur ... (5)	... 99	Showed an increase in the cropped area as compared with the preceding kharíf of 14 per cent, the increase in maize (33 per cent) being most noticeable. Outturn satisfactory. 101	There was a contraction of 19 per cent. on the cropped area owing to early cessation of the rains. In the *bet* tracts the outturn was a full one, but in the lower tracts the yield was only 6 annas. The *sirwal* villages had a 10-anna crop In unirrigated tracts the outturn was poor. 81	In Tahsíl Hoshiárpur a full crop expected in the sirwal. In the submontane tracts the outturn is cast at 5/6ths; In the hills from ⅓rd to ¼th. In Tahsíls Dasúya and Garhshankar, sirwal, 12 annas; submontane, 10 annas; hills, from 4 to 6 annas; *bet*, a full crop except in Garhshankar, where it will probably be 10 annas. In Tahsíl Una slightly higher than a half crop for the plains and slightly higher than between 4 and 6 annas for the hills Probably a ¾ths crop for whole district.	Outlook for the rabi bad. Unless there is rain this month, sowings will be little more than half the average, except in bet and sirwal tracts.	The short kharíf fodder crops will be supplemented by large and early sowings of green fodder on wet lands. Not much distress anticipated if rain falls properly for the rabi. Fodder is being exported, and if this continues the situation will be made worse.	Sufficient ...	No difficulty anticipated.	Rs. 5,193	Rs. 30,000	Severally insufficient both in the hands of the zamíndárs and the banias. Likely to last out till April next, given the hope of a favourable rabi.	If rain falls before the Diwáli sufficient for even moderate sowings, there will be no necessity for relief. If rain does not fall, relief works will be necessary in January.	Depends on whether rain falls or not. If rain does not fall, provision might have to be made for 50,000 people	Commissioner said it would tend to modify the crisis were the earth-work of the recently approved Jullundur-Hoshiárpur Railway put down for beginning early in January.

NOTE.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of average of ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average the last ten years.

Character of the preceding and prospects of the coming Harvest—continued.

District	Character of Harvests.				Present outlook as to				Amount of Land Revenue		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								JULLUNDUR DIVISION—concluded.						
Jullundur (43)	Below average. 104	Fair, showing an increase in the cropped area of 20,000 acres over the figures for the previous kharíf. Outturn seriously affected by early cessation of rains. 94	Showed a heavy shrinkage on the cropped area of nearly 93,000 acres. 84	Estimated at 14 annas on watered lands in Jullundur and at 12 annas in other tahsíls. In dry lands 6 annas in Nawashahr, 4 in Jullundur and 1 hillour, and 2 in Nakodar.	Cane, good. Maize, fair. Cotton, poor. Rabi ploughings progressing. Time to sow wheat till end of present month if rain falls. Gram can no longer be sown. If no rain by 15th November no báráni rabi can be hoped for.	Very scarce and likely to fail towards end of November if no rain falls.	Sufficient ...	In poor condition.	Rs. 3,259	Rs. 30,000	Sufficient on the assumption that the rabi is a fair one, and that the exports now going on will cease. The present jowár crop represents about two months' supplies for the district itself.	If rabi fails, relief works will probably be required by the 30th November.	For 30,000 persons.	
Ludhiána (24)	Favourable. 103	Generally poor. 69	Showed a heavy shrinkage in the area sown. Outturn poor in the dry lands of Tahsíl Ludhiána. Yield fair in Samrála and Jagraon. 84	Estimated at 2 annas on dry lands and all round at 6 annas.	Cane, 15 annas. Maize, 14 do. on wet plots. The *bet* outturn at 12 annas and the báráni at almost *nil*.	Very scarce, except in the *bet*. Large quantities are being imported. The scarcity of fodder is regarded as the most serious part of the situation.	Sufficient ...	Reported to be in a bad way and are being sold at prices far below their value.	Rs. 2,450	Rs. 25,000	Ample to last until the end of April. Dealers are now holding back. A good rainfall at the end of December will put things straight.	* None on the scale beyond the financial resources of the District Board required before January next; and probably none will be required at all if good rain falls.	For 15,000 people for five months according to Deputy Commissioner, but Commissioner thinks none if rain falls.	*Commissioner thinks it would largely benefit this district and Ferozepor were Government ready to begin the earthwork portion of the Ludhiána-Ferozepore Railway early in January next if prospects do not improve in the meantime.
Ferozepore (31)	Average ... 121	Poor; classed at 8 annas. 66	Area cropped was 26 per cent. below that of the previous rabi The harvest generally was poor. 89	Decidedly bad. Dry areas have almost entirely failed. A yield of from 40 to 50 per cent. on the wet lands is estimated. Commissioner estimates it at more.	Gloomy in view of the present difficulty of ploughing. The crops sown in light soil will only be kept alive if rain falls	No old stocks remain. Being imported briskly from Hoshiárpur and south Amritsar at heavy cost. The withered dry crops will be used for fodder.	Difficulty anticipated only in Tahsíl Muktsar, where the water is brackish. Commissioner some weeks back asked the Sirhind Canal authorities to open a ráj-báha for men and cattle.	Have been sent largely to Bikanir for grazing purposes. Can get along for two months without heavy mortality.	Rs. 16,355	Rs. 1,35,000	Small with the smaller land-owners; fairly large amongst the thriving Ját Sikh owners in Tahsíl Moga. Stocks likely to last till April.	District Board is likely to meet all emergencies between this and the end of January.	...	Deputy Commissioner urges the importance of immediately undertaking the earthwork of the recently sanctioned Ludhiána-Ferozepore Railway.

Note.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of the last ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average average of ten years.

The Commissioner (Colonel Massy) sums up the state of affairs in the Division as follows:—

"The present situation is a scare pure and simple, brought about by the assumption that we are going to lose the coming rabi harvest; there is some justification for this assumption from the fact that, owing to the sudden ceasing of the rains in late August, much of the rabi land is still unploughed and unsown, also from the fact that the yield of the last rabi was below the average and of the present kharíf decidedly poor in Ludhiána and Ferozepore. Without rain before the end of December we shall be in moderate difficulties in the lower tracts of Kángra and in Hoshiárpur and Jullundur generally, and there will be a severe pinch amount ing to famine in Ludhiána and Ferozepore. Local financial resources can be relied on everywhere up to at least the middle of January."

Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of harvest.				Present outlook as to				Amount of land revenue.		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of Rabi 1896.	Probable short collections on account of Kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								LAHORE DIVISION.						
Mooltan (84)	Average or slightly below average. 116	Average ... 97	Average ... 94	In the Mooltan, Mailsi and Lodhrán Tahsíls the crops are average	Little indigo has been sown, and cotton sowings are also contracted. As canal irrigation is now failing, the outturn of grain is not expected to be so good. Bájra and maize seem generally good.	Scarce in Kabírwála, but sufficiently abundant in other tahsíls. Bhúsa is scarce owing to the poor straw of last rabi.	Sufficient ..	In good condition and generally healthy.	Rs. 1,250	Rs. 4,000	Sufficient. Some 50,000 maunds stored in Mooltan for a rise of prices within the Municipality. Export going on to North-Western Provinces. No surplus stocks in Mooltan Tahsíl outside the town itself.	None at present necessary unless winter rains fail.	...	
Jhang ... (72)	Chiniot poor; Jhang and Shorkot average. 118	Below average in all three tahsíls. 136	Average ... 120	Average in Chiniot and Shorkot Tahsíls and below average in Jhang.	State of standing crops in Jhang Tahsíl precarious. Corn has not filled well in ears, but the outlook has not assumed any serious aspect. Prospects good in Chiniot and Shorkot along the Chiniot Canal and indifferent in other tracts.	Scarce in Jhang and moderate stock available in Chiniot and Shorkot. Outlook unsatisfactory everywhere.	Scanty except along Chenab Canal and in irrigated areas.	Underfed and overworked.	Rs. 2,323	No estimate	Sufficient probably to last until spring 1897 unless exported.	Not anticipated, as there is no actual fear of famine. In any case Chenab Canal and Railway if extended will give sufficient work.	...	
Montgomery. (75)	Bumper harvest. 121	The area under crops was 117,714 acres as compared with 125,158 acres in Kharíf 1894 124	The crops were good and the yield satisfactory, although the area under crops was less than the previous year. 81	Worse than the preceding one.	Crops irrigated by the Upper Sutlej Inundation Canals are poor. A 10 to 12 anna crop may be expected. The crops irrigated by the Gugera District Boards Canal have failed considerably owing to the stoppage of the Deg stream. Area irrigated by wells has also contracted. There are hardly any barání crops. Outlook for the rabi bad.	Very little grass except in the Sandal Bár and in the reserves. From 15th November it is apprehended the scarcity of fodder will be keenly felt.	Sufficient for drinking purposes as long as the Ravi does not dry up. It is running lower this year than in any previous year.	In bad condition. Many have died from starvation.	Rs. 35,337	Rs. 20,000	Deputy Commissioner is inclined to think it is insufficient.	No definite information. None were opened in the famine of 1861 owing to the nomadic character of the people. If any relief works are needed they will be required for the Ganii Bár of Ravi and the Bár of Pákpattan, probably from 15th November.	...	The Commissioner has directed the Deputy Commissioner to submit the report required by Section 43 of the Famine Code and to start one or two test works where necessary.
Lahore ... (62)	Average 106	Poor on unirrigated lands. The cropped area was mostly used as fodder. 78	There was a decrease of 203,271 acres in the cropped area as compared with the preceding year, chiefly due to continued drought in the Sharakpur Tahsíl. 76	Very poor on unirrigated lands, and on canal-irrigated lands fairly good. An insect called 'kiri' has attacked maize.	Prospects for well-irrigated lands are poor owing to dearth of fodder.	Scarce in many parts of the district.	Sufficient. Deg Nala drying up.	Large numbers have died from starvation and perhaps exhaustion.	Rs. 78,868	Rs. 2,33,000	Sufficient with traders, but not with zamíndárs.	If no rain falls in the course of a month small works of relief will be needed in the various parts of the district, chiefly in the Chunián and Sharakpur Tahsíls.	The Municipal Committee are preparing to reserve works for execution by relief workers should there prove to be any such.	Commissioner thinks the Gugera Branch will give sufficient work for relief.

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Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of harvests.				Present outlook as to				Amount of Land Revenue		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								LAHORE DIVISION—concluded.						
Amritsar (51)	Area cultivated acres 782,032. Area cropped 587,653 acres. Area failed 24,706 acres Area matured 562,807 acres. 101	Area cultivated acres 780,870. Area cropped 283,253 acres. Area failed 14,598 acres. Area matured 487,642 acres. 98	Area cultivated acres 777,423 Area cropped 547,742 acres. Area failed 60,100 acres. Area matured 287,655 acres 88	Average on irrigated lands, but have withered on bárání lands owing to scanty rainfall.	On irrigated lands the prospects are good, but on barání lands they are not good. Sufficient rain has fallen in parts of the district for the rabi sowings.	Sufficient fodder and grazing, but not sufficient stock stored.	Sufficient ...	Looking well, but those on well lands show signs of work.	Rs. 560 ...	*Nil.*	Stocks not sufficient in hands of villagers, but ample in the hands of traders.	May have to be started in December or January if no rain falls within the next month, and then only in Ajnála Tahsíl. No signs of distress at present.	...	
Gurdáspur (21)	Area sown 494,189 acres. Area cropped 466,761 acres. 98	Area sown 404,358 acres. Area cropped 373,340 acres. 94	Area sown 432,062 acres. Area cropped 382,695 acres. 80	*Tahsíl Batála.* Maize, sugarcane, rice and cotton crops in good condition. Moth and mash sown on baráni lands very poor. Til crops average. *Tahsíl Gurdáspur.* Kharif crops have dried up on high lands; on Bet lands they are doing well. *Tahsíl Pathánkot* Average as regards yield and area. *Tahsíl Shakargarh.* Have done well in the Barrári Circle. Crops on high land have fared badly for want of rain. In the Paritla and Darap Circles rice crop damaged: yield poor. In the Bet circle crops did well on low-lying lands, but badly on high land.	Poor ...	Fair in Batála and Gurdáspur Tahsíls and poor in other two tahsíls.	Sufficient except in the Barrári Circle of the Shakargarh Tahsíl.	Good at present.	Rs. 23,183	Rs. 36,000 ...	Ample but grain is being largely exported. The zamíndárs in general have no stocks. Large exports are being made from Batála to places down-country.	About the 15th of November if prospects do not improve. The District Board has made proposals for sufficient work to employ labour as shown in the next column.	In Tahsíls Shakargarh and Pathánkot 5,000 men for 6 months, and in the following towns:— *Men.* Batála 15,000 Gurdáspur 3,000 Dinonagar 5,000 Kalánaur 3,000 Srígovindpur 2,000 Dera Nának 5,000 Pathánkot 4,000 Sujánpur 2,000 Fatehgarh 3,000 for three months.	

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Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RAWALPINDI DIVISION.									Rs. 4,176	Rs. 10,000	Stocks very small in the hands of villagers, but ample in the hands of traders. Credit of zamíndárs continues good.	Will not be necessary unless prices continue to rise.	If relief works are necessary, the Deputy Commissioner thinks that they would be well within the scope of the District Boards Funds, which spend Rs. 20,000 per annum on communications.	
Siálkot... (51)	Indifferent... 100	Good ... 101	Indifferent... 88	Poor. The Deputy Commissioner thinks that the present kharíf throughout the district though by no means a good crop is very much better than it has been represented Outturn south of the Chenáb would have been 10 annas if jowár, maize and cane had not had to be used for fodder. Rice crop mostly failed except in Bajwat	Have suffered greatly for want of rain, especially the rice crop. In Daska sugarcane, cotton and maize are withering for want of rain. In Zaffarwál maize is being harvested Outturn average. In Pasrúr the crops are withering on báráni lands Raya outturn below average. Rice, cotton, &c., suffering for want of rain. Sowings for rabi will be below average unless rain falls before Christmas. In the báráni tracts everything depends on rain between this and Christmas.	In Daska sugarcane is being used as fodder. No green fodder in Zaffarwál. Maize and jowár stocks being used as fodder in Pasrúr.	Scarce in ponds. Cattle dependent on well water in Raya.	Losing in condition for want of fodder. A good deal of the kharíf crop will have to be sacrificed to keep cattle alive. Large taccávi advances have been made for purchase of cattle. Cattle losing condition for want of fodder and overwork in Raya. Large taccávi allowances have been made.						
Gujrát ... (29)	Average ... 108	Somewhat under average. 98	Much under average, due to insufficient rainfall. In a large number of villages only 30 per cent. of the rabi area was under crop. 78	In the submontane region the crop will in all probability be a little under the average. In the Bár and Hithár lands excluding the riverain villages such crops as there are will in all probability be largely used up as fodder. In the south-western portion of the Phália Tahsíl there are practically no crops at all.	In the submontane tracts there will probably be a 14-anna crop, and in the other two regions not much more than a 4-anna crop. The August rains led to extensive sowings which have come to nothing.	Bad. People have migrated with their cattle to the Belás of the Jhelum and other rivers. There are *no* stores of Bhúsa and but little grass. Mortality among cattle will certainly be great.	No present danger of a failure of the water-supply for drinking purposes and watering cattle. There are wells everywhere in the district.	Owing to an outbreak of rinderpest, the mortality has been great. Nearly 5,000 applications have been received for loans to buy cattle. Over 5,000 cattle have died, and the last six months' returns will probably double that number.	Rs. 79,888	Rs. 1,55,000	The villagers of the Bár and Hithár Circle have almost consumed their stock. The stock of grain in the hands of traders is not very great. If no exports are made, it will suffice for the requirements of the people till the rabi harvest matures.	Already in progress in the Phália Tahsíl, and more are about to be opened in the centre of the most affected parts of the tahsíl.		
Gujránwála (65)	Bad ... 113	Poor to bad 84	Below average. 90	Promises very poorly and more than an 8 anna crop can hardly be reckoned on, except in a few circles.	Will be below average and may turn out very bad, particularly cane and cotton.	Scarce and in places unprocurable.	Natural and artificial reservoirs are nearly all dry. As the district is mainly dependent on wells for water for all purposes, and the cattle are in a poor condition, the outlook is most grave	Seriously reduced in most circles by the past drought and hard work.	Rs. 26,371	Rs. 1,78,000	Practically no stocks of grain in the hands of the peasants. Traders and well to-do agriculturists are believed to have stocks which if not exported would suffice till the next rabi.	None on a provincial basis are required just now, and none are likely to be wanted before February 1897 at the earliest Canal and Railway works in progress are automatic relief works.	...	These remarks do not apply to the Chenab Canal tract, which is exceptional.

NOTE.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of average of ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average the last ten years.

Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue.		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895	Kharíf 1895	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of Rabi 1896	Probable short collections on account of Kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								RAWALPINDI DIVISION—continued.						
Shahpur... (48)	Below average for want of seasonable rain. Damaged by blight. 106	Poor owing to want of seasonable rain at sowing time. 108	43 per cent. below average of three preceding years. 83	Indifferent ...	Crops fair along the Jhelum. Bad in the bár of Shahpur and Bhera; fairly good in the western part of the District. Rabi prospects precarious owing to absence of rain.	Sufficient in the Thal and Sún, but scarce elsewhere.	Insufficient except in riverain villages.	So far in good condition, but without rain there is danger of their dying of starvation in certain tracts.	Rs. 40,294	Rs. 54,000	Insufficient in hands of villagers, nor have traders enough for the wants of the district.	Not needed at present, but if they are the posed to be able for relief works.	Salt Range and from Bhera to Jhang are available.	The Commissioner thinks that the early commencement of the Jhelum Canal would have an excellent effect on the Bhera and Jhelum Bár and neighbouring tracts as well as in Phália.
			Jhelum Tahsíl.											
Jhelum ... (5)	Poor ...	Poor ...	Very poor	Good in some circles and bad in others.	Sufficient rain has fallen to admit of the rabi sowings everywhere except in the Thal of Pind Dádan Khan, and if the winter rains come, the coming rabi harvest will be good. There are at present little or no prospects of a rabi crop in the Thal.	Scarce in every tahsíl. Bhúsa nearly exhausted. No fodder in the Thal, and cattle have been sent to the river lands in Shahpur, &c. In the Jhelum Tahsíl there will be a practical fodder famine in a month, when all the scanty crops of the present harvest have been exhausted. Most of the forest reserves in district are exhausted.	Sufficient ...	In fair condition in Chakwál and Talagang, poor in Pind Dádan Khan, and in semi-starvation in half of Jhelum.	Rs. 9,779	Rs. 75,000	In the Talagang, Chakwál and Pind Dádan Khan Tahsíls there is a sufficiency in the hands of villagers to last for six months. In the affected tracts in the Jhelum District the villagers have as a rule no stores and are dependent on their money-lenders and traders. There is supposed to be a good stock in the hands of traders.	Will not be necessary if the winter rain fall. If rain does not fall, relief works will require to be started in January in Jhelum Tahsíl and probably in Chakwál. Numbers of people have emigrated to the railways in Mombassa and Burma and the Mari Attock line.	...	Deputy Commissioner strongly urges that work be started at once on the Jhelum Canal. This would provide work for three districts—Jhelum, Gujrát and Shahpur.
			Tahsíl Chakwál.											
	Fair ...	Below average. Only an 8-anna crop in some circles.	Much below average and almost a total failure in some circles.	Good in some circles; almost a total failure in others.										
			Tahsíl Talagang.											
	Average ... 118	Fair average 95	Slightly under average. 81	Very poor Almost a total failure in some circles and in the Thal. A fair average in the Hill Circle.										
Ráwalpindi (5)	Fair ... 111	Poor, especially in the south-west of the district. 97	Poor, especially in the south-west of the district. 78	Very poor for the district as a whole.	In the Murree and Kahúta Tahsíls the crop not far below average. In the Gujar Khan and Ráwalpindi Tahsíls the crop is poor. In the Pindigheb and Attock Tahsíls the crop is very poor owing to deficient rain. There is no cause for anxiety in the eastern half of the district, but the western half is in serious straits. The prospects of the rabi are also poor. Unless rain falls soon, the rabi sowings will be much less than usual.	Scarce everywhere except in Tahsíls Murree and Kahúta. Scarcity severe in the west of the district, but not in the east.	Sufficient ...	Condition good in the east of the district, but in great straits for fodder in the west, and numbers are likely to succumb for want of sufficient nourishment.	Rs. 7,142	Rs. 1,00,000	Little grain in hands of villagers, but stock in the hands of traders is sufficient for some time to come.	Regular relief works on a large scale are not anticipated, but test works in three tahsíls will soon be started.	The District Board seems to have all the funds needed for immediate relief.	The Deputy Commissioner urges that the Chief Engineer be moved to reserve a portion of the work on the Mari-Attock Railway for the able-bodied not accustomed to labour. The Mari-Attock line will occupy 20,000 labourers (mostly professional) between October and March. A road from Pindigheb to Chauntra is being projected.

Note.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of average of ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average the last ten years.

Character of the preceding and prospects of the coming harvest—continued.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue		Stocks of grain in hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of Rabi 1896.	Probable short collections on account of Kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								PESHAWAR DIVISION.						
	Tahsíl Abbott-abad.													
Hazára ... (12)	Average (16 annas).	Average ...	Poor (14 annas).	The crops in the mountainous tracts on irrigated areas were good. On unirrigated areas bad.	In the Abbottabad and Mansehra Tahsíls sowings of wheat, barley and rape have been generally completed. While there is sufficient moisture in the soil to admit of full sowings, sowings can be made till well into December in these two tahsíls Sowings have been effected on irrigated tracts in the Haripur Tahsíl and also on lands that are susceptible to moisture, but no sowings have been carried out on baráni lands where no rain has fallen. Sowings can, however, be made in December and even in January.	Abundant in the Abbottabad Tahsíl, and generally sufficient in the district.	Sufficient ...	In good condition.	Rs. 150	Rs. 1,700	Zamíndárs have sufficient stocks of grain to last them till next rabi. In certain parts of the Haripur Tahsíl they have had to purchase grain for food. In the Mansehra Tahsíl there are considerable stocks of grain in the hands of the traders.	In January if no rain falls. If timely rain falls no relief works will be needed Only in Haripur is there real cause for anxiety.	24,445 persons are likely to be affected by the scarcity.	Commissioner thinks the prospects in the Haripur Tahsíl are gloomier than here stated, and Deputy Commissioner has been asked for further report.
	Tahsíl Mansehra.													
	Poor (14 annas).	Average. Rice good (18 annas).	Poor (14 annas).	Average in mountainous and low-lying tracts. Bad on baráni lands. 61 out of 268 villages need careful consideration owing to bad harvest.										
	Tahsíl Haripur.													
	Poor (14 annas). 93	Generally poor (14 annas) In some tracts only half average. 107	Wheat harvest indifferent (8 annas), barley (6 annas). 86	Varies considerably. In low hill tracts and irrigated plain tracts the outturn ranged from 12 to 14 annas in 174 out of 310 villages. In 136 villages crops were very bad (2 annas).										
Peshawar (52)	Good ... 109	Good ... 99	Indifferent... 78	Much inferior to the kharíf harvest of 1895. Only the land irrigated was cultivated, and its produce is now available. In unirrigated lands the produce has failed.	The standing kharíf harvest on irrigated areas is fairly good.	Sufficient in villages on irrigated lands. The state of the fodder supply for the whole district is, however, bad.	Scarce in baráni villages for men and cattle. Irrigation from the canals has been good, except from the Bára.	Much in need of water and fodder in baráni villages. None have yet died, as they are living on the stock in hand from previous crops and by migration to other villages.	Rs. 5,035	Rs. 65,500	About 156,394 maunds are in the hands of traders. It is believed that every zamíndár has sufficient for his own requirements for at least two months, by which time the kharíf will be reaped and will provide for three months more.	The prospects are generally favourable, and there is no present necessity to start relief works. If the necessity does arise, it is suggested that relief works be started on 1st January.	A list of relief works proposed is given by the Deputy Commissioner.	

Note.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an average of ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average harvest area of the last ten years.

Character of the preceding and prospects of the coming Harvest—continued.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue.		Stocks of grain in the hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895.	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								PESHAWAR DIVISION—CONCLUDED.						
Kohát ... (23)	Crops on irrigated lands average. Those on unirrigated lands far below the average. 101	Standing crops on unirrigated lands mostly failed. 108	Area of unirrigated lands sown with rabi crops was very limited owing to no rain. Crops on irrigated lands were about average, and those on unirrigated lands below the average. 102	Crops have suffered both on irrigated and unirrigated lands owing to failure of rain.	Average area is likely to be sown with rabi crops in the district. If rain fails in October, November, and December, the rabi sowings on unirrigated lands are likely to be limited, and standing crops will suffer. On irrigated lands in the Hangu Tahsíl kharíf crops are being harvested. The present agricultural outlook as to crops is not bad, and if rain falls the next rabi harvest may be good.	Sufficient in Tappa Sarak and in the Darra Circle of the Teri Tahsíl and also in the "Abi" villages of the Kohát and Hangu Tahsíls. Scarce in the báráni villages of the Kohát and Hangu Tahsíls and in the Seni and Kurram Circles of the Teri Tahsíl.	Sufficient at present. If rains fail, there will be a scarcity of water in a few villages of the Kohát and Teri Tahsíls.	Condition not good. Several have died in the Hangu and Kohát Tahsíls from foot and mouth disease. Several have died also for want of sufficient fodder. Taccávi advances are being given.	Rs. 3,839	Rs. 14,000	Do not amount to more than 100,000 maunds. Should suffice till next harvest.	None unless	rabi fails.	Commissioner thinks there is more scarcity in this district than is apparent. Deputy Commissioner has been asked for further report, and a rough scheme of works suitable as famine relief works has been prepared by Major Leigh.
								DERAJAT DIVISION.						
Bannu ... (26)	Fair except in the Marwat baráni tract, where it was poor. 97	Fair except in the Marwat baráni tract, where it was poor 89	Fair in irrigated tracts, below average in baráni tracts and also in the Indus alluvial lands. 88	The present kharíf in Bannu and Marwat is average in irrigated lands and mostly bad in others. The great majority of the villages in the Pakha and Gadwad Circles have no harvest at all, while the crops in other parts of the Marwat Tahsíl have been good. Crops are sufficient in Isa Khel and Miánwáli Tahsíls.	Prospects were generally good, except in western Marwat, where there has been no rain. If good rain falls within the next two months sowings can be proceeded with.	Grass has dried up in Marwat. In other parts of the district the grazing is distinctly better than it was six months ago.	The district is chiefly dependent on the rivers for water. Village tanks in Marwat are drying up. The Indus and Kurram can be relied on, but the Tochi has been running very low.	Condition on the whole fair. A noticeable improvement during the last six months. The cattle in western Marwat have already suffered a good deal, and will have to be driven elsewhere for grazing when present stock is exhausted.	Rs. 12,021	Rs. 14,000	Zamíndárs have little, if any, but traders have sufficient stocks.	Not anticipated.		

Note.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of average of ten years. The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average the last ten years.

Character of the preceding and prospects of the coming harvest—concluded.

District.	Character of Harvests.				Present outlook as to				Amount of Land Revenue.		Stocks of grain in hands of villagers, traders and others.	Relief Works.		Remarks.
	Rabi, 1895.	Kharíf, 1895	Rabi, 1896.	Kharíf, 1896.	Crops.	Fodder.	Water.	Cattle.	Remaining uncollected on 30th September 1896 on account of rabi 1896.	Probable short collections on account of kharíf 1896.		Date on which—will probably become necessary.	Extent of such.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
								DERAJAT	DIVISION—CONCLUDED.					
D. I. Khan (25)	As compared with the previous rabi, there was a decrease of 4 per cent. in the area under cultivation. Outturn was not however, below the average but quality somewhat inferior. 100	The total area under crop decreased by 3 per cent. as compared with the previous kharíf The outturn on the whole was better than the average. 102	There was a decrease of 14 per cent. as compared with the figures of the previous rabi in the area under cultivation. The outturn was not below average. 86	Generally average in Tank, Dera, Bhakkar and Leiah Tahsíls, except in Thal villages of Bhakkar and Leiah and Paina villages of Tank. In the Kuláchi Tahsíl crops are drying up for want of rain.	Lands are being extensively prepared for the coming rabi in Leiah and Bhakkar Tahsíls. Owing to rise in prices, zamíndárs are applying largely for taccávi to purchase seed with.	Scarce in Thal, in Leiah and Bhakkar Tahsíls and also in the Daman tract of the Dera Tahsíl and in the Kuláchi Tahsíl.	Scarcity feared in Kuláchi and Daman tracts of Dera Ismail Khan.	Good ...	Rs. 9,342	Rs. 13,500	Stocks sufficient in Tánk and Kuláchi provided there are no exports, but somewhat insufficient in Bhakkar Leiah and Dera.	Not necessary if taccávi for seed is given at once to zamíndárs of Bhakkar and Leiah Tahsíls. About Rs 80,000 would suffice.		
Dera Gházi Khan. (46)	Fairly good in irrigated tracts On sailáb lands in the southern part of the Rájanpur Tahsíl the crop was indifferent. 99	Fairly good except in the Jámpur Pachád. 93	Fairly good (The same remarks here apply as to the rabi of 1895.) Crops failed in the Jámpur Pachád. 90	Decidedly satisfactory in the Jámpur and Sangarh Tahsíls. But the reverse is the case in the Dera and Rájanpur Pachád villages and in other villages dependent for their irrigation on hill streams other than the Kaha and the Sargarh.	The rabi harvests do not present great variations in this district as the working of the wells during the rabi can always be relied on. Crops are in good condition in the Jámpur Pachád. The prospects of the rabi (except in the Dera Pachád and the Mazari Sailáb) are good.	Scarce in the Dera and Ráianpur Pachád. A good deal of charri and jowár have been raised in the present kharíf, and the wants of the district will on the whole be fairly supplied.	Sufficient ...	Lean in parts of the district, and a few have died.	Rs. 14,731	Rs. 3,400	Sufficient for 9 or 10 months.	Not required ...	...	Local rainfall does not affect the area under crops much, which depends mainly on inundation from the Indus and the working of the hill streams The scarcity prevailing elsewhere is making itself felt in this district in high prices.
Muzaffargarh. (76)	361,993 acres were brought under cultivation. 106	An increase of 1,769 acres brought under cultivation over last year. Yield reported fair. Indigo crop below average. 101	Showed a decrease of 21,911 acres brought under cultivation compared with the previous Rabi. This was due to insufficient flood water from the rivers Indus and Chenab. The produce of grain was 50 per cent less than in the last rabi. 99	Average ...	Much the same as in ordinary years Grain dealers have begun to demand an increased rate of interest for seed grain. Application has been made for taccávi. The market rate of interest on seed grain has risen from 25 per cent. to 50 per cent.	Sufficient ...	Sufficient ...	Have little to feed on in the Thal, as there has been no rain, but in dry seasons they migrate to the river banks. Cattle disease has broken out in some villages, and there have been several deaths.	Rs. 1,143	Rs. 300	Sufficient, but most of the grain is in the hands of traders, and little in the possession of villagers.	Do not seem likely to be necessary at present.	...	Two qualified Veterinary Assistants have been engaged by District Board to treat the cattle.

NOTE.—The figures in brackets in column 1 represent the proportion of total crops which receive irrigation annually on an harvest area of the last ten years.

The figures in columns 2, 3 and 4 represent the proportion of the total crops of the harvest to the average average of ten years.

Punjab Government Press, Lahore—25-11-95—36.

No. 13.

FROM

M. W. FENTON, ESQUIRE,
Revenue Secretary to Government,
Punjab and its Dependencies,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
REVENUE AND AGRICULTURAL DEPARTMENT.

Dated Lahore, 23rd November 1896.

File No.

Revenue and Agriculture.

Scarcity.

SIR,

IN the circular of the Government of India, No. 5—48, dated 2nd March 1892, the rule quoted in the margin, which is reproduced in Section 45 of the Punjab Famine Code, prescribes the submission to the Government of India of a general report on the conditions of tracts suffering from failure of crops.

III.—As soon as the information is available, a general report should be submitted, giving an account of the economic condition of the affected districts or groups of districts in ordinary times, and indicating the crops affected and the extent to which they have suffered; the contingencies on which the probable duration of distress depends; the position of the affected area as to local trade, food supply and communications; and any other general information likely to be instructive.

Present report not confined to particular districts.

2. The Government of India have already been made aware from the weekly telegraphic reports that famine relief works are in progress in the Phália Tahsíl of the Gujrát District, that test relief works have been opened in the Karnál District, and that relief works are about to be commenced in the Hissar District. In addition to these tracts the districts of Rohtak and Umballa (southern tahsíls) have just been reported to Government as areas in which scarcity is prevalent and famine is imminent; and the Commissioner of Delhi has directed the submission of similar reports under Section 43 of the Famine Code for the remaining plains districts of his Division. The Lieutenant-Governor does not, however, in the present report propose to deal only with the circumstances of the tracts so affected. The present scarcity or famine appears to have visited practically the whole of India, and though particular districts may, from their having obtained timely rain or in consequence of the large proportion of irrigated area which they contain, have enjoyed good harvests and produced a sufficiency of grain and fodder for their own requirements, yet such tracts in the present days of improved communications cannot remain isolated from the effects of the generally prevailing scarcity; and high prices with their attendant consequences make themselves felt even in localities so favoured. Sir Dennis Fitzpatrick's view of the situation thus created is explained in the following extract from a circular issued to District Officers a fortnight ago:—

> The period during which sowings for the rabi are possible is now rapidly passing away without any sign of rain, and a point may very soon be reached at which a wide-spread failure of the rabi crop will be a certainty. The result of this would in all probability be that prices, high as they are now, would go up much higher with a sudden bound, and that though there might be ample stocks in the country to last for a long time to come, vast numbers of people would not be able to pay the price of their daily food, and would be thus thrown on our hands.

2. The Lieutenant-Governor desires to draw the attention of Commissioners and Deputy Commissioners to the possibility of this happening very suddenly and very soon, and to remind them that, owing to the failure of the crops extending over so many parts of India and to the great facilities of transport created of late years tending to equalize prices all over the country, this result may come about very suddenly and very soon not only in those tracts where the crops fail for want of rain, but also in tracts which may be regarded as from the agricultural point of view well protected. It is therefore most necessary that *everywhere* preparations for relief should be so complete that relief measures could be started at a moment's notice.

For the above reasons it is now proposed to discuss the situation for the Province as a whole.

Causes of the present situation.

3. It is apparent that the present distress is due to two causes, *viz.*—

(1) Failure of harvests within the Province itself; and

(2) Rise in prices caused partly by (1) and partly by the conditions existing in other parts of India.

It will be convenient to deal with these two causes separately.

Normal crop statistics for the Province.

4. The normal* area of matured crops in the Punjab is as follows:—

1 Harvest.	2 Irrigated.	3 Unirrigated.	4 Total.
	Acres.	Acres.	Acres.
Kharíf	2,562,219 (25)	7,591,927 (75)	10,154,146 (43·5)
Rabi	4,515,983 (34)	8,684,423 (66)	13,200,408 (56·5)
Total	7,078,202 (30)	16,276,352 (70)	23,354,554 (100)

NOTE.—The figures in brackets in columns 2 and 3 represent percentage of irrigated and unirrigated to total area on which crops have been matured; those in column 4 indicate the relative proportions of kharíf and rabi.

It will be seen from the above table that the rabi is the most important crop both in point of the actual area sown and the greater predominance of the edible grains, that 30 per cent. of the crops grown are irrigated, and that the largest proportion of irrigation takes place in the rabi. In different parts of the Province, however, the proportions indicated by the percentages shown in the table vary considerably. Thus the proportion of crops irrigated to total crops in the six Divisions is as follows:—

Division.	Percentage.	Division.	Percentage.
Delhi	11	Ráwalpindi	31
Jullundur	26	Pesháwar	35
Lahore	57	Deraját	41

The Delhi Division is thus much more dependent upon rainfall, and therefore a much more precarious tract than any other portion of the Province. In respect of the greater importance of the kharíf harvest the Delhi Division also differs

* Based on the returns of 10 harvests for kharíf and 11 harvests for rabi.

from the rest of the Punjab. There are only seven districts in the Province in which the normal kharíf area exceeds that of the spring harvest. Three of these, Simla, Kángra and Hazára, are in the hills, and can generally count on a sufficiency of monsoon rain; a fourth, Dera Gházi Khan, is largely dependent upon inundation canals. The remaining three, Hissar, Rohtak and Gurgaon, are in the Delhi Division, and the kharíf harvest in these three districts, which depends almost entirely upon the monsoon rains, is in area on the average about double the rabi. In the remaining districts of the Delhi Division the normal rabi area only just exceeds that of the kharíf harvest. The average area under wheat in the whole of the Delhi Division is less than the average area of this crop in the Dera Ismail Khan and Bannu Districts together, and amounts to only 9 per cent. of the total area under the crop. It will therefore be understood that this Division is more affected by bad kharíf harvests than by failure of the spring crops; and, as of the past three harvests which have been much below the average two are kharíf harvests, the calamity is most felt in this part of the Province, and perhaps most of all in the Hissar District, in which the kharíf harvest in a normal year amounts to 70 per cent. of the total crops and pays five-sixths of the revenue of the district.

Abstract of information contained in District reports.

5. Reports as to the character of past harvests and as to present agricultural prospects were called for from all Deputy Commissioners last month. These have now been received, and an abstract of their contents in tabular form is annexed to this letter. The percentages shown in the abstract indicating the proportion of the area of crops in each harvest to the normal area do not of course make any allowance for poorness or excellence of outturn as distinguished from area matured. In the districts of Jhang and Gujránwála there has been a considerable extension of cultivation on the Chenab Canal and the percentage figures for recent harvests are on that account largely swollen.

Character of rabi harvest of 1895.

6. Generally speaking the spring harvest of 1895 was a good one. In area it was 10 per cent. above the normal and the outturn was estimated by the Director of Land Records and Agriculture as an average one.

Character of kharíf harvest of 1895.

7. The kharíf crop of 1895 was a bad one. In area it was 15·5 per cent. below the normal, and was rated by the Director of Land Records and Agriculture as a 12-anna crop. The Hissar District suffered most, the matured area being only 30 per cent. of the normal. Those districts in or near the hills which are generally in danger of suffering from an excess of rain did well. There was a great lack of fodder in most districts.

Character of rabi harvest of 1895.

8. The rabi crop of 1896 may be described as decidedly bad. In area it was 20·6 per cent. below the normal. Not only were sowings greatly contracted owing to the early cessation of the previous monsoon, but the winter rains in December and January failed largely. The contraction of the unirrigated area amounted to 37·7 per cent. as compared with the average of 11 years, but this was to some extent compensated for by an increase of 543,750 acres (or 12 per cent. above the normal) in the irrigated area. In fact the irrigated area, which on the average amounts to 34 per cent. of the whole, in this season amounted to 48 per cent. of the cropped area. The proportion of matured crops to normal area in the six Divisions was as follows:—

Division.	Percentage.	Division.	Percentage.
Delhi	61	Ráwalpindi	83
Jullundur	86	Pesháwar	83
Lahore	87	Deraját	90

The Delhi Division, as in the previous season, suffered the most. In no tract except the Chenab Colony was the harvest a good one. In the Sharakpur Tahsíl of the Lahore District, a purely unirrigated tract, it was found necessary

to start relief works which were continued until the autumn of the year. They have not been re-opened as the work on the Gugera Branch of the Chenab Canal in the adjoining district affords employment to residents of this tract.

Present kharíf harvest.

9. The area returns of the present kharíf harvest are not to hand yet, but are being compiled, and a detailed report on the character of the harvest will shortly be submitted. It, however, may be stated that except in a few localities the crop is a bad one. The estimates of the District Officers as to the character of the harvest are noted in column 5 of the annexed abstract, but can be regarded only as estimates of the roughest description. The Director of Land Records and Agriculture has examined these estimates and has recorded a note thereon which is enclosed, but which I am to say His Honor is inclined to think takes too sanguine a view of matters. There has, it should be stated, been a great increase in the area irrigated from Government canals which will to some extent counterbalance the falling-off in the area of rain crops.

Prospects of coming rabi harvest.

10. As regards the prospects of the coming rabi, the early failure of the monsoon rains and the almost total absence of rain since the end of August are undoubtedly very serious features in the situation, as implying very contracted sowings on rain lands. In this respect the prospects are as unfavorable for the spring crop as they were on the same date last year, but even yet there is a hope that if rain fall in November or in some parts of the Province early in December, which is however not likely, there will be a considerable area of unirrigated land sown, especially in the northern and western districts of the Province. Even if this does not happen, it is not to be assumed that the usual winter rains will fail. Should they come at the usual time and be sufficiently copious, a large area of crops that would otherwise fail may be expected to reach maturity, especially in the case of late baráni sowings and irrigated crops on overworked wells and on inundation canals, as well as of crops on *sailáb* lands. The irrigated area also may be expected to exceed even that of last year, as the tendency in this direction is progressive. In the Delhi Division, however, the ordinary time for sowings has already passed, and apart from this circumstance the rabi crop in the distressed tracts is of minor importance as compared with the kharíf, and its success would not so much improve the situation as its failure would aggravate it.

Rise of prices.

11. Adverting now to the other cause of the present distress—the rise in prices—this is undoubtedly as much due to failure of crops in other parts of India as to short harvests in the Punjab. The present unfavourable prospects of the coming rabi are without doubt a factor in the situation, as speculation and market prices are influenced as much, if not more, by future prospects as by past events. The speculation or gambling—for this it often amounts to—which is reported to be taking place on a large scale among grain dealers, is regarded by the Native Press and by the Native public generally as the main cause of the present famine prices. It is no doubt largely owing to this that the prices are raised and kept high. The cause of this state of things is the anticipation of an insufficiency of stocks and the absence at present of any favourable agricultural prospects. Nothing but the appearance of some favourable feature, such as an early and wide-spread fall of rain in tracts which would benefit thereby, is likely to bring about that turn of the market which would convert those who bought for a profit into sellers to secure that profit or to save a loss. When the highest point will be reached it is difficult to say, but if the speculation is as wide-spread as is reported it seems likely that when the corner is turned and prices begin to fall there will be a scramble to realize profits or avoid losses.

State of grain stocks.

12. As to the extent to which the depletion of stocks of grain is responsible for the present high prices it is difficult to obtain any accurate information. In the reports which Deputy Commissioners have submitted, as noted in the enclosed abstract,

attempts have been made to estimate the stock of grain in each district, but with the free flow of produce from surplus tracts into distressed areas no estimate of the stocks in existence at any moment in a single district is of much value. The Director of Land Records and Agriculture in an addendum to the note referred to above has calculated the outturn of past harvests, and, deducting therefrom the amount of grain estimated to have been consumed and exported, he arrives at the conclusion that, apart from the produce of the present kharíf and the coming rabi harvests, there is a sufficient stock of grain in the Province to carry us on to the 15th of April next. The kharíf now being garnered is estimated to provide for the consumption of a further three months, after which there would be the whole of the produce of rabi 1897. There are, however, so many speculative elements in such calculations that it would be unsafe to rely much on them.

Relief works for what classes required.

13. The extent to which recourse will be necessary to relief works cannot at present be very well gauged, and the estimates given in our returns of the number of persons we are likely to have on our hands in a season of distress in each tract are, His Honor thinks, purely speculative. For the reasons explained in paragraph 2 above, relief works may, owing to high prices, be found necessary in districts in which the character of the harvests alone would not point to the necessity of any such measures. In such districts, and indeed in any district, the chief class for which relief works may be expected to provide employment is that of agricultural labourers or *kamíns*. In 1888 a confidential inquiry was made in this as in other provinces into the allegation that a large proportion of the population habitually suffer from insufficiency of food. In the report submitted to the Government of India (Punjab Government letter No. 263 S., dated 23rd June 1888), which was based on inquiries made in the districts, Sir James Lyall, while repelling the above assertion as regards the population generally, was of opinion that in insecure tracts when crops fail badly or are scanty for two or more seasons the village artizans, field labourers and some of the poorer tenants show signs of insufficient diet. These together with the poorer classes in towns who suffer from high prices are the classes who will first be driven to the acceptance of famine wages on relief works. The experience up to date in Gujrát where relief works are in progress is that very few agriculturists apply for work. In Karnál upon the test works which have been started according to recent reports agriculturists have not yet applied for employment. No reports have yet been submitted from Hissar. Generally it may be anticipated that if the winter rains do not fail such relief works as may be started will be mainly required for workers of the *kamín* classes, though in some districts considerable numbers of the poorer agriculturists too will be driven to look for employment. If, however, the rabi harvest proves a failure, relief operations for agriculturists as well as for other classes may be necessary on a very large scale. In this connection, however, it must be borne in mind that in a season like the present those zamíndárs whose holdings are irrigated, especially from a perennial canal, must reap very large profits, and it is only reasonable to suppose that a portion of those profits would find its way in some shape or other into the hands of their poorer neighbours.

State of preparedness.

14. It is of course necessary, while not at present assuming that the next rabi harvest will be a failure, to make preparations for such a contingency. For the past year the Lieutenant-Governor has been constant in directing the attention of District Officers to the preparation and revision of relief programmes for the insecure tracts mentioned in the list on page 6 of the Punjab Famine Code. For most of these fairly adequate programmes exist, and where this is not so steps are being taken to add new works. The preparation of relief programmes for districts not mentioned in the above list has been directed by the Lieutenant-Governor in the circular referred to in paragraph 2 above. It is believed that under the guidance of Deputy Commissioners District Boards generally are alive to the situation, and will by carrying out ordinary works of a suitable description afford sufficient employment where more extensive relief measures are not required. The work

on the Chenab Canal is of immense value in affording employment to the inhabitants of the distressed tract in the Lahore and Gujránwála Districts, and it even attracts labourers from the Phália Tahsíl of Gujrát. His Honor is about to address the Government of India with a view to the provision of additional funds to admit of this work being continued and extended as a relief work. In general, His Honor prefers that money should be spent on large works of this description which must be constructed some day or another than that it be frittered away on small works of much less importance and utility.

Immediate outlook as regards relief operations.

15. Pending the uncertainty as to the future of the next rabi, it will no doubt be necessary to continue the relief works in Gujrát. The numbers on the test works in Karnál are increasing week by week, and it will soon be necessary to adopt relief measures in that district under the Code rules. In Hissar the relief works about to be commenced will probably have to be kept open for several months, and the condition of Rohtak in this respect seems similar. As regards these districts and the Delhi Division generally it was found in the case of previous famines that provision had to be made not only for the inhabitants of the tract, but also for emigrants from the States of Rájpútána. The extent to which emigration will take place on the present occasion depends upon whether sufficient employment on relief works for their subjects will be provided by the States concerned ; and it is most desirable in the Lieutenant-Governor's opinion that the necessity for providing such employment be urged upon the attention of the Darbárs. Already an influx of men from Bikaner is reported from the Karnál District, the immigrants being described as begging their way from village to village. The difficulty will to some extent be met by the Ghaggar Canal project which will immediately be started on the border of Hissar and Bikaner and so supply relief work in the tract where it is most urgently needed, and the assistance thus rendered will be supplemented to some extent if the Ludhiána-Dhuri-Tohána and the Ludhiána-Ferozepore Railways are taken up.

16. A separate report will, as required by the rules in the circular of the Government of India, No. 5—48 of 2nd March 1892, be submitted to the Government of India in regard to the financial position. The abstract tabular report which is among the present enclosures shows the amounts of fixed land revenue remaining uncollected on 30th September 1896 on account of the rabi harvest of 1896 and the amount which it is anticipated will in addition have to remain uncollected on account of kharíf 1896 on 31st March next. The former amount is just under 6 lakhs, the latter is estimated at a little over 19 lakhs, but this estimate can pending the report of the Girdáwari be regarded a little better than a guess in most districts. In addition to this it is probable that collections on account of fluctuating and miscellaneous land revenue will be some two lakhs below the budget estimate for the year.

I have the honor to be,

SIR,

Your most obedient Servant,

M. W. FENTON,

Revenue Secretary to Government, Punjab.

Regr. No.

1896.

REVENUE AND AGRICULTURAL DEPARTMENT.

FROM

GOVERNMENT, PUNJAB.

Dated 23*rd November* 1896. } *No.* 13.
Spare copies
Received } *Enclosures*

L. No. *Progs.*
D. No. *No.*

SUBMITS report on the conditions of tracts suffering from failure of crops.

Punjab Government Press, Lahore—24-11-96—67.

No. 474, dated 5th March 1897.

From—M. F. O'DWYER, Esquire, C.S., Director of Land Records and Agriculture, Punjab,
To—The Revenue Secretary to Government, Punjab.

WITH reference to your endorsement No. 280, dated 10th February, and No. 298, dated 13th February 1897, I have the honor to forward a memo. on the existing state of food stocks in the Province, bringing up to date the export and consumption calculations embodied in this office No. 2134, dated 31st October, and also a rough forecast of the rabi yield. The latter you may be able to correct and supplement from the estimates of area received in your office, which I have not had an opportunity of referring to, as the matter was too urgent to hold over for the publication of the returns now in the Press.

Memo. on stocks available in the Punjab by M. F. O'DWYER, Esquire, Director of Land Records and Agriculture, Punjab.

Enclosure to Director of Land Records and Agriculture Punjab's No 474, dated 5th March 1897

THE object of the present memo. is to bring up to date the estimate as to food stocks available, and the export and consumption calculations embodied in Mr. Robertson's letter No. 2134, dated 31st October last.

Since then the kharif harvest of 1896 has been reaped, the figures for exports and imports during the quarter ending 30th September have become available, and the winter rains have determined the fate of the standing rabi harvest.

Taking as a basis Mr. Robertson's calculation, we had in the Province on 15th June 1896 a balance of 121,367,747 maunds of food stuffs, which, unless reduced by exports, he estimated would suffice for 10 months' consumption at the ordinarily assumed rate of 6 maunds per head per annum, and for 13 months' consumption at Famine Code rates—approximately 6 maunds per annum for maximum and 4 maunds for minimum rations, giving a mean of very nearly 5 maunds per head.

At the higher rate of consumption, the stocks were estimated to last to 15th April, leaving out of consideration possible exports and the kharif outturn.

2. The first factor in the present estimate is the exports and imports. According to the returns of rail and river-borne traffic for the quarter ending 30th September, 2,288,151 maunds were exported from the Province and 503,128 maunds imported into it. This includes all imports for the quarter ending 30th September and imports from outside India in the quarter ending 31st December. This left a net export of 1,785 023 maunds. Returns of exports for the quarter ending 31st December are not yet available, but they are believed to have been inconsiderable, for in November, owing to the enormous rise in prices consequent on a bad kharif, exports fell off, and imports from Sind and trans-frontier territory begun. The latter have already been taken account of. For December and January we have figures showing imports to and exports from the Province by the railways. In December 396,312 maunds were imported from Sind and 10,374 maunds exported to the North-Western Provinces. In January the imports by rail were 289,564 maunds, the exports 30,130. So that in these two months the net gain by imports was 645,000 maunds. The import from Sind is still proceeding briskly, and for February may be estimated at 400,000 maunds, so that from 1st December to 1st March we have gained say 1,000,000 maunds. The only unknown quantities left are—

(1) Exports by rail, rivers, &c., in October and November and exports otherwise than by rail from 1st December. These are believed to have been very trifling, for under present conditions we are exporting only to other parts of India, and practically all the trade goes by rail.

(2) Imports by rail, rivers, &c., from other Provinces for October and November, and imports from other Provinces otherwise than by rail since 1st December. These are also probably small, as Sind, the only important source of supply, did not begin to export to the Punjab till November, and at first only on a small scale.

(3) Imports from countries outside India since 1st January otherwise than by rail. This consists almost entirely of imports from trans-frontier and Afghan territory, which are largely supplying Bannu, Kohát, Dera Ismail Khan, &c., and is estimated at 100,000 maunds per month. Adding 200,000 maunds from this source for January and February, we get a total

import of 1,200,000 maunds, which deducted from the excess of exports for the quarter ending 30th September, 1,785,000 maunds leaves us about 600,000 maunds to the bad, that is to say our stocks since 15th June 1896 have been reduced by exports to the extent of only 600,000 maunds, which represents only two days' comsumption for the Province.

3. The next factor is the outturn of last kharíf. In the kharíf there was an area of 6,035,587 acres under food-grains, of which 30 per cent. was irrigated. This area was 25 per cent. below the average of the preceding five years—about 8 millions of acres—but 30 per cent. of the area was irrigated against an average of only 19 per cent. The outturn as arrived at by applying to the irrigated and unirrigated areas the rates of yield given in assessment reports—which are undoubtedly under estimates in an ordinary year—comes to 41,535,742 maunds. These rates of yield are per acre—

	Irrigated.	Unirrigated.	Average.
Rice	14	7¼	12
Jowár	6½	5⅓	5⅔
Bájra	6¼	4¾	5
Maize	14	7¾	10½
Moth	...	...	3
Múng	...	...	3⅓
Másh	...	...	4¼
China	...	...	5⅓
Kangni	...	...	4¼
Ragi	...	...	3¼
Other cereals	...	...	4
Other pulses	...	...	3½

Mr. Robertson considered these rates of yield too low for working out the results of the three harvests ending rabi 1896, and corrected them with reference to the recorded results of crop experiments made every harvest in selected districts and tabulated in this office. For last kharíf, which was one of the worst on record both as regards area and outturn, I do not think them over lenient. The crop was roughly estimated from the District Reports to be only a 13-anna one as regards yield. A very large proportion of the jowár (which includes charri), moth and múng was grazed for fodder, and as these are mainly rain crops, and suffered severely from the drought, I would estimate the average outturn in their case at only one-half of what is given above, applying the rates shown in the table to all the other crops. This correction reduces the estimated outturn given above by 5,834,788 acres, leaving an outturn of 35,700,934 maunds. This amount would at the rates of consumption—6 maunds per head per annum—given in the Decennial Progress Report, which (allowing an increase of about 16 per cent. for people's cattle, Commissariat animals, seed grain, &c.) comes to about 12,000,000 maunds per month—supply the population for only about 3 months, and this was Mr. Robertson's estimate in October. The rates of consumption above assumed are, however, far above those which actually prevail in a year of scarcity. Taking the average ration as the mean between the maximum and minium of the Famine Code, *e.g.*, about 5 maunds per head per annum, the monthly consumption, including reserve

for food-grain, maintenance of cattle, &c, comes to about 10,000,000 maunds per month. At this rate the kharíf stocks would supply the Province for 3½ months from 15th April—the earliest date by which, according to Mr. Robertson's calculation, the old stocks would be exhausted. As a matter of fact, when food-grains are as high as they are now the mass of the poorer people cut down their own consumption of grain and that of their cattle to the lowest possible limit and eke out their subsistence in other ways. Over most of the Province the needy classes appear to have made large use of carrots during the winter months, and in the Muhammadan districts of the Western Punjab—where cattle are very numerous and difficult to feed in years of scarcity—they have been killed in large numbers for human consumption. In fact over all the great grazing districts meat has been selling cheaper throughout the winter than even the inferior food-grains. Even therefore if the rabi prospects were gloomy, I think we might count on existing stock holding out till the end of July. Of course individual districts, such as Hissar, Delhi, part of Ferozepore and Rohtak, where the kharíf was about a complete failure, would have run through their supplies long before. Some of these have only been kept going by imports from Sind, or from more prosperous districts within the Province. In December Hissar imported by rail 230,778 maunds and in January 96,480. Montgomery imported 47,174 maunds in December and 28,233 maunds in January. Ferozepore 99,204 maunds in December and 31,262 in January. Imports in December were stimulated by the high prices then prevailing; they fell off in consequence of the fall in price after the general rain in the middle of January, and the reaction towards a rise in February seems to have sent them up again. On 15th November the average price of wheat was 8 seers. Prices had been artificially forced up by large dealers who had gained possession of much of the stocks and were speculating on a probable failure of the winter rains. In December a tendency to fall was observed, and at the end of the year the average price of wheat was 8½ seers. The timely and general rain in the middle of January caused a rapid fall by securing from risk of failure most of the spring crops and bringing into market stocks held up in anticipation of a further rise. By the end of January wheat had fallen in price from 9 to 11 seers per rupee and averaged about 10¼ seers. Since then, owing probably to the general low state of stocks and the high prices prevailing in other provinces, where rabi prospects are not so assured, prices have again risen, and in the beginning of March wheat averaged 9 seers per rupee. At present they do not show any marked tendency to rise still higher, and the price of wheat, which in this Province regulates all other food-grains, will probably range from 8 to 9 seers till the new crop begins to be reaped *e. g.*, till about the middle of April. If we are favoured with rains in the first half of March which would ensure a bumper yield on a reduced area in most districts, a further fall might be relied upon. The rabi crop does not come into the market till the end of June, and, unless the available food stocks were sufficient to cover the consumption up till at least that date, prices would now be ruling much higher than they are. All this tends to confirm the conclusion already arrived at, that the Province possesses stocks sufficient to keep it going till the end of July. This also agrees with the reports received from District Officers, which are generally to the effect that they have sufficient reserves to last till the rabi is harvested. In Hissar, Delhi, Umballa, Montgomery, Gujrát, Shahpur, Ráwalpindi and Kohát stocks are reported to be either very low or completely exhausted, but all of these districts are being supported by exports from Sind, from trans-frontier territory (in the case of Kohát and Ráwalpindi), and from districts with a surplus such as Jullundur, Ludhiána, Hoshiárpur, Jhang, &c. Dera Gházi Khan is reported to have stocks sufficient till next kharíf.

4. The last and main factor in the present situation is the prospect of the standing rabi crop. As to the total area sown, we have only very rough estimates to go upon, pending the girdáwari returns.

As regards wheat, which is the main staple, covering on the average 55 per cent. of the total rabi cropped area, we have probably a fairly accurate estimate in the second forecast recently submitted which shows the position of things at the end of January. According to this the rabi wheat sowings amount in round numbers to 6 millions of acres, a falling-off of 12·9 per cent. from the actual figures of last year and of 15 per cent. from the average. For all crops the very rough estimate lately submitted to the Punjab Government from districts shows, I understand, that sowings are about 10 per cent. below the matured area of last year, which was, as regards area, 20·6 per cent. below the normal.

Taking the normal rabi area of crops as 13,200,000 acres, last year's area was roughly 10½ millions of acres, and the sowings this year have been estimated at about 9½ millions, a decrease of 27 per cent. as compared with the normal area of matured crops. It is very possible that this is rather under-estimated, and that sufficient allowance has not been made for the fresh sowings of barely—barley and wheat and extra rabi crops—made after the January rains. Probably 10 millions of acres would not be an over-sanguine estimate of the rabi sowings.

In estimating the outturn it must of course be borne in mind that much depends on the weather conditions of the next month. So far we know that a much larger proportion of the crop than usual is secured by irrigation—for wheat alone the estimate is 51 per cent. irrigated against an average of 42 per cent.—and that the unirrigated crop has been practically secured against serious failure by the winter rains, except in the Delhi Division and parts of the Deraját, though a further fall of rain is required in most districts to bring the crop, which is later than usual this year, up to the average. Usually one-third of the rabi is irrigated, two-thirds unirrigated. This year, owing mainly to the expansion and increased efficiency of canal irrigation, which up to date has covered an area of 2,300,000 acres, or a quarter of a million in excess of last year's figures, we may assume that the irrigated area will be equal to the average, 4½ millions of acres, or 45 per cent. of the sowings, leaving 5½ millions or 55 per cent. of the area unirrigated. On irrigated lands the yield, judging by all present indications, should, unless we have very unfavorable weather, hail-storms, hot dry winds, locusts, &c., during the next month, be above the average, and on unirrigated lands, even if no more rain falls, the yield will probably be little below the average. Allowing 10 per cent for failure—probably a high estimate for the present crop—we should have about 9 million acres of harvested crops, say 5½ million acres of wheat and 3½ million acres of other crops. At a very moderate estimate we may take the yield for irrigated wheat, 51 per cent. of the whole, as 11 maunds per acre, the unirrigated, 49 per cent., at 7 maunds, or let us say 9 maunds per acre on the average. Of the 3½ million acres of other crops, barley, gram, &c., about 1¼ millions, or $\frac{5}{14}$, would be irrigated, and 2¼ millions, or $\frac{9}{14}$, unirrigated. Taking the yield on the former as 11 and on the latter as 7 maunds per acre, the average comes to 8 maunds per acre. Thus the rabi outturn would work out thus :—

5½ million acres of wheat at 9 maunds per acre =	49½ millions.
3½ million acres of other crops at 8 maunds per acre =	28 „
Total ...	77½ „

This outturn would suffice for over six months' consumption at the rates given, 6 maunds per head per annum, in the Decennial Progress Report, allowance being made for cattle, seed grains, &c., and for between 7 and 8 months' consumption at Famine Code rates, taking the mean between the maximum and minimum. Taking the least favourable view, I think we are justified in assuming that existing stocks, supplemented in a few districts by imports from Sind and beyond the border, will hold out till the end of June, and that the rabi which will then come into the market will, unless considerably depleted by exports, carry us on to the end of the year. The pinch of scarcity will be most felt during the present month. In April early barley, kangni, &c., begin to come into the market, and in May we may count on a large fall in prices. Forward bargains for wheat are now being made at from 13 to 16 seers per rupee, so that agriculturists with a surplus for sale will gain enormously by the high prices, though the poorer classes of consumers will continue to feel the pinch till stocks are again replenished by an abundant harvest.

Punjab Government Press, Lahore—10-3-97—56.

REVENUE DEPARTMENT (FAMINE.)

Bombay Castle, 23rd March 1897.

No. 931-FAM.—The following note and statements are published for general information :—

NOTE.

Estimated outturn, consumption and surplus, during the years 1895-96 and 1894-95.

In order to obtain an estimate of outturn, consumption and surplus of food-grains Statements A—D have been compiled. In Table B the estimated outturn for the reported areas and anna valuation has been worked out with the help of the crop formulæ.

These formulæ are estimates of the average yield per acre of the various crops in the different districts. They were originally compiled by a Committee of experienced Survey Officers. They have for the affected districts been recently revised by the Deputy Director of Agriculture, and are probably as near an approximation to facts as can be made upon existing knowledge. The average yields of the principal food-crops have been placed at a much lower figure than they were assigned in the original formulæ. The crops dealt with comprise pulses as well as all cereals including wheat.

2. In Table C the estimated consumption of food-grains for human beings has been calculated for each district on the basis adopted for the reports previously submitted to Government in 1888 and 1891. Additions have been made for seed, feed of stock, and wastage.

3. In Table D the principal agricultural factors which affect the production of the district and the length to which it will last as food-supply, have been summarised in a convenient form. These factors are briefly—(1) "the anna valuations" of the principal crops, (2) the density of the population per square mile, (3) the cropped areas per hundred head of the population, and (4) the average assessment per acre of the occupied area. The anna valuations, it may be explained, represent the number of annas in the rupee at which the crop of the district was actually estimated for the season concerned by the local officers. The average assessment on the occupied area has been given as a rough gauge of the relative fertility of the soil in the different divisions. The gauge, it must be remembered, is a very rough one; since the assessment is affected not merely by the fertility of the soil, but by the relative advantages which the tract or "group," as it is called, in which it is situated possesses in matter of rainfall, communications, markets, and general development. Land of corresponding fertility is generally more highly assessed in Gujarát than in the Deccan. This is due principally to generally superior fertility, but largely also to the other reasons mentioned, chief among these being, perhaps, the uniformity and sufficiency of the rainfall.

4. Table A, which summarises the results of Tables B and C, shows the estimated surplus after deducting consumption from outturn. This table has thus been prepared on the model of the statement adopted in the Famine Commission's Report (paragraph 156); but it must be noted that, for the Bombay Presidency the materials required for the calculation were, at the time when the Commission prepared its report, most deficient, and the Commission had to rely upon, and to use, for the most part, the estimates prepared for other provinces. In the present statement the estimates have been framed upon materials which have since been locally collected, revised and checked so far as has been possible.

5. An examination of Table A shows that during the year 1895-96 the total outturn in the Presidency is estimated to amount to 1,445 L. M., consumption 1,166 L. M., surplus 279 L. M. During the year 1894-95 the estimated outturn according to Table A amounted to 1,453 L. M., consumption 1,172 L. M., and surplus 281 L. M. The estimated consumption of food-grains for human beings for both the years was 81 per cent., feed of stock 9 per cent., seed 4 per cent, and wastage 6 per cent. The following statement shows details for the different divisions:—

L. M. = lakhs of maunds.

Division.	1895-96. Outturn.	Consumption.	Surplus.	Percentage of surplus over consumption.	Months for which surplus expected to last.	1894-95. Outturn.	Consumption.	Surplus.	Percentage of surplus over consumption.	Months for which surplus expected to last.
	L. m.	L. m.	L. m.			L. m.	L. m.	L. m.		
Deccan	683	494	189	38·3	4½	713	497	216	43·5	5
Karnátak	353	233	120	51·8	6½	293	230	63	27·5	3¼
Gujarát	245	228	17	7·4	1	294	234	60	25·7	3
Konkan	164	211	—47	—22·4	—2½	153	211	—58	—28	—3½
Total ...	1,445	1,166	279	23·9	2¾	1,453	1,172	281	24	2¾

The surplus in 1895-96 is sufficient to provide a supply of food-grains estimated to last for about 6½ months in the Karnátak, for about 4½ months in the Deccan, and for about one month in Gujarát. In the Konkan there is a regular deficit to the extent of about one-fifth the consumption; but the net surplus, after making allowance for all deficits, is estimated to yield about three months' supply for the whole Presidency. During 1894-95, also, the net surplus for the Presidency is also estimated at nearly three months' supply, though the variations in the different divisions are considerable.

6. From the statistics of Rail-borne Traffic it appears that, during 1895-96, the Presidency (exclusive of Bombay Port) exported food-grains to the extent of 54 L. M., and imported to the extent of 22 L. M., or in other words there were net exports of 32 L. M.; the net export represents 11·6 per cent. of the estimated surplus. Making deduction on account of exports, the net surplus amounts to about 247 L. M., which represents about 21 per cent. of the estimated consumption and a supply for about 2½ months. During 1894-95 the exports of food-grains amounted to 38 L. M. and the imports to 29¾ L. M., with net exports of about 8¼ L. M. or about 3 per cent. of the estimated surplus. Making deduction on account of exports the net surplus amounts to about 272 L. M. or 23 per cent. of the estimated consumption and a supply for 2¾ months.

7. Table A does not take into account the consumption of the large population of Bombay Port, which is provided with its food-supply from all parts of India. In the preceding para., therefore, for estimating the *net* supply the exports from the rest of the Presidency to the Port have been deducted from the *gross* supply.

8. From tables D and D1 it will be gathered that the number of acres of food-crops per 100 persons of agricultural population and the average assessment per acre, &c., for the different divisions are as follows:—

Division.	Percentage of surplus food-grains over consumption.	Percentage of area under food crops over total cropped area.	Density of population per square mile. Total.	Density of population per square mile. Agricultural.	Percentage of agricultural on total Population.	Cropped acres per 100 heads of Agricultural Population. Total crops.	Cropped acres per 100 heads of Agricultural Population. Food-grain crops.	Assessment per acre of occupied area.
	1895-96.							
Deccan	38·3	79	162	104	64	342	272	0 12 9
Karnátak	51·8	75	192	128	67	351	264	0 13 7
Gujarát	7·4	74	301	185	61	179	133	3 1 0
Konkan	—22·4	91	219	154	70	90	82	1 11 3
Presidency Proper...	23·9	78	196	128	65	259	203	1 1 11
	1894-95.							
Deccan	43·5	80	162	104	64	345	279	0 12 10
Karnátak	27·5	75	192	128	67	348	262	0 13 7
Gujarát	25·7	77	301	185	61	195	151	2 11 8
Konkan	—28·0	91	219	154	70	91	83	1 10 9
Presidency Proper...	24	80	196	128	65	266	215	1 0 11

These figures help to explain the existence of the comparative large surpluses in the Deccan and the Karnátak, of the small surplus in Gujarát, and of the deficit in the Konkan.

(Signed) J. W. P. Muir-Mackenzie,
Acting Survey Commissioner and Director,
Land Records and Agriculture.

Poona, 16th March 1897.

By order of His Excellency the Right Honourable the Governor in Council,

J. MONTEATH,
Acting Chief Secretary to Government.

A.—Estimated Outturn of Food-grain Crops, Consumption and Surplus during 1895-96.

District.	Population.	Outturn of food-grain crops in Indian maunds as per table B.	Average under food-grain crops.	Food as per table C.	Ordinary Consumption (Indian maunds). Seed.	Feed of Stock.	Wastage.	Total.	Surplus (Indian maunds).	Percentage of surplus over consumption.	Months for which surplus is expected to last.
1	2	3	4	5	6	7	8	9	10	11	12
Deccan.											
1 Khándesh ...	1,460,851	1,750,064	1,448,397	8,987,851	300,972	875,382	722,820	10,887,075	3,571,322	32·8	4
2 Násik ...	848,582	1,582,511	1,270,260	5,234,045	208,849	701,255	635,513	6,959,662	5,750,588	82·7	10
3 Ahmednagar ...	888,755	2,364,784	1,374,351	5,551,665	362,310	1,182,382	598,717	7,698,074	4,270,277	55·5	7
4 Poona ...	1,067,800	1,846,733	1,367,236	6,606,303	283,530	928,367	728,362	8,431,568	2,155,668	25·3	3
5 Sholápur ...	750,689	1,779,638	1,151,274	4,702,888	245,012	809,819	357,564	6,195,883	955,301	15·3	2
6 Sátára ...	1,225,989	1,525,590	1,197,442	7,616,487	251,340	751,795	569,871	9,199,493	2,197,919	23·8	3
Total, Deccan ...	6,237,666	10,847,900	8,359,930	38,799,239	1,742,619	5,809,956	3,412,947	49,371,755	18,857,175	38·3	4½
Karnátak											
7 Belgaum ...	1,013,261	1,412,508	1,035,831	6,333,710	325,078	766,254	651,231	8,076,273	6,943,437	86·0	10
8 Bijápur ...	796,239	2,165,898	1,382,297	4,996,067	339,693	1,022,949	479,115	6,837,824	1,841,757	27·0	3
9 Dhárwár ...	1,051,314	1,453,355	1,753,558	6,501,519	421,051	726,678	537,678	8,187,926	1,686,607	20·6	2
Total, Karnátak ...	2,860,914	5,031,761	4,171,686	17,831,296	1,105,822	2,515,881	1,768,024	23,391,693	10,471,801	44·8	5
Gujarát.											
10 Ahmedábad ...	921,712	840,379	696,912	5,886,940	245,347	420,189	344,912	6,897,388	653	...	...
11 Kaira ...	871,579	694,039	575,420	5,596,832	125,723	317,020	311,420	6,311,595	—43,302	—0·6	6
12 Panch Mahals ...	313,417	383,352	176,582	1,931,325	95,746	191,676	176,582	2,395,329	1,133,364	47·4	6
13 Broach ...	341,496	267,982	149,223	2,220,197	69,203	138,991	149,223	2,577,774	428,691	16·7	2
14 Surat ...	669,989	466,672	281,234	4,064,731	129,258	262,836	281,234	4,639,159	148,519	3·2	1
Total, Gujarát ...	3,098,197	2,531,424	1,679,371	19,644,525	664,949	1,330,712	1,263,371	22,798,595	1,663,855	7·4	1
Konkan.											
15 Thána ...	1,414,152	498,239	1,000,000	8,823,804	326,230	218,116	429,072	10,082,959	—1,501,515	—14·9	—1½
16 Kolába ...		298,471			186,503	199,235					
17 Ratnágiri ...	1,105,926	669,649	1,000,000	6,770,289	240,346	334,825	278,679	7,623,939	—2,060,073	—26·9	—3
18 Kánara ...	446,351	205,502	400,000	2,891,953	286,433	102,751	111,151	3,301,288	—1,148,264	—34·4	—4
Total, Konkan ...	2,966,729	1,709,851	2,400,000	18,486,046	948,012	854,926	818,902	21,107,886	—4,729,852	—22·4	—2¾
Grand Total ...	15,163,506	20,120,936	16,611,087	94,621,706	4,461,393	10,060,469	7,263,354	136,369,929	27,897,161	23·9	2¾

(Signed) J. W. P. Muir-Mackenzie,
Acting Survey Commissioner and Director,
Land Records and Agriculture.

B.—Detailed Calculation of Outturn under principal Food-grains (Cereals and Pulses) for the Year 1895-96.

District.	Cereals.																					
	Jowári.			Bájri.			Rice. Paddy.			Equivalent yield in husked or clean rice.	Wheat.			Ragi.			Maize.		
	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield in unhusked rice.		Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.
	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.
Deccan.																			
Khándesh	486,709 12	979	5,901,347	625,846 11	440	3,442,153	2,087 11	1,650	43,044	292,293	11,594 10	1,000	144,925	8,820 15	1,100	12,127	2,345		32,830
							28,756 11	1,100	395,395		242,232 10	583	1,765,266						
Násik	126,838 14	653	1,010,315	669,546 13	520	4,352,049	4,598 15	2,250	129,319	710,538	23,469 12	1,180	346,168	182,886 14	1,240	2,058,258	1,633		22,862
							49,946 15	1,500	936,487		269,554 12	560	1,886,878						
Ahmednagar ...	835,771 10	400	4,178,855	829,837 10	283	2,935,548	988 10	1,750	21,612	113,866	23,862 10	983	416,079	23,364 12	1,060	338,778	860		12,040
							11,935 10	1,000	149,187		201,113 10	467	1,173,985					1,120	
Poona	729,656 11	458	4,177,281	623,071 11	312	2,429,977	1,901 14	2,217	52,681	806,974	21,124 12	1,080	285,174	53,392 13	1,300	867,620	1,280		17,920
							66,159 14	1,400	1,157,782		77,684 12	470	456,393						
Sholápur	1,203,533 8	307	4,618,558	252,343 5	150	473,143	3,292 7	1,050	43,207	141,988	26,890 10	983	335,554	44 4	1,060	583	11,972		167,608
							19,403 7	700	169,776		24,307 10	467	141,892						
Sátára	491,406 11	788	4,840,349	464,449 7	292	1,697,789	8,855 10	1,769	195,806	426,502	24,755 11	1,082	335,186	58,517 11	1,100	804,595	8,948		125,272
							32,287 10	1,100	443,946		38,017 11	513	243,784						
Total, Deccan ...	3,873,913	...	24,726,705	3,465,092	...	15,330,609	Irrigated. 21,721 Unirrigated. 208,486	...	Irrigated. 485,669 Unirrigated. 3,252,573	2,492,161	Irrigated. 131,694 Unirrigated. 852,907	...	Irrigated. 1,863,086 Unirrigated. 5,668,198	276,973	...	4,082,661	27,038	...	378,532
Karnátak.																			
Belgaum	630,580 14	817	6,439,798	163,163 15	475	968,780	10,696 12	2,000	267,400	1,271,576	3,351 12	1,040	43,563	47,576 13	1,300	773,110	7,607		87,280
							100,921 12	1,300	1,639,966		112,878 12	560	790,146						
Bijápur	1,381,955 9	345	5,959,681	311,731 8	240	935,593	1,035 12	1,800	23,287	167,525	1,331 9	885	14,724	210 9	900	2,363	618	1,120	8,652
							15,200 12	1,200	228,000		178,803 9	420	938,716						
					9		77,338 10	1,667	161,443		17 12	1,040	221	46,626 13	1,300	757,705	43		497
Dhárwár	647,234 11	852	6,893,042	4,219 5	221	116,550	72,998 10	967	882,363	695,874	240,468 12	660	2,033,361						
Total, Karnátak ...	2,659,769	...	19,292,521	479,113	...	2,020,523	Irrigated 89,069 Unirrigated 189,119	...	Irrigated 452,130 Unirrigated 2,750,329	2,134,975	Irrigated 4,699 Unirrigated 538,149	...	Irrigated 58,508 Unirrigated 3,762,223	94,412	...	1,533,178	8,268	...	96,429
Gujarat.																			
Ahmedabad	279,053 8	713	2,487,060	128,750 10	708	1,139,437	78,452 9	1,318	1,292,497	861,664	16,698 9	1,110	231,685	7,513 8	980	92,934	4,027	1,050	52,867
											53,343 9	664	1,272,747						
Kaira...	63,588 8	700	556,395	162,734 10	792	1,611,067	142,804 8	1,180	2,106,418	1,404,278	2,407 8	827	24,882	73,389 5	610	559,551	280	1,050	3,675
											10,613 8	600	79,597						
Panch Mahals ...	5,340 12	1,000	66,750	42,134 18	547	288,091	68,533 7	857	734,160	489,440	652 8	933	7,604	17,074 6	700	149,391	109,535	1,150	1,574,580
											17,386 8	800	178,860						
Broách	123,889 15	1,462	2,264,072	11,651 7	624	90,878	20,720 5	506	131,054	87,370	43,436 6	480	293,616	159 5	620	1,232	13	1,050	171
											1 10	1,100	14						
Surat...	131,633 12	1,120	1,842,862	7,122 8	720	64,098	106,967 10	1,642	2,195,498	1,463,666	18,871 10	850	200,504	12,472 10	1,030	160,577	7	1,050	92
Total, Gujarát ...	603,503	...	7,217,139	352,391	...	3,193,571	417,480	...	4,459,627	4,306,418	268,907	...	2,284,509	110,607	...	962,785	113,862	...	1,631,385
Konkan.																			
Thána	30 12	800	300	...	...	.....	305,128 14	1,412	5,385,509	3,590,338	107 14	560	749	61,175 12	730	558,231	64		736
							243,011 14	1,400	4,252,693	2,835,128	.....	...	.....	61,504 10	650	499,720	...	1,120	...
Kolába	...	...	.....	...	...	.....	50,846 12	1,200	762,690	508,460	.....	...	.....	23,051 11	630	181,503	2		23
Ratnágiri	...	...	.....	7 12	320	28	188,906 13	1,300	3,069,722	2,046,482	.....	...	.....	6,106 12	1,400	106,855	359		4,128
Kánara	1,999 14	933	20,813	...	...	.....													
Total, Konkan ...	2,029	...	21,113	7	...	28	787,891	...	13,470,614	8,980,408	107	...	749	151,836	...	1,346,309	425	...	4,887
GRAND TOTAL ...	7,139,214	...	51,257,478	4,296,603	...	20,544,731	1,713,766	...	26,870,942	17,913,962	1,796,463	...	13,637,273	633,828	...	7,924,933	149,593	...	2,111,233

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B.—*Detailed Calculation of Outturn under principal Food-grains (Cereals and Pulses) for the Year 1895-96.*

District.	Cereals—continued.								Pulses.									
	Kodra.			Other Cereals.			Total.		Tur.			Gram.			Other Pulses.			Total.	
	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area.	Total yield.
	Acres.	Lbs.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.	Acres.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.	Acres.	Lbs.	Ind. Mds.	Acres.	Ind. Mds.
Deccan.																			
Khándesh	5,152 10	550	35,420	13,109 12	600	98,317	1,426,650	11,724,678	77,371 11	880	851,081	52,506 13	650	426,611	194,137 12	600	1,456,027	324,014	2,733,719
Násik...	2 11	560	14	37,818 12	600	283,635	1,316,240	10,671,417	26,003 12	960	312,036	75,203 13	520	488,819	165,065 12	600	1,237,988	266,271	2,038,843
Ahmednagar	122 7	380	578	28,020 12	560	196,140	1,955,872	9,365,869	90,855 10	800	908,550	120,952 11	440	665,236	197,085 10	420	1,034,696	408,892	2,608,482
Poona...	37 8	530	245	44,654 12	560	172,578	1,618,958	9,214,162	44,169 10	670	369,915	76,911 11	440	423,010	106,695 10	420	560,149	227,775	1,353,074
Sholápur	82 2	130	133	14,269 4	150	26,754	1,556,135	5,906,213	73,952 7	580	517,664	68,120 10	400	340,600	81,431 9	380	386,797	223,503	1,245,061
Sátara	220 3	160	440	77,361 10	460	444,826	1,204,815	8,918,693	63,106 10	1,200	946,590	75,202 11	430	404,211	18,467 10	500	1,127,918	318,775	2,478,719
Total, Deccan ...	5,615	...	36,830	215,231	...	1,222,250	9,078,670	55,801,032	375,456	...	3,905,836	478,994	...	2,748,487	924,880	...	5,803,575	1,769,230	12,457,898
Karnátak.																			
Belgaum	71 15	820	728	108,138 12	560	756,966	1,181,981	13,131,947	67,801 11	880	745,811	49,871 13	520	324,161	109,855 12	600	823,912	227,527	1,893,884
Bijápur	35 10	666	2,914	32,932 9	600	246,990	1,923,850	8,276,758	86,175 6	480	517,038	71,184 11	440	391,512	84,691 9	375	396,989	242,048	1,305,539
Dhárwár	185 13	160	370	119,256 12	560	834,972	1,214,584	11,332,413	58,257 6	500	364,106	54,032 11	510	344,454	126,682 9	450	712,586	238,971	1,421,146
Total, Karnátak ...	291	...	4,012	260,326	...	1,838,748	4,323,215	30,741,117	212,231	...	1,626,955	175,087	...	1,060,127	321,228	...	1,933,487	708,546	4,620,569
Gujarát.																			
Ahmedabad	16,768 7	800	167,680	44,975 8	660	337,312	729,579	6,642,487	5,946 6	280	20,811	18,129 7	110	24,927	86,725 3	250	210,016	110,800	255,754
Kaira...	108,205 12	1,230	1,663,652	4,192 12	1,200	62,880	568,216	5,965,978	20,226 9	460	102,616	8,407 4	220	23,729	37,190 9	380	176,653	65,823	302,428
Panch Mahás ...	19,462 4	380	92,587	22,117 6	480	132,702	302,233	2,975,008	5,533 7	330	22,824	59,285 9	620	459,459	16,301 9	360	73,355	81,119	555,638
Broach	6,952 7	560	48,664	28 6	500	175	212,348	2,786,177	8,969 7	350	39,239	1,301 3	140	2,275	45,364 6	280	158,774	55,634	200,288
Surat...	31,285 11	1,140	445,811	675 10	730	6,159	309,033	4,183,782	26,374 10	570	187,929	2,029 2	140	3,551	68,236 9	480	409,416	76,639	600,896
Total, Gujarát ...	182,672	...	2,418,394	91,987	...	539,228	2,121,409	22,553,429	47,048	...	373,449	89,151	...	513,341	253,816	...	1,028,214	410,015	1,915,004
Konkan.																			
Thána	11,868 12	730	108,295	23,878 12	640	191,244	402,250	4,449,895	6,192 7	220	17,028	2,544 11	360	10,198	25,243 10	330	104,127	33,979	131,353
Kolába	17,401 11	720	156,609	50,988 10	600	382,410	372,904	3,873,868	2,180 12	410	11,172	2,372 13	340	10,081	21,015 12	400	105,075	25,567	126,328
Ratnágiri	17,086 11	630	134,552	10,290 10	600	77,175	588,172	5,236,793	353 10	360	1,588	37 12	320	148	13,638 10	330	56,257	81,477	336,773
Kánara	...	...	...	741 12	800	7,410	198,111	2,185,687	218 8	370	1,068	464 12	480	2,784	6,709 10	400	33,545	7,391	37,337
Total, Konkan ...	46,355	...	399,456	85,897	...	658,239	1,561,437	15,746,243	8,943	...	30,796	5,417	...	23,211	66,605	...	299,004	148,414	631,791
Grand Total ...	234,933	...	2,858,692	633,441	...	4,258,465	17,064,731	124,841,821	643,678	...	5,937,036	738,549	...	4,345,166	1,566,529	...	9,064,280	3,036,205	19,625,262

Note.—(1) The black figures under areas represent reported anna valuation of outturn.
(2) The equivalent outturn in *rice husked* has been calculated at $\frac{2}{3}$ of that for unhusked rice.
(3) In the case of Ratnágiri District for which large areas do not return Agriculture Statistics, approximate addition for these areas has been made under total areas and outturn under cereals and pulses. The area of non-reporting villages is roughly estimated at 486,892 acres under cereals and 67,447 acres under pulses.

(Signed) J. W. P. Muir-Mackenzie,
Acting Survey Commissioner and Director,
Land Records and Agriculture.

C.—*Detailed Calculation of Annual Consumption.*

District.	Total Population.	Children up to 2 years.	Children above 2 and up to 14 years.	Females above 14 years.	Males above 14 years.	Total.	Remarks.
						Estimated consumption of food.	
1	6	2	3	4	5	10	11
	No.	Ind. mds.	Ind. mds.	Ind. mds.	Ind. mds.	Ind. mds.	
Deccan.							
1 Khándesh	1,460,851	137,443	468,391	416,970	438,047	8,957,851	
2 Násik	843,582	74,592	268,542	244,500	255,948	5,234,045	
3 Ahmednagar	888,755	81,811	262,584	267,686	276,674	5,554,665	
4 Poona	1,067,800	96,643	313,114	323,034	335,009	6,646,303	
5 Sholápur	750,689	73,439	207,919	231,664	237,677	4,702,888	
6 Sátára	1,226,950	109,981	371,782	381,734	382,492	7,616,487	
Total, Deccan ...	6,237,666	573,899	1,892,332	1,865,588	1,905,847	38,792,239	
Karnátak.							
7 Belgaum	1,013,261	89,742	303,996	309,663	309,860	6,333,710	
8 Bijápur	796,339	77,683	220,893	251,289	246,475	4,976,667	
9 Dhárwár	1,051,314	92,126	311,242	324,835	323,111	6,591,519	
Total, Karnátak ...	2,860,914	259,550	836,131	885,787	879,446	17,901,896	
Gujarát.							
10 Ahmedabad	921,712	68,874	272,634	285,507	294,697	5,886,940	
11 Kaira	871,389	68,233	257,122	263,528	282,706	5,556,332	
12 Panch Mahals	313,417	27,917	104,001	87,390	94,109	1,931,325	
13 Broach	341,490	26,206	93,092	108,290	113,902	2,205,197	
14 Surat	649,989	53,238	200,826	203,552	192,373	4,064,731	
Total, Gujarát ...	3,098,197	244,468	927,675	948,267	977,787	19,644,525	
Konkan.							
15 Thána	1,414,452	120,008	449,528	410,552	434,264	8,823,804	
16 Kolába	1,105,926	94,772	352,565	371,688	286,901	6,770,289	
17 Ratnágiri	446,351	30,129	131,860	133,462	150,900	2,891,953	
18 Kánara							
Total, Konkan ...	2,966,729	244,909	934,053	915,702	872,065	18,486,046	
Total for the Presidency Proper.	15,163,506	1,322,826	4,590,191	4,615,344	4,635,145	94,824,706	
Bombay City	821,764	38,794	171,179	207,638	404,153	5,889,923	

Note.—As separate details for Thána and Kolába owing to territorial transfers are not available, the figures for the two districts have been lumped together.

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D.

Percentage of Surplus of Food-grains over consumption and percentage of Agricultural Population, Food-grain Crop and Assessment per acre, 1895-96.

District.	Percentage of surplus food-grains over consumption, 1895-96.	Reported anna valuation for principal cereals.				Percentage of area under food crops over total cropped area.	Density of population per square mile.		Percentage of agricultural on total population.	Cropped acres per 100 heads of agricultural population.		Assessment per acre of occupied area.
		Jowár.	Bájri.	Rice.	Wheat.		Total.	Agricultural.		Total crops.	Food-grain crops.	
1	2	3				4	5	6	7	8	9	10
												Rs. a. p.
Deccan.												
1. Khándesh	32·8	12	11	11	10	57	133	88	66	319	182	1 4 5
2. Násik	82·7	14	13	15	12	80	142	90	63	370	297	0 11 1
3. Ahmednagar	55·5	10	10	10	10	86	133	87	65	479	412	0 9 5
4. Poona	25·3	11	11	14	12	90	198	115	58	333	299	0 10 2
5. Sholápur	15·3	8	5	7	10	85	165	100	60	463	393	0 8 1
6. Sátára	23·8	11	7	10	11	89	245	172	70	200	178	1 0 3
Total, Deccan ...	38·3	...	...	...	...	79	162	104	64	342	272	0 12 9
Karnátak.												
7. Belgaum	62·4	14	15	12	12	80	217	152	70	249	199	0 15 2
8. Bijápur	38·9	9	8	12	9	77	140	95	67	523	404	0 8 5
9. Dhárwár	52·2	11	5	10	12	68	228	44	63	321	220	1 3 6
Total, Karnátak ...	51·8	...	...	...	...	75	192	128	67	351	264	0 13 7
Gujarát.												
10. Ahmedabad	...	8	10	9	9	71	233	116	50	257	183	2 0 7
11. Kaira	—0·6	8	10	8	8	91	541	378	70	114	104	3 13 7
12. Panch Mahals	47·4	12	8	7	8	91	194	145	75	180	163	0 15 5
13. Broach	16·7	15	7	5	6	47	233	140	60	276	131	4 2 7
14. Surat	3·2	12	8	10	10	75	391	238	61	133	103	3 4 9
Total, Gujarát ...	7·4	...	...	...	...	74	301	185	61	179	133	3 1 0
Konkan.												
15. Thána	—14·9	...	...	14	...	94	230	157	69	83	77	1 3 9
16. Kolába				14	...	93	272	199	72	96	93	2 2 6
17. Ratnágiri	—26·9	...	...	12	...	87	282	209	75	93	81	0 13 4
18. Kánara	—34·4	...	...	13	...	84	114	72	63	87	72	2 15 9
Total, Konkan ...	—22·4	...	...	...	...	91	219	154	70	90	82	1 11 3
Grand Total ...	23·9	...	...	...	...	78	196	128	65	259	203	1 1 11

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Acting Survey Commissioner and Director,
Land Records and Agriculture.

A.—*Estimated Outturn of Food-grain Crops, Consumption and Surplus during 1894-95.*

	District.	Population.	Acreage under Food-grain Crops.	Outturn of Food-grain Crops in Indian Maunds as per Table B-I.	Ordinary Consumption (Indian Maunds).					Surplus (Indian Maunds).	Percentage of Surplus over Consumption.	Months for which Surplus is expected to last.
					Food as per Table C.	Seed.	Food of Stock.	Wastage.	Total.			
1		2	3		5	6	7	8	9	10	11	12
	Deccan.											
1	Khándesh	1,460,851	1,792,114	14,782,026	8,987,851	309,682	896,057	739,101	10,932,691	3,849,335	35	4
2	Násik	843,582	1,696,874	13,617,090	5,234,045	313,678	848,437	680,855	7,077,015	6,540,075	92	11
3	Ahmednagar	888,755	2,443,338	12,062,783	5,554,665	376,640	1,221,669	603,139	7,756,113	4,306,670	56	7
4	Poona	1,067,800	1,857,143	10,598,133	6,696,303	285,527	928,574	529,906	8,440,310	2,157,823	25	3
5	Sholápur...	750,689	1,799,188	9,067,540	4,702,888	245,708	899,594	453,377	6,301,567	2,765,973	44	5
6	Sátára	1,225,989	1,538,413	11,220,309	7,616,487	251,814	766,707	561,016	9,196,024	2,024,285	22	2½
	Total, Deccan ...	6,237,666	11,122,075	71,347,881	38,792,239	1,783,049	5,561,038	3,567,394	49,703,720	21,644,161	43·5	5
	Karnátak.											
7	Belgaum	1,013,261	1,409,947	9,478,818	6,333,710	323,702	704,973	473,941	7,836,326	1,642,492	21	2½
8	Bijápur...	796,339	2,118,934	9,337,085	4,976,667	352,606	1,059,467	466,854	6,855,594	2,481,491	36	4
9	Dhárwár	1,051,314	1,459,486	10,486,633	6,591,519	438,016	729,743	524,332	8,283,610	2,203,023	26	3
	Total, Karnátak ...	2,860,914	4,988,367	29,302,536	17,901,896	1,114,324	2,494,183	1,465,127	22,975,530	6,327,006	27·5	3¼
	Gujarát.											
10	Ahmedábád	921,712	1,028,142	8,766,326	5,886,940	329,473	514,071	438,316	7,168,800	1,597,526	22	2½
11	Kaira	871,589	697,338	8,541,136	5,556,332	143,967	348,669	427,057	6,476,025	2,065,111	32	3½
12	Panch Maháls	313,417	397,154	3,640,737	1,931,325	106,649	198,577	182,037	2,418,588	1,222,149	50	6
13	Broach	341,490	337,259	3,739,444	2,205,197	116,234	168,629	186,972	2,677,032	1,062,412	40	4½
14	Surat	649,989	408,523	4,704,513	4,064,731	141,938	204,262	236,225	4,646,156	58,357	1	.....
	Total, Gujarát ...	3,098,197	2,868,416	29,392,156	19,644,525	838,261	1,434,208	1,469,607	23,386,601	6,005,555	25·7	3
	Konkan.											
15	Thána	1,414,452	436,631	7,288,948	8,823,804	225,397	218,315	157,109	10,018,412	—2,729,464	—27	—3¼
16	Kolába		400,721			186,087	200,361	207,339				
17	Batnágiri	1,105,926	688,046	5,892,013	6,770,289	250,073	344,023	294,601	7,658,986	—1,766,973	—23	—2¾
18	Kánara	446,351	207,668	2,092,632	2,891,953	290,702	103,834	104,651	3,391,120	—1,298,488	—38	—4½
	Total, Konkan ...	2,966,729	1,733,066	15,273,593	18,486,046	952,259	866,533	763,680	21,068,518	—5,794,925	—28	—3½
	Grand Total ...	15,163,506	20,711,924	145,316,166	94,824,706	4,687,893	10,355,962	7,265,808	117,134,369	28,181,797	24	2¾

Note.—For the description of the mode in which this table has been drawn up reference is invited to the explanatory notes on Table A for 1895-96.

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Acting Survey Commissioner and Director, Land Records and Agriculture.

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B.—*Detailed calculation of Outturn under principal Food-grains (Cereals and Pulses) for the Year 1894-95.*

District.	Cereals.																	
	Jowári.			Bájri.			Rice. Paddy.			Rice. Equivalent yield in husked or clean rice.	Wheat.			Ragi.			Maize.		
	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield in unhusked rice.		Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.
Deccan.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.
Khándesh	513,241 11	890	5,709,876	625,987 11	440	3,442,928	Irrigated 2,176 Unirrigated. 27,339 13	1,950 1,300	53,040 444,259	331,543	Irrigated 12,094 Unirrigated, 256,495 13	1,300 758	196,527 2,430,290	9,507 12	880	107,877	1,962 12		27,468
Násik...	119,652 13	780	1,166,607	758,576 13	520	4,930,744	Irrigated 5,389 Unirrigated. 46,994 14	2,100 1,400	141,461 822,395	642,571	Irrigated 28,361 Unirrigated, 269,551 12	1,180 560	418,325 1,886,857	142,496 14	1,240	2,208,688	1,593 12		22,302
Ahmednagar... ...	864,171 10	400	4,320,855	870,809 10	280	3,047,831	Irrigated 1,481 Unirrigated. 11,642 12	2,100 1,200	38,876 174,630	142,337	Irrigated 25,584 Unirrigated, 217,516 11	1,082 513	318,973 1,394,821	25,007 10	883	276,015	1,026 12		14,364
Poona	703,377 10	416	3,657,560	652,670 13	360	2,937,015	Irrigated 1,681 Unirrigated. 66,945 14	2,217 1,400	46,585 1,154,037	800,415	Irrigated 22,719 Unirrigated, 79,185 10	900 392	255,589 388,006	55,150 13	1,300	896,187	1,710 12	1,120	123,930
Sholápur	1,317,229 11	420	6,915,452	210,891 6	190	503,866	Irrigated 2,806 Unirrigated. 14,604 9	1,350 900	47,351 164,295	141,097	Irrigated 28,789 Unirrigated, 21,558 10	983 467	353,745 63,357	50 3	300	187	15,681 12		219,534
Sátára	465,789 11	788	4,598,022	483,563 9	375	2,266,702	Irrigated 8,120 Unirrigated. 32,305 10	1,608 1,000	163,212 403,812	378,016	Irrigated 24,723 37,662 11	1,082 513	334,378 241,507	55,659 9	900	626,164	9,134 12		127,876
Total Deccan ...	3,983,459	...	26,368,302	3,602,496	..	17,129,086	Irrigated 21,653 Unirrigated. 198,829 220,482	...	490,525 3,163,428 3,653,953	2,435,969	Irrigated 140,270 Unirrigated, 881,967 1,022,237	...	1,877,537 6,404,838 8,282,375	288,169	...	4,115,118	31,106		435,474

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B.—*Detailed calculation of Outturn under principal Food-grains (Cereals and Pulses) for the Year 1894-95*—continued.

District.	Cereals.																							
	Jowári.			Bájri.			Rice. Paddy.			Equivalent yield in husked or clean rice	Wheat.			Ragi.			Maize.		
	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield unhusked rice.		Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.
Karnátak.																			
Belgaum	691,168 10	580	4,358,468	193,640 9	285	689,842	Irrigated. 8,617 Unirrigated. 102,733 9	1,500 975	161,569 1,252,058	942,418	Irrigated. 3,229 Unirrigated. 111,119 9	780 420	31,483 583,375	51,272 11	1,100	704,990	8,280 12		115,920
Bijápur	1,382,401 9	345	5,961,604	289,385 8	240	868,155	Irrigated. 1,337 Unirrigated. 11,307 10	1,500 1,000	25,069 141,338	110,938	Irrigated. 1,866 Unirrigated. 180,620 10	983 466	22,923 1,052,111	299 9	900	2,576	783 12	1,120	10,962
Dhárwár	633,147 8	650	4,906,889	4,637 8	360	20,866	Irrigated. 67,480 Unirrigated. 83,338 7	1,166 700	983,521 729,207	1,141,819	Irrigated. 51 Unirrigated. 282,510 12	1,040 660	663 2,030,707	43,680 4	400	218,400	33 12		462
Total, Karnátak ...	2,616,716	...	15,226,961	487,662	...	1,578,863	Irrigated. 77,434 Unirrigated. 197,378 274,812	... ...	1,161,802 2,075,396 3,237,198	2,195,175	Irrigated. 5,146 Unirrigated. 574,249 579,395	... ...	55,074 3,666,193 3,721,267	95,181	...	925,966	9,096	...	127,344
Gujarát.																			
Ahmedabad... ...	287,845 5	535	1,924,963	141,132 4	285	502,783	109,097 14	2,050	2,795,098	1,863,400	246,550 11	811	2,499,400	5,376 9	1,102	74,054	3,625 12	1,040	47,125
Kaira	64,611 8	700	565,609	170,464 8	630	1,342,404	156,935 15	2,210	4,335,329	2,890,219	22,850 13	975	278,484	67,455 11	1,347	11,35,774	133 12	1,040	1,729
Panch Mahals ...	5,665 6	500	35,406	46,085 7	480	276,510	73,797 12	1,470	1,356,020	904,013	26,735 11	1,100	367,606	16,295 8	933	190,040	100,410 12	560	702,870
Broach	119,003 11	1,070	1,591,665	11,364 6	535	75,997	23,507 14	1,416	181,004	120,669	109,120 13	1,040	1,418,560	185 6	750	1,734	1 12	1,040	13
Surat...	134,220 9	840	1,199,310	6,133 8	720	55,197	111,637 12	1,970	2,749,061	1,832,707	33,759 12	1,020	430,427	11,3 6 9	930	132,362	6 12	1,040	78
Total, Gujarát ...	591,374	...	5,316,953	375,178	...	2,252,891	474,973	...	11,416,512	7,611,008	439,014	...	4,994,477	100,697	...	1,533,964	104,175	...	751,815
Konkan.																			
Thána	...	...	.....	...	...	.....	303,518 13	870	3,300,758	2,200,505	143 14	560	1,001	59,212 11	669	495,160	67 12		938
Kolába	...	...	.....	...	...	.....	241,774 14	1,400	4,231,045	2,820,697	.....	...	.....	60,664 12	700	591,474	...		...
Ratnágiri	...	..	.....	...	...	.....	49,689 12	1,200	745,335	496,890	.....	...	.....	23,834 12	690	205,568	1 12	1,120	14
Kánara	1,582 12	800	15,820	...	...	.....	192,541 12	1,200	2,888,115	1,925,410	.....	...	.....	6,396 12	1,400	111,930	22 12		308
Total, Konkan ...	1,582	...	15,820	...	...	.....	787,522	...	11,165,253	7,443,502	143	...	1,001	150,106	...	1,404,132	90		1,260
Grand Total ...	7,193,131	...	4,692,836	4,465,336	...	20,957,840	1,757,789	...	29,472,916	19,685,654	2,040,789	...	16,999,129	634,153	...	2,979,180	144,467	...	1,315,893

District.	Cereals—*continued.*								Pulses.											
	Kodra.			Other Cereals.			Total.		Tur.			Gram.			Other Pulses.			Total.	
	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area.	Total yield.
Deccan.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	Lbs.	In. Mds.	Acres.	In. Mds.
Khándesh	4,710 12	660	38,857	13,170 10	500	82,312	1,466,981	12,367,598	82,959 10	800	829,590	57,001 12	600	427,507	185,173 10	500	1,157,331	325,133	2,414,428
Násik	53 12	560	371	42,281 12	600	317,108	1,414,946	11,593,573	28,106 10	800	281,060	80,604 11	440	443,322	173,218 12	600	1,299,135	281,928	2,023,517
Ahmednagar ...	136 7	380	646	27,356 10	480	164,136	2,042,728	9,679,978	83,147 9	720	748,323	128,794 10	460	613,970	188,669 10	420	990,512	400,610	2,382,805
Poona	26 8	530	172	48,532 12	560	339,724	1,630,995	9,298,598	42,306 10	670	354,313	29,899 10	400	399,495	103,948 10	420	1,545,727	226,153	1,299,535
Sholápur	66 2	130	107	14,510 6	225	40,809	1,626,184	8,235,154	45,614 6	480	273,684	69,180 9	360	311,310	58,210 8	340	247,392	173,004	832,386
Sátára	53 6	320	212	80,622 10	460	463,576	1,197,630	9,036,453	64,592 8	800	645,920	84,869 9	352	373,423	186,322 10	500	1,164,513	335,783	2,183,85
Total Deccan ...	5,044	...	40,365	226,471	...	1,407,665	9,379,464	60,211,354	346,724	...	3,132,890	500,347	...	2,599,027	895,540	...	5,404,610	1,742,611	11,136,527

Note.—(1) The black figures under areas represent reported anna valuation of outturn.
(2) The equivalent outturn in *rice husked* has been calculated at ⅔ of that for unhusked rice.
(3) In the case of Ratnágiri District, for which large areas do not return Agricultural Statistics, approximate addition for these areas has been made under total areas and outturn under Cereals and Pulses. The area of non-reporting villages is estimated at 499,268 acres under Cereals and 71,694 acres under Pulses.

District.	Cereals.								Pulses.									
	Kodra.			Other Cereals.			Total.		Ur.			Gram.			Other Pulses.			Total.	
	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area and anna estimate of outturn.	Yield per acre.	Total yield.	Area.	Total yield.
Karnátak.																		
Belgaum	49 10	540	331	114,036 10	480	684,216	1,194,143	8,111,043	9	700	560,304	49,988 9	360	224,946	103,560 9	450	582,525	215,804	1,367,775
Bijápur	27 10	666	225	47,849 10	460	225,132	1,915,804	8,304,631	70,045 4		280,180	63,606 10	400	318,030	69,479 10	500	434,244	203,130	1,032,454
Dhárwár	68 6	80	68	126,074 10	480	756,444	1,241,018	9,076,318	53,814 6	600	403,605	54,247 10	467	316,666	110,407 10	500	690,044	218,468	1,470,315
Total, Karnátak...	144	...	624	287,959	...	1,715,792	4,350,965	25,491,992	186,115	...	1,244,089	167,841	...	859,642	283,446	...	1,706,813	637,402	3,810,544
Gujarát.																		
Ahmedabad	15,536 11	1,265	245,663	66,704 10	825	687,885	875,865	7,845,273	5,343 6	280	18,700	825 12	620	398,600	97,109 10	415	503,753	152,277	921,053
Kaira...	108,840 12	1,230	1,673,415	5,892 10	1,000	7,365	597,210	7,894,999	20,317 8	460	116,823	42,063 10	558	293,589	37,748 12	500	235,925	100,128	646,137
Panch Maháls ...	17,722 6	570	126,269	21,829 6	480	130,974	308,538	2,733,688	4,766 7	330	19,660	64,451 14	957	770,995	19,399 12	480	116,394	88,616	907,049
Broach	6,527 12	960	78,324	16 10	830	166	269,723	3,287,128	9,042 8	400	45,210	2,443 12	483	14,749	56,051 12	560	392,357	67,536	452,316
Surat...	31,258 12	1,240	242,249	1,157 10	730	10,558	309,556	3,902,888	22,598 12	680	200,583	1,863 10	558	12,994	73,506 12	640	588,048	98,967	801,625
Total, Gujarát ...	179,883	...	2,365,920	95,598	...	836,948	2,360,892	25,663,976	63,066	...	400,976	160,645	...	1,490,727	283,813	...	1,836,477	507,524	3,728,180
Konkan.																		
Thána	12,304 13	791	121,656	25,221 12	640	201,768	400,465	3,021,028	6,651 8	247	20,544	2,678 11	360	12,051	26,834 8	264	88,552	36,166	121,147
Kolába	17,890 10	650	145,356	52,877 12	720	475,893	373,205	4,033,420	2,468 11	376	11,599	2,070 10	283	9,445	22,378 10	330	92,309	27,516	113,353
Ratnágiri	17,158 11	630	142,994	10,887 12	720	97,533	601,787	5,535,409	374 10	360	1,683	46 8	320	184	14,275 10	330	58,884	86,259	356,605
Kánara	...	...	...	670 12	800	6,700	201,211	2,060,168	221 8	370	1,022	262 12	480	1,572	5,974 10	400	29,870	6,457	32,464
Total, Konkan ...	48,352	...	410,006	89,605	...	781,894	1,576,668	14,650,025	9,717 8	...	34,848	5,65 12	...	23,252	69,461 10	...	269,615	156,398	623,569
Grand Total ...	233,423	...	2,816,915	699,633	...	4,742,299	17,667,989	126,017,347	605,622	...	4,812,803	834,45	...	4,972,648	1,532,260	...	9,217,515	3,043,935	19,298,820

(Signed) J. W. P. MUIR-MACKENZIE,
Acting Survey Commissioner and Director, Land Records and Agriculture.

D.—Percentage of surplus of food-grains over consumption and percentage of agricultural population and food-grain crops and assessment per acre during 1894-95.

	District.	Percentage of surplus food-grains over consumption during 1894-95.	Retired Anna valuation for principal cereals.			Percentage of area under food-crops over total cropped area.	Density of population per square mile.		Percentage of agricultural on total population.	Cropped acres per 100 heads of agricultural population.		Assessment per acre of occupied area.	Remarks.
			Jowár.	Bájra.	Rice.	Wheat.		Total.	Agricultural.		Food-grain crops.		
	1	2	3				4	5	6	7	8	9	10	11
	Deccan.												Rs. a. p.	
1	Khándesh	25	11	13	13	58	133	88	66	320	180	1 4 7	
2	Násik...	92	13	13	14	84	142	90	63	370	319	0 10 11	
3	Ahmednagar ...	76	10	10	12	88	133	87	65	481	425	0 9 7	
4	Poona... ...	25	10	13	14	90	198	115	58	335	301	0 10 3	
5	Sholápur	44	11	6	9	86	165	100	60	463	398	8 2	
6	Sátára	22	11	9	10	89	245	172	70	202	179	1 0 2	
	Total, Deccan ...	435	...	...	...	80	162	104	64	345		12 10	
	Karnátak.													
7	Belgaum	21	10	9	9	80	217	152	70	248	199	0 15 3	
8	Bijápur	36	9	8	10	76	140	95	67	518	305	0 8 5	
9	Dhárwár	26	8	7	12	69	228	44	63	319	221	1 6	
	Total, Karnátak ...	27·5	...	...	...	75	192	128	67	349	262	0 13 7	
	Gujarát.													
10	Ahmedabad	52	5	4	14	75	233	116	50	301	225	2 0 3	
11	Kaira...	32	8	15	13	92	541	373	70	121	115	3 1 10	
12	Panch Maháls ...	50	6	7	12	89	194	115	77	155	169	0 15 6	
13	Broach	40	11	6	14	58	233	110	60	285	165	4 6 8	
14	Surat	1	9	8	12	73	391	238	61	140	104	3 4 8	
	Total, Gujarát ...	257	...	...	...	77	301	185	61	195	151	2 11 8	
	Konkan.													
15	Thána...	...	13	...	93	230	157	69	83	78	1 2 7	
16	Kolába	—27	14	...	98	272	109	72	97	91	2 2 6	
17	Ratnágiri	—23	12	...	88	282	209	75	96	84	0 13 3	
18	Kánara	—38	12	...	84	114	72	63	88	74	2 15 11	
	Total, Konkan ...	—28	...	...	91	219	154	70	91	83	1 10 9	
	Grand Total ...	24	...	...	80	196	128	65	266	215	1 0 11	

(Signed) J. W. P. MUIR-MACKENZIE,
Acting Survey Commissioner and Director,
Land Records and Agriculture.

EXPLANATORY NOTES.

Table A.

Population.—The figures are for the census of 1891 and include those for children under two years of age, who consume little or no grain. The number of these children has been taken as approximately balancing the increase in population that has occured between 1891 and 1896.

Area under food-grains.—These figures include areas sown with cereals and pulses. For Ratnágiri the area for which statistics are available is oven less than one-sixth of the total area. In order to make the information as complete as practicable, and at the same time to remove any disturbing element from comparison for this district, estimates of area have been taken for those areas for which statistics are not available and the same standards of outturn have been applied to them.

The total area shown under this head in the accompanying statement is appreciably smaller than that given in the Report (Part I, page 50) of the Famine Commission who included Sind in their estimate.

Outturn of food.—The principal factors in estimating outturn of food are the scales of estimated yield per acre fixed for each district for the several food crops, and the estimated yield reported in annas by Mámlatdárs.

In estimating the outturn of food-grains in the districts of Gujarát and the Konkan the printed formulæ have been employed. For the Deccan and the Karnátak Districts these formulæ have on many occasions been found to be unreliable; the outturn calculations for these districts have therefore been based on estimates revised by the Deputy Director of Agriculture, who had a considerable number of crop experiments to guide him. Mr. Mollison's estimates are considerably lower than those given in the formulæ, except in the case of irrigated wheat, rice, ragi and tur.

The calculations show that the outturn per acre in 1895-96 amounted to about 7 maunds or 574 lbs. This will not be thought an over-estimate when it is remembered that of the total food-grain area jowári had 36 per cent. with an acre yield of 574 lbs., rice 9 per cent. with 950 lbs., wheat 9 per cent. with 600 lbs., and ragi 3 per cent. with 1,000 lbs. The rate of yield per acre here calculated is considerably above that given in the Famine Commission Report, *viz.*, nearly 6 maunds or 470 lbs. But it must be borne in mind that in the absence of any reliable estimate for this Presidency, the Famine Commissioners had to frame their estimate on the figures for the Central Provinces.*

Famine Commission Report, Part I, page 51.

Consumption food.—These figures have been arrived at by taking the daily ration rate of one lb. for children above two and below 14 years of age, 1½ lbs. for adult females and 2 lbs. for adult males. These rates give 6½ maunds per annum or a little more than 1¾ lbs. per diem per head of population, as against 5¾ maunds and 1½ lbs. as given in the Report of the Famine Commission. The maximum famine ration for a man is 1¾ lbs., for a woman 1½ lbs., and for a working child (7 to 12 years old) 1 lb.-5 oz. The grain and pulse in prison diet for an adult amount to 1 lb. 13 oz. The present estimate is, it is believed, by no means too low.

Consumption seed.—The seed rates have been based upon the formulæ. They are too low for some crops, and too high for others. The total allowance for seed is perhaps insufficient; but is balanced by the allowance for feed of stock, which is probably too high.

Feed of stock.—This item has been calculated at the rate of half a maund of grain to the acre. The same rate was taken by the Famine Commissioners. As a matter of fact work cattle eat more oilcake than food-grains; but when the feed of horses and milch cattle is taken into account the allowance is fairly correct, though probably rather high.

Wastage and shrinkage.—This item has been computed at 5 per cent. of the total outturn. The same rate was taken by the Famine Commissioners.

(Signed) J. W. P. Muir-Mackenzie,
Acting Survey Commissioner and Director,
Land Records and Agriculture.

REVENUE DEPARTMENT.

1897.

Board of Revenue

(Revenue Settlement, Land Records and Agriculture),

MADRAS.

Recd. } 1897. *Enclosures*

Regd. } *Spare copies*

Printed August th.

Proceedings, 27th July 1897, No. 532.

JULY.

Food-stocks.—Submitting to Government the report regarding the existing — in the Madras Presidency.

PROCEEDINGS OF THE BOARD OF REVENUE
(Revenue Settlement, Land Records and Agriculture).

Read—G O., Mis. No. 2477, Revenue, dated 14th May 1897.

Abstract.—Communicating letter from the Government of India forwarding correspondence as to the existing food stocks in the Punjab and in the affected districts of the Bombay Presidency with the request that reports embodying similar information for the Madras Presidency may be prepared and submitted at an early date for transmission to the Government of India.

Read—also G.O., No. 1146, Revenue, dated 15th June 1897.

Abstract.—Requesting the Board of Revenue to expedite the submission of the report regarding the existing food stocks in the Madras Presidency.

Read—also G.O., No. 1277, Revenue, dated 9th July 1897.

Abstract.—Communicating for very early attention reminder from the Government of India requesting early information as to the existing food stocks in the Madras Presidency.

Resolution—dated 27th July 1897, No. 532.

With the order read above, Government forwards certain papers, received from the Government of India, embodying a calculation of food stocks in the Punjab, and in the Bombay Presidency, and desires that a report embodying similar information may be furnished, for the Presidency of Madras.

2. The Board was at first disposed to represent the extreme difficulty of framing for this Presidency any trustworthy estimate of the sort required, owing to the incompleteness and general rottenness of some of the data on which the estimate must be based.

An estimate framed on such data, if any reliance be placed upon it, may be positively mischievous, as tending (according as the figures may happen to work out) either to unfounded panic or to a misplaced sense of security. As, however, data very similar to those used in the Punjab and Bombay are available here, the Board has compiled from them the desired statistics, and will content itself with pointing out, in the proper place, where the errors come in which lead to an absurd result. The Board has not held itself at liberty to fudge, or manufacture for the occasion, estimates of the harvest outturns more sanguine and reasonable than the pessimistic guesses of the village accountants, but will state further on, the extent to which their estimates should, in the Board's opinion, be increased.

3. From the papers received with the Government Order, it may be observed that in the Punjab and Bombay the following calculations were made to arrive at an estimate of the food stocks:—

(1) The outturn of food grains from the total cultivated area,
(2) the quantity of food grains imported and exported,
(3) the consumption of food grains by the total population of the province.

4. In calculating item (1) in the Punjab, the outturn of the spring (rabi), and autumn (kharif), harvests in the three years 1894, 1895 and 1896, and the prospective outturn of the (rabi) spring crop of 1897, which was still on the ground at the time of the preparation of the estimates, were taken into account. In Bombay, however, the outturn of only the two years 1894–95 and 1895–96 has been calculated, omitting the outturn of the present year of famine.

5. In the Punjab memorandum, it is stated that average yields were calculated in 1892, in the office of the Director of Land Records and Agriculture, in obedience to the Government of India Circular No. 3—45, dated 20th February 1892. The total outturn in maunds was calculated according to these estimated yields and the reported character of the harvests. The statements referred to in the memorandum give information districtwar regarding area cultivated and irrigated, and character of outturn. A second estimate of outturn is also made, with the help of more accurate rates of yield, obtained, it is stated, from careful crop experiments made during the three years succeeding 1892.

In Bombay, the method by which the total outturn has been calculated is given in detail in statement B appended to that Government's notification. The area under each food-crop is given, and below it, the outturn of it in the anna notation, as estimated and reported by local officers in each year. The standard yield is then taken, and the outturn is calculated from these three factors. In regard to these standards of yield it is stated that they were originally compiled by a committee of experienced survey officers, and recently revised, so far as the affected districts are concerned, by the Deputy Director of Agriculture.

6. Coming now to the data available for the desired calculations in Madras, the Board possesses the estimates of Mr. Wilson, a former Director of Revenue Settlement, who calculated an average acre outturn for the food crops in each district (*vide* his letter printed in B.P., No. 2563, dated 5th September 1885). The statements A and B referred to in his letter are not now forthcoming, but the yields determined are found in the general review of the outturn of crops prepared by the Board in the next three years (*vide* B.Ps., Nos. 7913, dated 23rd October 1886, 448, dated 15th November 1887, and 628, dated 5th November 1888). Subsequently, in 1892, a circular was received from the Government of India calling for information, at the instance of the Secretary of State, regarding the average yield per acre of the principal crops for representative districts, and in reply thereto, a statement was submitted from this Presidency (*vide* B.P., No. 473, dated 29th June 1892) in which standard rates of yield have been given for the following districts only, and for such only of the food crops in them as were adopted as staples at settlement:—

(1) Ganjám.
(2) Kistna (uplands).
(3) Kurnool.
(4) Cuddapah.
(5) Nellore.
(6) Chingleput.
(7) South Arcot.
(8) Tanjore.
(9) Madura.
(10) North Arcot.
(11) Salem.
(12) Coimbatore.
(13) Trichinopoly.

7. The districts omitted were:—

(1) Vizagapatam.
(2) Gódávari.
(3) Kistna (delta).
(4) Anantapur.
(5) Bellary.
(6) Tinnevelly.
(7) Nilgiris.
(8) Malabar.
(9) South Canara.

For districts Nos. (1), (2), (4) and (5), and also for the districts of Tanjore and Trichinopoly in which revised settlements were introduced subsequent to 1892, average acre-yields have now been calculated in the Board's office from the outturns as estimated in the Settlement reports of those districts. For Kistna delta, the rates obtained for Gódávari delta have been adopted. For Tinnevelly Mr. Wilson stated in paragraph 10 of his letter in B.P., No. 2563, dated 5th September 1885, that no abstracts of the settlement results were available in the Central office and that the average of other settled districts was therefore taken. For this and the remaining three districts, and for such crops in the other districts also as were not adopted as staples at settlement, the standards given in B.P., No. 628, dated 5th November 1888, and paragraph 12 of Mr. Wilson's letter in B.P., No. 2563, dated 5th September 1885, have been adopted. All that the Board can say regarding these yield-estimates is that it possesses no better, and that the data upon which they are calculated have not been manufactured for the occasion.

8. Collectors now send to the Board an half-yearly statement showing the estimated outturn of crops in terms of annas—one on 15th December for the earlier crops harvested up to the end of November, and the other on 15th July for all crops harvested in the year—early and late. In recent years, the average outturn in annas calculated from the latter of these returns has been embodied in the Board's jamabandi reports.

9. The area cultivated with each food crop is available in the returns of agricultural statistics submitted annually to the Government of India—*vide* B.Ps., Nos. 38, dated 7th March 1896, and 174, dated 1st March 1897, for 1894–95 and 1895–96; but the statistics refer only to Government and inam lands (including whole inam villages) and exclude Zamindaris, and Agency Tracts in Ganjám and Vizagapatam, for which no information is available.

10. Statement No. I submitted herewith shows the estimated quantity of food grains produced in each district in the fasli years (ending June 30th) 1894–95, 1895–96 and 1896–97. For the first two of the said years, the outturns have been calculated on the data explained above.

As noted above, the outturn for the year of famine (1896–97) has been estimated in the Punjab, but not in Bombay. In this Presidency, the Collector's returns of outturn for the year are not yet in, but an attempt has been made to estimate the yield. In the case of non-affected districts, the estimate is based on a consideration of the comparative cultivation up to March last and the state of the season. For affected districts, the average-yield report by Collectors for affected parts, in connection with their proposals for dry remissions, has been taken into account, while for the non-affected parts generally an average yield of 8 annas has been adopted.

11. The next item to be considered in the calculation of food-stocks are the imports and exports of grain. Statement No. II shows the rail-borne and sea-borne grain trade of the Presidency with places outside it for the five official years ending 1896–97, and during the first quarter of the current official year. No information is available regarding the exports and imports of food grains for each district, which can be made use of to check the estimates of outturn of food stocks therein. A large portion of the trade between adjoining districts is carried on by cart roads, and no information is available regarding such trade. Nor is the available information regarding rail-borne and sea-borne trade in such detail as to show what quantity of food stock grown in each district goes out of it, and what quantity grown outside comes into it for consumption. Even as between the Presidency as a whole and outside places, no information for recent years is available in respect of road traffic except as regards a few roads which are mainly those connecting the British territory with the French Settlements on the Coast. It is only from the statistics of rail-borne and sea-borne trade that an imperfect idea can be formed as to how far the stock of food grain produced within the Presidency is more than sufficient for its requirements, or how far it has to be supplemented by imports from without. A glance at statement II shows that in the last 15 months over 500 million lbs. of grain have left the Presidency, though ordinarily (*vide* paragraph 18 below) the Presidency does not produce any surplus of food grain over and above its requirements.

12. The next item in the calculation is the population. As already stated no data are available regarding cropped areas, or outturns, in the Zamindaris and Agency Tracts, which comprise about one-third of the Presidency area. The population of these tracts must therefore be omitted, and the remainder was 27,060,000 in 1891. One per cent. per annum may be allowed for increase since 1891, and the population for each of the three years 1894–95, 1895–96 and 1896–97 is arrived at by adding 3 per cent., 4 per cent., and 5 per cent., respectively, to the population of 1891.

13. The next step is to fix a mean daily grain ration for each head of the population. For the Punjab the allowance is fixed at 6 maunds (about 494 lbs.) per head per annum, which is taken as including a sufficient margin for seed grain, food of cattle, &c. For Bombay—after making allowance for the smaller consumption of infants, children and women—$6\frac{1}{4}$ maunds (514 lbs.) per annum is taken as the consumption per head of population, and to this is added nearly one-quarter as much again as an

allowance for seed-grain, feed of cattle and shrinkage and wastage. The total annual allowance per head of population is thus over $7\frac{2}{3}$ maunds, or 630 lbs.

14. For reasons which will be only too plain when "consumption" is deducted from "outturn," the Board cannot emulate the liberality of the Bombay assumptions, but must restrict itself to the parsimonious allowance of the Punjab.

In dealing with 27 millions of mouths, a mouthful more or less at each meal makes a prodigious difference in the consumption of a year. It appears, however, futile to attempt any new calculation with a view to show that if due allowance be made for the slender appetites of infants, children, women and old people, and for the vast quantities of food consumed in the shape of meat, fish, fruit, vegetables, jaggery, milk and toddy, a grain ration of 1 lb. a day per head all round is probably an adequate estimate of the actual consumption.

Even if this be admitted, the Punjab allowance of one-third more to cover seed-grain, feed of cattle and wastage by husking and pounding, leaves the estimate of the daily mean ration lower than could be wished.

Following closely the Punjab allowance, the Board (to facilitate calculations) will take 500 lbs. per annum as representing the grain consumption per head of population. One million pounds of grain will then suffice for 2,000 people. Multiplying the mean daily ration by the population and comparing the result with the grain outturn, we arrive at the result exhibited in statement No. III.

This statement shows that in 1895–96, described in the jamabandi report as "a season generally favourable for agricultural operations," and when there was no expectation of scarcity, there was no grain for over 5 millions of the population! The deficiency in 1894–95, which was also not a bad year, was even larger. Though fully alive to the unreliability of its data, and aware that the karnams' "anna valuations" of the harvest would certainly lead to a ridiculous under estimate of outturns, the Board was hardly prepared for so absurd a result.

15. The truth is that some of the most important factors of the calculation are, as the Board has already said, utterly rotten.

First in delusiveness come the "anna valuations." Each village accountant at the time of harvest is called on to give his opinion as to how many annas in the rupee each crop has yielded, taking sixteen annas to represent an average crop.

Any intelligent, careful man who makes the experiment may satisfy himself how difficult the task is. He will remember spells of bad weather, fields which were attacked by blight, ridges whereon the crops withered, hollows where damage was done by flood and so on, until he has persuaded himself that it would be quite unsafe to reckon the total outturn as up to the average. Thus it comes about that in a fair agricultural season like 1895–96, the average anna valuation of the harvest of the staple food-grains for the whole Presidency was as shown in the margin. The Board believes that it would be safe to raise the karnams' anna valuations by one-third, *i.e.*, where the karnam has estimated the outturn at 12 annas, the Board would estimate it at 16 annas on the ground that the karnam insists on regarding 12 annas, as the proper representation of an average crop. If this be done, the alarming deficiency in the two years specified disappears at once, and the Presidency is left with a handsome surplus of over 1,400 million lbs. A net import of 416 million lbs. by rail and sea, during the two years, raises the surplus to over 1,800 million lbs., as an opening balance for 1896–97. By similar treatment the great deficiency in 1896–97 can, without much juggling, be made to disappear.

Grain.	Yield in annas.
Paddy	11
Cholam	10
Cumbu	9
Ragi	10
Varagu	9
Varigalu	10
Korra	9

16. The estimate of the average yield per acre of the various crops presents another stumbling-block, for it varies most strangely in different districts, and its correctness is, in many cases, plainly open to challenge. The Board indeed doubts the possibility of framing any correct estimate of the average yield per acre for an area

so large and various as is embraced in a Madras district. At any rate when it is found that the average yield of cumbu and korra is taken in Cuddapah as 210 lbs. and 310 lbs. per acre, and in Bellary as 400 lbs. and 600 lbs., we have got far towards an explanation why Bellary shows a good surplus of food, when Cuddapah exhibits a large deficiency. The Board doubts whether in truth there is any difference between the two districts in their average productiveness per acre.

To those who have local knowledge, the figures of the different districts, comparing outturn with consumption, will be seen to be replete with gross absurdities, all of which are traceable either to errors in the "anna valuations" of crop, or to errors in the estimate of the "average district yield per acre," or to both.

17. If it be asked why a better "average yield per acre" should not now be calculated, the answer is that past mistakes can only be corrected by years of patient continued experiment, conducted in a uniform manner, by a trained trustworthy establishment, which can devote its whole attention to the work. If experience teaches anything it is that crop experiments are worthless when made in a hurry by low-paid, over-driven native officials, or by superior officers pressed by more urgent revenue and magisterial duties.

18. Unless Government otherwise directs, the Board does not think it profitable to pursue the subject in the direction of exposing further instances and sources of error. It must, however, be remarked as a solid fact that, during the ten years ending March 1896, the imports of grain by rail and by sea into the Madras Presidency have exceeded the exports of grain by an annual average of about 220 millions of pounds, and that it was only in two years of that period, viz., 1888–89 and 1889–90, that the exports of grain exceeded the imports. Since the commencement of the past official year, however, this state of things has been reversed, and the remarkable spectacle is presented of a steady increase in grain exports and decrease in grain imports. The grain exports of 1896–97 exceeded the grain imports by 380 million pounds, and from April to the middle of July in the current year the net grain exports are 27 million pounds by rail and 108 million pounds by sea, total 135 million pounds. This change in the current of the grain trade is doubtless due to famine, and consequent high prices, in other parts. It is, of course, a striking confirmation of the worthlessness of the Board's calculations. If stocks were at a low ebb it appears unlikely that the unusual outward drain would continue, but more than this the Board cannot venture to say.

(True Extract.)

R. V. Srinivasa
Secretary.

To the Secretary to Government, Revenue Department. with enclosures returned
Copy to all Collectors.

Exd. A. F. Eccleston.

2.

STATEMENT I.

	1894–95.			1895–96.			1894–95.			1895–96.		
	Estimated average rate of yield per acre.	Area in thousands of acres.	Outturn in millions of lbs.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated average rate of yield per acre.	Area in thousands of acres.	Outturn in millions of lbs.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.
	Paddy.						*Cholam.*					
	Lbs.						Lbs.					
Ganjam	1,500	315	667	11	486	323	500	2	1	6	337	328
Vizagapatam	1,550	92	196	11	143	95	500	13	3	9	129	102
Godâvari	1,720	620	1,487	11	1,086	734	1,000	98	35	7	670	622
Kistna	1,300	34	62	11	45	31	690	406	160	8	34	41
Nellore	1,720	478	1,096	11	800	566	380	372	101	11	634	491
Kurnool	1,500	21	42	10	30	22	420	538	164	10	24	21
Bellary	1,450	236	523	10	381	211	330	34	7	10	209	234
Anantapur	1,430	31	67	10	48	28	480	848	263	11	26	29
Cuddapah	1,450	53	110	9	76	48	380	270	64	9	53	53
North Arcot	1,680	20	48	9	33	16	410	366	87	9	18	53
Chingleput	1,460	39	81	11	64	46	500	52	16	8	50	20
South Arcot	1,720	68	167	10	117	73	500	13	3	6	117	43
Salem	1,680	86	205	11	144	97	750	67	27	8	88	109
Coimbatore	1,630	74	173	11	121	49	770	77	47	10	47	86
Trichinopoly	970	366	508	8	294	294	400	682	183	10	310	77
Tanjore	1,650	477	1,126	8	788	247	520	149	64	11	264	376
Madura	1,040	492	732	10	512	416	500	1	11	11	435	510
Tinnevelly	1,360	109	212	10	148	109	430	177	46	8	138	516
Nilgiris	1,610	90	207	11	145	84	500	104	25	7	102	125
Malabar	1,360	206	400	11	280	206		180			252	93
South Canara	1,450	1,077	2,227	12	1,559	1,293		4			1,414	214
	1,600	183	419	7	293	81		627			104	1,087
	1,010	236	339	7	237	140		448			180	205
	1,350	5	10	9	7	4					4	266
	1,350	667	1,401	10	980	563					627	5
	1,350	486	1,021	11	715	452					448	743
	1,350											483

Statement I—*cont.*

—	Estimated average rate of yield per acre.	1894-95. Area in thousands of acres.	1894-95. Estimated outturn in annas.	1894-95. Outturn in millions of lbs.	1895-96. Area in thousands of acres.	1895-96. Estimated outturn in annas.	1895-96. Outturn in millions of lbs.	Estimated rate of yield per acre.	1894-95. Area in thousands of acres.	1894-95. Estimated outturn in annas.	1894-95. Outturn in millions of lbs.	1895-96. Area in thousands of acres.	1895-96. Estimated outturn in annas.	1895-96. Outturn in millions of lbs.
		Cumbu.							*Ragi.*					
	LBS.			LBS.			LBS.	LBS.			LBS.			LBS.
Ganjám	400	6	7	1	6	6	1	510	83	7	19	68	6	13
Vizagapatam	550	33	6	7	34	10	12	560	33	7	8	29	10	10
Gódávari	800	16	10	8	13	8	5	1,200	32	10	23	26	10	20
Kistna	370	204	10	47	181	10	42	650	29	7	8	26	12	13
Nellore	300	64	8	9	68	9	12	650	59	9	22	58	9	21
Kurnool	400	78	8	16	77	9	17	650	36	8	12	36	9	13
Bellary	400	72	9	16	71	10	18	650	39	10	16	37	12	18
Anantapur	400	69	8	14	69	8	14	460	80	9	21	87	10	25
Cuddapah	210	328	10	44	301	9	36	650	152	11	68	159	10	65
North Arcot	420	115	8	24	123	7	23	480	143	8	34	138	8	33
Chingleput	400	13	7	2	14	7	3	490	60	7	13	63	7	14
South Arcot	480	314	9	84	312	8	74	700	154	9	61	150	9	59
Salem	710	324	9	130	335	9	134	740	279	10	129	279	10	129
Coimbatore	370	657	8	122	637	9	132	390	200	10	49	195	11	53
Trichinopoly	630	195	10	77	170	11	74	810	117	12	71	104	11	58
Tanjore	540	17	7	4	25	11	9	670	42	7	13	41	11	19
Madura	400	112	8	23	101	8	20	650	97	7	27	88	8	29
Tinnevelly	400	169	6	25	170	8	34	650	54	8	18	53	7	15
Nilgiris	..	..	..	..	..	..	..	650	3	8	1	3	10	1
Malabar	400	..	8	..	..	9	..	650	6	8	2	5	10	2
South Canara	..	..	..	..	..	..	..	650	3	11	1	3	11	1

Statement I—*cont.*

—	Estimated average rate of yield per acre.	1894-95. Area in thousands of acres.	1894-95. Estimated outturn in annas.	1894-95. Outturn in millions of lbs.	1895-96. Area in thousands of acres.	1895-96. Estimated outturn in annas.	1895-96. Outturn in millions of lbs.	Estimated average rate of yield per acre.	1894-95. Area in thousands of acres.	1894-95. Estimated outturn in annas.	1894-95. Outturn in millions of lbs.	1895-96. Area in thousands of acres.	1895-96. Estimated outturn in annas.	1895-96. Outturn in millions of lbs.
		Varagu.							*Varigalu.*					
	LBS.			LBS.			LBS.	LBS.			LBS.			LBS.
Ganjám	600	1	7	..	1	6	..	..	..	..	..	..	..	..
Vizagapatam	600	4	8	1	5	9	1	..	..	..	..	..	..	..
Gódávari	600	7	9	2	11	8	3	600	4	9	2	1	8	..
Kistna	600	8	9	3	17	12	7	720	295	9	120	291	10	132
Nellore	500	81	7	18	64	10	20	630	103	8	32	91	10	36
Kurnool	300	141	9	24	131	10	25	600	18	9	6	16	10	6
Bellary	600	4	10	2	5	11	2	..	..	..	..	..	..	..
Anantapur	600	30	10	11	28	12	13	..	..	..	..	..	..	..
Cuddapah	600	58	10	22	38	9	13	..	..	..	..	..	..	..
North Arcot	520	107	7	24	104	7	24	..	..	..	..	..	..	..
Chingleput	700	59	8	21	47	6	12	..	..	..	..	..	..	..
South Arcot	730	302	8	111	269	9	111	..	..	..	..	..	..	..
Salem	600	82	9	28	75	9	25	..	..	..	..	..	..	..
Coimbatore	600	5	8	2	5	9	2	..	..	..	..	..	..	..
Trichinopoly	1,000	184	11	138	172	11	129	..	..	..	..	..	..	..
Tanjore	930	82	9	43	80	11	52	..	..	..	..	..	..	..
Madura	600	111	7	29	106	7	28	..	..	..	..	..	..	..
Tinnevelly	600	39	6	9	33	6	7	..	..	..	..	..	..	..
Nilgiris	600	..	8	..	..	8	..	..	..	..	..	..	..	..
Malabar	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Canara	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Statement I—*cont.*

—	Estimated average rate of yield per acre.	1894–95. Area in thousands of acres.	1894–95. Estimated outturn in annas.	1894–95. Outturn in millions of lbs.	1895–96. Area in thousands of acres.	1895–96. Estimated outturn in annas.	1895–96. Outturn in millions of lbs.	Estimated average rate of yield per acre.	1894–95. Area in thousands of acres.	1894–95. Estimated outturn in annas.	1894–95. Outturn in millions of lbs.	1895–96. Area in thousands of acres.	1895–96. Estimated outturn in annas.	1895–96. Outturn in millions of lbs.	Total outturn of all grains in millions of lb. 1894–95.	1895–96.	1896–97.
	Korra.							*Other cereals and pulses.*									
	LBS.			LBS.			LBS.	LBS.			LBS.			LBS.	LBS.	LBS.	LBS.
Ganjam	600	..	7	..	..	6	..	600	56	7	15	58	6	13	358	365	112
Vizagapatam	600	2	8	1	3	9	1	600	44	8	13	45	9	15	131	171	74
Gódávari	600	5	9	2	4	8	1	600	106	9	36	130	8	39	893	807	717
Kistna	600	60	9	20	42	12	19	600	198	9	67	191	12	86	1,011	1,117	1,031
Nellore	600	12	7	3	11	9	4	600	87	7	23	94	9	32	426	461	460
Kurnool	290	330	9	53	278	9	45	600	143	9	48	165	9	56	371	394	278
Bellary	600	437	11	180	463	10	174	600	227	10	85	239	11	99	573	614	261
Anantapur	600	323	9	109	290	7	76	600	345	10	130	359	8	118	416	427	186
Cuddapah	310	109	11	24	110	19	22	600	197	10	74	241	9	81	481	439	250
North Arcot	600	1	7	..	2	7	..	600	75	7	20	96	7	25	409	431	392
Chingleput	600	1	7	..	1	8	..	600	12	7	3	14	8	4	289	300	290
South Arcot	600	18	8	5	19	8	6	600	55	8	17	60	8	18	718	730	650
Salem	600	21	9	7	26	9	9	600	399	9	134	391	9	132	571	614	583
Coimbatore	600	23	9	8	21	10	8	600	398	8	119	387	9	130	537	610	580
Trichinopoly	600	2	12	1	2	11	1	600	85	12	38	78	11	32	585	610	610
Tanjore	600	..	7	..	..	11	..	600	36	7	10	40	11	17	1,363	1,511	1,465
Madura	600	5	7	1	5	7	1	600	228	7	60	246	7	65	260	293	287
Tinnevelly	600	1	7	..	2	6	..	600	292	7	76	337	5	64	291	325	325
Nilgiris	600	..	8	..	..	8	..	600	20	8	6	20	8	6	11	11	11
Malabar	..	..	..	..	..	..	..	600	38	8	12	41	9	14	577	643	643
South Canara	..	..	..	..	..	..	..	600	34	11	14	33	11	14	467	463	463
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10,738	11,336	9,668

STATEMENT II.

STATEMENT showing Rail-borne and Sea-borne exports and imports of food-grains from and into the Madras Presidency.

—	1892–93.	1893–94.	1894–95.	1895–96.	1896–97.	3rd April to 17th July 1897.	Remarks.
Rail-borne .. { Imports	3,659	3,696	1,876	1,611	1,468	210	Thousands of maunds.
.. { Exports	710	639	767	1,117	1,956	535	
Net .. { Imports + ..	+2,949	+3,056	+1,109	+494	—488	—325	
.. { Exports — ..							
In millions of lbs. ..	+243	+251	+91	+41	— 40	— 27	
Sea-borne .. { Imports	4,056	5,063	3,765	4,007	1,562	• 414	Thousands of cwts.
{ Exports	1,590	2,003	2,750	2,489	4,598	1,377	
Net ..	+2,466	+3,060	+1,015	+ 1,518	—3,036	—963	
In millions of lbs. ..	+276	+343	+114	+170	—340	—108	
Total, Rail-borne and Sea-borne in millions of lbs. ..	+519	+594	+205	+211	—380	—135	

• April, May and June.

STATEMENT III.

CONSOLIDATED statement showing outturn, population, consumption, and trade in food-grains.

Districts.	1894-95 (Fasli 1304).			1895-96 (Fasli 1305).			1896-97 (Fasli 1306).				
	Outturn in million lbs.	Population in thousands (3 per cent. more than Census of 1891).	Consumption in million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 2 and 4).		Outturn in million lbs.	Population in thousands.	Consumption in million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 12 and 14.)	
				Excess.	Deficiency.				Excess.	Deficiency.
1	2	3	4	5	6	7	8	9	10	11
Ganjam *	358	695	348	10	..	365	702	351	14	..
Vizagapatam	131	462	231	..	100	171	467	234	..	63
Godâvari	893	1,414	707	186	..	807	1,428	714	93	..
Kistna *	1,011	1,528	764	247	..	1,117	1,542	771	346	..
Nellore	426	977	488	..	62	461	987	493	..	32
Kurnool	371	842	421	..	50	394	850	425	..	31
Bellary	573	907	454	119	..	614	916	458	156	..
Anantapur	416	750	375	41	..	427	757	378	49	..
Cuddapah	481	1,310	655	..	174	439	1,323	662	..	293
North Arcot	409	1,493	747	..	338	431	1,507	754	..	323
Chingleput	289	1,010	505	..	216	300	1,020	510	..	210
South Arcot	718	2,190	1,095	..	377	730	2,211	1,106	..	376
Madras	..	466	233	..	233	..	470	235	..	235
Salem †	571	1,422	711	..	140	614	1,435	718	..	104
Coimbatore	537	2,011	1,005	..	468	610	2,031	1,015	..	405
Trichinopoly	565	1,192	596	..	11	610	1,203	602	8	..
Tanjore	1,363	2,195	1,097	266	..	1,511	2,216	1,108	403	..
Madura	260	1,587	793	..	533	233	1,602	801	..	568
Tinnevelly	291	1,510	755	..	464	325	1,524	762	..	437
Nilgiris	11	103	51	..	40	11	104	52	..	41
Malabar	577	2,720	1,360	..	783	643	2,746	1,373	..	730
South Canara	467	1,088	544	..	77	463	1,098	549	..	86
Total ..	10,738	27,872	13,935	869	4,066	11,336	28,149	11,071	1,069	3,804
Net ..	..	..	..	..	(a) 3,197	..	..	..	..	(b) 2,735

(a) Net deficiency after deducting the net import of	265 million lbs.	..	2,932 million lbs.
(b) Do.	211	..	2,524 "
(c) Do. adding the net export of	340	..	4,918 "

* The figures entered against these districts exclude certain whole inam villages for which at present no details of cultivation are available.
† The figures entered against this district exclude all whole inam villages therein.

To be substituted for Board's Proceedings of the same number and date.

REVENUE DEPARTMENT.

1897.

Board of Revenue

(Revenue Settlement, Land Records and Agriculture),

MADRAS.

Recd. } 1897. *Enclosures*

Regd. } 1897. *Spare copies*

Printed August th.

Proceedings, 27th July 1897, No. 532.

JULY.

Food-stocks.—Submitting to Government the report regarding the existing — in the Madras Presidency.

PROCEEDINGS OF THE BOARD OF REVENUE

(Revenue Settlement, Land Records and Agriculture).

Read—G.O., Mis. No. 2477, Revenue, dated 14th May 1897.

Abstract.—Communicating letter from the Government of India forwarding correspondence as to the existing food stocks in the Punjab and in the affected districts of the Bombay Presidency with the request that reports embodying similar information for the Madras Presidency may be prepared and submitted at an early date for transmission to the Government of India.

Read—also G.O., No. 1146, Revenue, dated 15th June 1897.

Abstract.—Requesting the Board of Revenue to expedite the submission of the report regarding the existing food stocks in the Madras Presidency.

Read—also G.O., No. 1277, Revenue, dated 9th July 1897.

Abstract.—Communicating for very early attention reminder from the Government of India requesting early information as to the existing food stocks in the Madras Presidency.

Resolution—dated 27th July 1897, No. 532.

With the order read above, Government forwards certain papers, received from the Government of India, embodying a calculation of food stocks in the Punjab, and in the Bombay Presidency, and desires that a report embodying similar information may be furnished, for the Presidency of Madras.

2. The Board was at first disposed to represent the extreme difficulty of framing for this Presidency any trustworthy estimate of the sort required, owing to the incompleteness and general rottenness of some of the data on which the estimate must be based.

An estimate framed on such data, if any reliance be placed upon it, may be positively mischievous, as tending (according as the figures may happen to work out) either to unfounded panic or to a misplaced sense of security. As, however, data very similar to those used in the Punjab and Bombay are available here, the Board has compiled from them the desired statistics, and will content itself with pointing out, in the proper place, where the errors come in which lead to an absurd result. The Board has not held itself at liberty to fudge, or manufacture for the occasion, estimates of the harvest outturns more sanguine and reasonable than the pessimistic guesses of the village accountants, but will state further on, the extent to which their estimates should, in the Board's opinion, be increased.

3. From the papers received with the Government Order, it may be observed that in the Punjab and Bombay the following calculations were made to arrive at an estimate of the food stocks:—

(1) The outturn of food grains from the total cultivated area,
(2) the quantity of food grains imported and exported,
(3) the consumption of food grains by the total population of the province.

4. In calculating item (1) in the Punjab, the outturn of the spring (rabi), and autumn (kharif), harvests in the three years 1894, 1895 and 1896, and the prospective outturn of the (rabi) spring crop of 1897, which was still on the ground at the time of the preparation of the estimates, were taken into account. In Bombay, however, the outturn of only the two years 1894–95 and 1895–96 has been calculated, omitting the outturn of the present year of famine.

5. In the Punjab memorandum, it is stated that average yields were calculated in 1892, in the office of the Director of Land Records and Agriculture, in obedience to the Government of India Circular No. 3—45, dated 20th February 1892. The total outturn in maunds was calculated according to these estimated yields and the reported character of the harvests. The statements referred to in the memorandum give information districtwar regarding area cultivated and irrigated, and character of outturn. A second estimate of outturn is also made, with the help of more accurate rates of yield, obtained, it is stated, from careful crop experiments made during the three years succeeding 1892.

In Bombay, the method by which the total outturn has been calculated is given in detail in statement B appended to that Government's notification. The area under each food-crop is given, and below it, the outturn of it in the anna notation, as estimated and reported by local officers in each year. The standard yield is then taken, and the outturn is calculated from these three factors. In regard to these standards of yield it is stated that they were originally compiled by a committee of experienced survey officers, and recently revised, so far as the affected districts are concerned, by the Deputy Director of Agriculture.

6. Coming now to the data available for the desired calculations in Madras, the Board possesses the estimates of Mr. Wilson, a former Director of Revenue Settlement, who calculated an average acre outturn for the food crops in each district (*vide* his letter printed in B.P., No. 2563, dated 5th September 1885). The statements A and B referred to in his letter are not now forthcoming, but the yields determined are found in the general review of the outturn of crops prepared by the Board in the next three years (*vide* B.Ps., Nos. 7913, dated 23rd October 1886, 448, dated 15th November 1887, and 628, dated 5th November 1888). Subsequently, in 1892, a circular was received from the Government of India calling for information, at the instance of the Secretary of State, regarding the average yield per acre of the principal crops for representative districts, and in reply thereto, a statement was submitted from this Presidency (*vide* B.P., No. 473, dated 29th June 1892) in which standard rates of yield have been given for the following districts only, and for such only of the food crops in them as were adopted as staples at settlement:—

(1) Ganjám.
(2) Kistna (uplands).
(3) Kurnool.
(4) Cuddapah.
(5) Nellore.
(6) Chingleput.
(7) South Arcot.
(8) Tanjore.
(9) Madura.
(10) North Arcot.
(11) Salem.
(12) Coimbatore.
(13) Trichinopoly.

7. The districts omitted were:—

(1) Vizagapatam.
(2) Gódávari.
(3) Kistna (delta).
(4) Anantapur.
(5) Bellary.
(6) Tinnevelly.
(7) Nilgiris.
(8) Malabar.
(9) South Canara.

For districts Nos. (1), (2), (4) and (5), and also for the districts of Tanjore and Trichinopoly in which revised settlements were introduced subsequent to 1892, average acre-yields have now been calculated in the Board's office from the outturns as estimated in the Settlement reports of those districts. For Kistna delta, the rates obtained for Gódávari delta have been adopted. For Tinnevelly Mr. Wilson stated in paragraph 10 of his letter in B.P., No. 2563, dated 5th September 1885, that no abstracts of the settlement results were available in the Central office and that the average of other settled districts was therefore taken. For this and the remaining three districts, and for such crops in the other districts also as were not adopted as staples at settlement, the standards given in B.P., No. 628, dated 5th November 1888, and paragraph 12 of Mr. Wilson's letter in B.P., No. 2563, dated 5th September 1885, have been adopted. All that the Board can say regarding these yield-estimates is that it possesses no better, and that the data upon which they are calculated have not been manufactured for the occasion.

8. Collectors now send to the Board an half-yearly statement showing the estimated outturn of crops in terms of annas—one on 15th December for the earlier crops harvested up to the end of November, and the other on 15th July for all crops harvested in the year—early and late. In recent years, the average outturn in annas calculated from the latter of these returns has been embodied in the Board's jamabandi reports.

9. The area cultivated with each food crop is available in the returns of agricultural statistics submitted annually to the Government of India—*vide* B.Ps., Nos. 38, dated 7th March 1896, and 174, dated 1st March 1897, for 1894–95 and 1895–96; but the statistics refer only to Government and inam lands (including whole inam villages) and exclude Zamindaris, and Agency Tracts in Ganjám and Vizagapatam, for which no information is available.

10. Statement No. I submitted herewith shows the estimated quantity of food grains produced in each district in the fasli years (ending June 30th) 1894–95, 1895–96 and 1896–97. For the first two of the said years, the outturns have been calculated on the data explained above.

As noted above, the outturn for the year of famine (1896–97) has been estimated in the Punjab, but not in Bombay. In this Presidency, the Collector's returns of outturn for the year are not yet in, but an attempt has been made to estimate the yield. In the case of non-affected districts, the estimate is based on a consideration of the comparative cultivation up to March last and the state of the season. For affected districts, the average-yield report by Collectors for affected parts, in connection with their proposals for dry remissions, has been taken into account, while for the non-affected parts generally an average yield of 8 annas has been adopted.

11. The next item to be considered in the calculation of food-stocks are the imports and exports of grain. Statement No. II shows the rail-borne and sea-borne grain trade of the Presidency with places outside it for the five official years ending 1896–97, and during the first quarter of the current official year. No information is available regarding the exports and imports of food grains for each district, which can be made use of to check the estimates of outturn of food stocks therein. A large portion of the trade between adjoining districts is carried on by cart roads, and no information is available regarding such trade. Nor is the available information regarding rail-borne and sea-borne trade in such detail as to show what quantity of food stock grown in each district goes out of it, and what quantity grown outside comes into it for consumption. Even as between the Presidency as a whole and outside places, no information for recent years is available in respect of road traffic except as regards a few roads which are mainly those connecting the British territory with the French Settlements on the Coast. It is only from the statistics of rail-borne and sea-borne trade that an imperfect idea can be formed as to how far the stock of food grain produced within the Presidency is more than sufficient for its requirements, or how far it has to be supplemented by imports from without. A glance at statement II shows that in the last 15 months over 500 million lbs. of grain have left the Presidency, though ordinarily (*vide* paragraph 18 below) the Presidency does not produce any surplus of food grain over and above its requirements.

12. The next item in the calculation is the population. As already stated no data are available regarding cropped areas, or outturns, in the Zamindaris and Agency Tracts, which comprise about one-third of the Presidency area. The population of these tracts must therefore be omitted, and the remainder was 27,060,000 in 1891. One per cent. per annum may be allowed for increase since 1891, and the population for each of the three years 1894–95, 1895–96 and 1896–97 is arrived at by adding 3 per cent., 4 per cent., and 5 per cent., respectively, to the population of 1891.

13. The next step is to fix a mean daily grain ration for each head of the population. For the Punjab the allowance is fixed at 6 maunds (about 494 lbs.) per head per annum, which is taken as including a sufficient margin for seed grain, food of cattle, &c. For Bombay—after making allowance for the smaller consumption of infants, children and women—6½ maunds (514 lbs.) per annum is taken as the consumption per head of population, and to this is added nearly one-quarter as much again as an

allowance for seed-grain, feed of cattle and shrinkage and wastage. The total annual allowance per head of population is thus over 7⅔ maunds, or 630 lbs.

14. For reasons which will be only too plain when "consumption" is deducted from "outturn," the Board cannot emulate the liberality of the Bombay assumptions, but must restrict itself to the parsimonious allowance of the Punjab.

In dealing with 28 millions of mouths, a mouthful more or less at each meal makes a prodigious difference in the consumption of a year. It appears, however, futile to attempt any new calculation with a view to show that if due allowance be made for the slender appetites of infants, children, women and old people, and for the vast quantities of food consumed in the shape of meat, fish, fruit, vegetables, jaggery, milk and toddy, a grain ration of 1 lb. a day per head all round is probably an adequate estimate of the actual consumption.

Even if this be admitted, the Punjab allowance of one-third more to cover seed-grain, feed of cattle and wastage by husking and pounding, leaves the estimate of the daily mean ration lower than could be wished.

Following closely the Punjab allowance, the Board (to facilitate calculations) will take 500 lbs. per annum as representing the grain consumption per head of population. One million pounds of grain will then suffice for 2,000 people. Multiplying the mean daily ration by the population and comparing the result with the grain outturn, we arrive at the result exhibited in statement No. III.

This statement shows that in 1895–96, described in the jamabandi report as "a season generally favourable for agricultural operations," and when there was no expectation of scarcity, there was no grain for over 5 millions of the population! The deficiency in 1894–95, which was also not a bad year, was even larger. Though fully alive to the unreliability of its data, and aware that the karnams' "anna valuations" of the harvest would certainly lead to a ridiculous under estimate of outturns, the Board was hardly prepared for so absurd a result.

15. The truth is that some of the most important factors of the calculation are, as the Board has already said, utterly rotten.

First in delusiveness come the "anna valuations." Each village accountant at the time of harvest is called on to give his opinion as to how many annas in the rupee each crop has yielded, taking sixteen annas to represent an average crop.

Any intelligent, careful man who makes the experiment may satisfy himself how difficult the task is. He will remember spells of bad weather, fields which were attacked by blight, ridges whereon the crops withered, hollows where damage was done by flood and so on, until he has persuaded himself that it would be quite unsafe to reckon the total outturn as up to the average. Thus it comes about that in a fair agricultural season like 1895–96, the average anna valuation of the harvest of the staple food-grains for the whole Presidency was as shown in the margin. The Board believes that it would be safe to raise the karnams' anna valuations by one-third, *i.e.*, where the karnam has estimated the outturn at 12 annas, the Board would estimate it at 16 annas on the ground that the karnam insists on regarding 12 annas, as the proper representation of an average crop. If this be done, the alarming deficiency in the two years specified disappears at once, and the Presidency is left with a handsome surplus of over 1,400 million lbs. A net import of 416 million lbs. by rail and sea, during the two years, raises the surplus to over 1,800 million lbs., as an opening balance for 1896–97. By similar treatment the great deficiency in 1896–97 can, without much juggling, be made to disappear.

Grain.	Yield in annas.
Paddy	11
Cholam	10
Cumbu	9
Ragi	10
Varagu	9
Varigalu	10
Korra	9

16. The estimate of the average yield per acre of the various crops presents another stumbling-block, for it varies most strangely in different districts, and its correctness is, in many cases, plainly open to challenge. The Board indeed doubts the possibility of framing any correct estimate of the average yield per acre for an area

so large and various as is embraced in a Madras district. At any rate when it is found that the average yield of cumbu and korra is taken in Cuddapah as 210 lbs. and 310 lbs. per acre, and in Bellary as 400 lbs. and 600 lbs., we have got far towards an explanation why Bellary shows a good surplus of food, when Cuddapah exhibits a large deficiency. The Board doubts whether in truth there is any difference between the two districts in their average productiveness per acre.

To those who have local knowledge, the figures of the different districts, comparing outturn with consumption, will be seen to be replete with gross absurdities, all of which are traceable either to errors in the "anna valuations" of crop, or to errors in the estimate of the "average district yield per acre," or to both.

17. If it be asked why a better "average yield per acre" should not now be calculated, the answer is that past mistakes can only be corrected by years of patient continued experiment, conducted in a uniform manner, by a trained trustworthy establishment, which can devote its whole attention to the work. If experience teaches anything it is that crop experiments are worthless when made in a hurry by low-paid, over-driven native officials, or by superior officers pressed by more urgent revenue and magisterial duties.

18. Unless Government otherwise directs, the Board does not think it profitable to pursue the subject in the direction of exposing further instances and sources of error. It must, however, be remarked as a solid fact that, during the ten years ending March 1896, the imports of grain by rail and by sea into the Madras Presidency have exceeded the exports of grain by an annual average of about 220 millions of pounds, and that it was only in two years of that period, viz., 1888–89 and 1889–90, that the exports of grain exceeded the imports. Since the commencement of the past official year, however, this state of things has been reversed, and the remarkable spectacle is presented of a steady increase in grain exports and decrease in grain imports. The grain exports of 1896–97 exceeded the grain imports by 380 million pounds, and from April to the middle of July in the current year the net grain exports are 27 million pounds by rail and 108 million pounds by sea, total 135 million pounds. This change in the current of the grain trade is doubtless due to famine, and consequent high prices, in other parts. It is, of course, a striking confirmation of the worthlessness of the Board's calculations. If stocks were at a low ebb it appears unlikely that the unusual outward drain would continue, but more than this the Board cannot venture to say.

(True Extract.)

R. J. Srinivasan

Secretary.

To the Secretary to Government, Revenue Department,
with enclosures returned.

Copy to all Collectors.

Prd. A. F. Eccleston.

STATEMENT I.

	Estimated average rate of yield per acre.	1894–95.			1895–96.		
		Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.
Cholam.	LBS.			LBS.			LBS.
Ganjam	500	2	7	..	2	6	1
Vizagapatam	500	13	7	3	9	9	3
Godavari (Delta	1,000	98	9	55	80	7	35
Godavari (Upland	1,000						
Kistna (Delta	690	406	9	158	462	8	160
Kistna (Upland	690						
Nellore (Principal division	380	372	9	80	385	11	101
Nellore (Sub-division	420	538	10	141	586	10	154
Karnool (Proper	330	34	10	7	36	10	7
Karnool (Cumbum and Markapur.	480	845	9	223	771	11	253
Bellary	380	270	9	68	302	9	64
Anantapur	410	366	11	103	378	9	87
Cuddapah (Main division	500	52	8	13	63	8	16
Cuddapah (Sub-division	500	13	7	3	15	6	3
North Arcot	750	67	8	25	72	8	27
Chingleput	770	77	9	34	96	10	47
South Arcot	400	632	9	153	731	10	183
Salem	520	149	11	54	176	11	64
Coimbatore	500	1	7	..	1	11	..
Trichinopoly	430	177	8	39	213	8	46
Tanjore	600	104	7	23	114	7	25
Madura	..	..	2	..	..	..	..
Tinnevelly	..	..	8	..	1	9	..
Nilgiris	500	..	..	..	..	..	..
Malabar	..	..	..	..	..	..	..
South Canara	..	..	..	..	..	..	..
Paddy.	LBS.						
Ganjam	1,500	315	11		323	11	
Vizagapatam	1,550	92	11		98	11	
Godavari (Delta	1,720	620	11		734	11	
Godavari (Upland	1,300	34	11		31	11	
Kistna (Delta	1,720	478	11		666	11	
Kistna (Upland	1,500	21	10		22	10	
Nellore (Principal division	1,430	236	10		211	10	
Nellore (Sub-division	1,450	31	10		28	10	
Karnool (Proper	1,580	53	9		48	9	
Karnool (Cumbum and Markapur.	1,460	20	9		16	9	
Bellary	1,680	39	11		46	11	
Anantapur	1,720	68	10		73	10	
Cuddapah (Main division	1,630	86	11		97	11	
Cuddapah (Sub-division	970	74	11		49	11	
North Arcot	1,650	356	8		294	8	
Chingleput	1,040	477	8		247	8	
South Arcot	1,350	492	10		415	10	
Salem	1,610	109	10		109	10	
Coimbatore	1,360	90	11		84	11	
Trichinopoly	1,450	206	11		206	11	
Tanjore	1,600	1,077	12		1,293	12	
Madura	1,010	188	7		81	7	
Tinnevelly	1,350	236	7		140	7	
Nilgiris	1,550	5	9		4	9	
Malabar	1,320	667	10		563	10	
South Canara	1,350	486	11		452	11	

Statement I—*cont.*

	Estimated average rate of yield per acre.	1894–95.			1895–96.			1896–97.		
		Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.
		—			—			—		
	Cumbu.									
	lbs.									
Ganjám ..	400	6	7	1	6	10	1	6	10	1
Vizagapatam ..	550	33	6	7	34	10	7	34	10	7
Godávari ..	800	16	10	8	13	10	5	13	10	5
Kistna ..	370	204	10	47	181	10	42	181	10	42
Nellore ..	300	64	10	9	68	10	12	68	10	12
Kurnool ..	400	78	8	9	77	9	12	77	9	12
Bellary ..	400	72	9	16	71	10	17	71	10	17
Anantapur ..	400	69	8	14	69	8	14	69	8	14
Cuddapah ..	210	328	10	44	301	10	36	301	10	36
North Arcot ..	420	115	8	24	123	8	23	123	8	23
Chingleput ..	400	13	7	2	14	9	3	14	9	3
South Arcot ..	480	314	9	84	312	9	74	312	9	74
Salem ..	710	324	8	130	335	9	134	335	9	132
Coimbatore ..	370	657	10	122	637	10	132	637	10	132
Trichinopoly ..	630	195	7	77	170	9	74	170	9	74
Tanjore ..	540	17	8	4	25	9	9	25	9	9
Madura ..	400	112	8	23	101	9	20	101	9	20
Tinnevelly ..	400	169	6	25	170	8	34	170	8	34
Nilgiris ..	..	..	..	..	..	..	..	..	..	..
Malabar ..	430	..	8	..	..	9	..	..	9	..
South Canara ..		..	..	..	..	..	..	..	..	..
	Rági.									
	lbs.									
Ganjám ..	510	83	7	19	68	6	13	68	6	13
Vizagapatam ..	560	33	7	8	29	10	10	29	10	10
Godávari ..	1,200	32	10	23	25	10	20	25	10	20
Kistna ..	650	29	7	8	26	12	13	26	12	13
Nellore ..	650	59	9	23	58	9	21	58	9	21
Kurnool ..	650	36	8	12	36	12	18	36	12	18
Bellary ..	650	39	10	16	37	12	25	37	12	25
Anantapur ..	460	80	9	21	87	10	33	87	10	33
Cuddapah ..	650	152	11	68	159	10	65	159	10	65
North Arcot ..	480	143	8	34	138	8	33	138	8	33
Chingleput ..	490	60	7	13	63	7	14	63	7	14
South Arcot ..	700	154	9	61	150	9	59	150	9	59
Salem ..	740	279	10	129	279	10	129	279	10	129
Coimbatore ..	330	200	10	49	195	11	53	195	11	53
Trichinopoly ..	810	117	12	71	104	11	58	104	11	58
Tanjore ..	670	42	7	13	41	11	19	41	11	19
Madura ..	650	97	7	27	88	8	29	88	8	29
Tinnevelly ..	650	54	8	18	53	7	15	53	7	15
Nilgiris ..	650	3	8	1	3	10	1	3	10	1
Malabar ..	650	6	8	2	5	10	2	5	10	2
South Canara ..	650	3	11	1	3	11	1	3	11	1

Statement I—*cont.*

	Estimated average rate of yield per acre.	1894–95.			1895–96.			1896–97.		
		Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.
		—			—			—		
	Varagu.									
	lbs.									
Ganjám ..	600	1	7	..	1	8	..	1	8	..
Vizagapatam ..	600	4	8	1	2	9	..	2	9	..
Godávari ..	600	7	9	2	3	9	1	3	9	1
Kistna ..	600	8	7	2	3	8	1	3	8	1
Nellore ..	500	81	7	18	64	9	17	64	9	17
Kurnool ..	300	141	9	24	131	10	33	131	10	33
Bellary ..	600	4	10	2	5	10	2	5	10	2
Anantapur ..	600	30	10	11	28	10	11	28	10	11
Cuddapah ..	600	58	10	22	38	9	12	38	9	12
North Arcot ..	520	107	7	24	104	7	12	104	7	12
Chingleput ..	700	59	8	21	47	6	9	47	6	9
South Arcot ..	730	302	8	111	269	9	42	269	9	42
Salem ..	600	82	9	28	75	9	11	75	9	11
Coimbatore ..	600	6	8	2	5	11	2	5	11	2
Trichinopoly ..	1,090	184	11	138	172	11	80	172	11	80
Tanjore ..	930	82	9	43	80	7	21	80	7	21
Madura ..	600	111	7	29	106	6	26	106	6	26
Tinnevelly ..	600	39	6	9	33	8	10	33	8	10
Nilgiris ..	..	..	..	..	..	..	..	..	..	..
Malabar ..	..	..	..	..	..	..	..	..	..	..
South Canara ..	..	..	..	..	..	..	..	..	..	..
	Varigalu.									
	lbs.									
Ganjám ..	600	..	..	..	..	..	..	..	..	..
Vizagapatam ..	720	4	9	1	3	9	1	3	9	1
Godávari ..	620	293	8	120	295	8	120	295	8	120
Kistna ..	600	103	8	32	103	8	32	103	8	32
Nellore ..	..	18	9	6	18	9	6	18	9	6
Kurnool ..	..	..	..	..	..	..	..	..	..	..
Bellary ..	..	..	..	..	..	..	..	..	..	..
Anantapur ..	..	..	..	..	..	..	..	..	..	..
Cuddapah ..	..	..	..	..	..	..	..	..	..	..
North Arcot ..	..	..	..	..	..	..	..	..	..	..
Chingleput ..	..	..	..	..	..	..	..	..	..	..
South Arcot ..	..	..	..	..	..	..	..	..	..	..
Salem ..	..	..	..	..	..	..	..	..	..	..
Coimbatore ..	..	..	..	..	..	..	..	..	..	..
Trichinopoly ..	..	..	..	..	..	..	..	..	..	..
Tanjore ..	..	..	..	..	..	..	..	..	..	..
Madura ..	..	..	..	..	..	..	..	..	..	..
Tinnevelly ..	..	..	..	..	..	..	..	..	..	..
Nilgiris ..	..	..	..	..	..	..	..	..	..	..
Malabar ..	..	..	..	..	..	..	..	..	..	..
South Canara ..	..	..	..	..	..	..	..	..	..	..

Statement I—*concl.*

	Other cereals and pulses.										Korra.										Total outturn of all grains in millions of lb.		
	1894–95.			1895–96.			1894–95.			1895–96.													
	Estimated average rate of yield per acre.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Estimated average rate of yield per acre.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	1894–95.	1895–96.	1896–97.
	Lbs.							Lbs.													Lbs.	Lbs.	Lbs.
Ganjam ..	600	56	7	15	58	6	13	600	..	..	..	..	..	..	..	..	..	..	..	..	358	365	112
Vizagapatam ..	600	44	8	13	45	9	15	600	2	7	1	3	6	1	3	6	1	3	6	1	131	171	74
Godávari ..	600	106	9	36	130	8	39	600	5	9	2	4	9	2	4	9	2	4	9	2	803	807	717
Kistna ..	600	198	9	67	191	12	86	600	60	9	20	42	8	12	42	8	12	42	8	12	1,011	1,117	1,031
Nellore ..	600	87	7	23	94	9	32	600	12	7	3	11	9	3	11	9	3	11	9	3	426	461	460
Kurnool ..	600	143	9	48	165	11	56	290	330	9	53	278	11	53	278	11	53	278	11	53	371	394	278
Bellary ..	600	227	10	85	239	8	99	600	437	11	180	463	9	180	463	9	180	463	9	180	573	614	261
Anantapur ..	600	345	10	130	359	9	118	310	323	9	119	290	11	119	290	11	119	290	11	119	416	427	186
Cuddapah ..	600	197	10	74	241	8	81	310	109	11	44	110	7	44	110	7	44	110	7	44	481	439	250
North Arcot ..	600	75	7	26	96	9	25	600	1	7	..	2	10	..	2	10	..	2	10	..	409	431	392
Chingleput ..	600	12	7	3	14	8	4	600	1	8	..	2	7	..	2	7	..	2	7	..	289	300	290
South Arcot ..	600	55	8	17	60	8	18	600	18	9	6	19	8	6	19	8	6	19	8	6	718	730	650
Salem	600	399	9	134	391	9	132	600	21	9	7	26	9	7	26	9	7	26	9	7	571	614	583
Coimbatore ..	600	398	8	119	387	9	130	600	23	9	8	21	10	8	21	10	8	21	10	8	537	610	589
Trichinopoly ..	600	85	12	38	78	11	32	600	2	12	1	2	11	1	2	11	1	2	11	1	686	610	610
Tanjore	600	36	7	10	40	11	17	600	..	7	..	..	11	..	..	11	..	..	11	..	1,363	1,511	1,405
Madura	600	228	7	60	246	7	65	600	6	7	1	5	7	1	5	7	1	5	7	1	260	293	287
Tinnevelly ..	600	282	7	75	327	6	64	600	1	7	..	2	8	..	2	8	..	2	8	..	291	325	325
Nilgiris	600	20	8	6	20	8	6	..	..	..	..	..	..	..	..	..	..	..	..	..	11	11	11
Malabar	600	38	6	12	41	9	14	..	..	..	..	..	..	..	..	..	..	..	..	..	577	643	643
South Canara ..	600	34	7	14	23	11	14	..	..	..	..	..	..	..	..	..	..	..	..	..	467	463	463
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10,738	11,336	9,603

STATEMENT II.

STATEMENT showing Rail-borne and Sea-borne exports and imports of food-grains from and into the Madras Presidency.

——	1892–93.	1893–94.	1894–95.	1895–96.	1896–97.	3rd April to 17th July 1897.	Remarks.
Rail-borne .. Imports	3,659	3,695	1,876	1,611	1,468	210	Thousands of maunds.
Rail-borne .. Exports	710	639	767	1,117	1,956	535	
Net .. Imports + .. Exports − ..	+2,949	+3,056	+1,109	+494	−488	−325	
In millions of lbs. ..	+243	+251	+91	+41	−40	−27	
Sea-borne .. Imports	4,056	5,063	3,765	4,007	1,562	* 414	Thousands of cwts.
Sea-borne .. Exports	1,590	2,003	2,750	2,489	4,598	1,377	
Net ..	+2,466	+3,060	+1,015	+1,518	−3,036	−963	
In millions of lbs. ..	+276	+343	+114	+170	−340	−108	
Total, Rail-borne and Sea-borne in millions of lbs.	+519	+594	+205	+211	−380	−135	

* April, May and June.

STATEMENT III.

CONSOLIDATED statement showing outturn, population, consumption, and trade in food-grains.

Districts.	1894-95 (Fasli 1304).				1895-96 (Fasli 1305).				1896-97 (Fasli 1306).				
	Outturn in million lbs.	Population in thousands (3 per cent. more than Census of 1891).	Consumption million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 2 and 4).	Outturn in million lbs.	Population in thousands.	Consumption million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 7 and 8).	Outturn in million lbs.	Population in thousands.	Consumption in million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 12 and 14.)	
				Excess. Deficiency.				Excess. Deficiency.				Excess.	Deficiency.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ganjam *		358	695	348	10	..	365	702	351	14	..	112	709	354	..	242
Vizagapatam *		131	462	231	..	100	171	467	234	..	63	74	472	236	..	162
Godavari		893	1,414	707	186	..	807	1,428	714	..	63	717	1,442	721	..	4
Kistna *		1,011	1,328	764	247	..	1,117	1,542	771	346	..	1,031	1,557	779	252	..
Nellore		426	977	488	..	62	461	987	493	..	32	460	995	498	..	38
Kurnool		371	842	421	..	50	394	850	425	..	31	278	859	429	..	151
Bellary		573	907	454	119	..	614	916	458	156	..	261	925	463	..	202
Anantapur		416	750	375	41	..	427	757	378	49	..	186	764	382	..	196
Cuddapah		481	1,310	655	..	174	439	1,323	662	..	223	250	1,336	668	..	418
North Arcot		409	1,493	747	..	338	431	1,507	754	..	323	392	1,522	761	..	369
Chingleput		289	1,010	505	..	216	300	1,020	510	..	210	290	1,030	515	..	225
South Arcot		718	2,190	1,095	..	377	730	2,211	1,106	..	376	670	2,232	1,116	..	466
Madras		..	466	233	..	233	..	470	235	..	235	475	475	237	..	237
Salem †		571	1,422	711	..	140	614	1,436	718	..	104	583	1,450	725	..	142
Coimbatore		537	2,011	1,005	..	468	610	2,031	1,015	..	405	580	2,050	1,025	..	445
Trichinopoly		585	1,192	596	..	11	610	1,203	602	8	..	610	1,215	608	..	2
Tanjore		1,363	2,195	1,097	266	..	1,511	2,216	1,108	403	..	1,465	2,238	1,119	346	..
Madura		260	1,587	793	..	533	293	1,602	801	..	508	287	1,618	809	..	522
Tinnevelly		291	1,510	755	..	464	325	1,524	762	..	437	225	1,539	769	..	444
Nilgiris		11	103	51	..	40	11	104	52	..	41	11	105	52	..	41
Malabar		677	2,720	1,360	..	783	643	2,746	1,373	..	730	643	2,772	1,386	..	743
South Canara		467	1,088	544	..	77	463	1,098	549	..	86	463	1,109	554	..	91
Total		10,738	27,872	13,935	869	4,066	11,236	28,140	14,071	1,069	3,804	9,668	28,415	14,206	609	5,138
Net		..	..	..	..	(x)3,197	..	..	..	..	(y)2,735	..	..	..	..	(z)4,538

(a) Net deficiency after deducting the net import of 205 million lbs. .. 2,692 million lbs.
(b) Do. do. 211 " .. 2,524 "
(c) Do. adding the net export of 380 " .. 4,918 "

* The figures entered against these districts exclude certain whole inam villages for which statistics of cultivation are not available.
† The figures entered against this district exclude all whole inam villages therein.

C No 6770 & 1897

Ans/ Gt O (Press) No 767 Dt 8th Sept: 1897.

Ordered to be forwarded to the Govt of India.

8/9/97.

To The Bd of Rev. Sett. Letter No 768.

To

The Secretary to the Govt of India

R. & A Dept (Famine)

Sir,

With reference to Mr Holderness' letter of the 5th May last No 1193, I am directed to forward the marginally noted Proceedings of this Govt embodying a report from the Board of Revenue on the existing food Stocks in this Presidency. The items which have been taken into consideration in arriving at an estimate of ~~outturn food stocks~~ are as in the Punjab and in Bombay,

(a) the outturn of food grains from the total cultivated area,

(b) the quantities of food grains exported and imported, and

(c) the consumption of food grains by the total population of the province.

No 767 & 8-9-97

But as pointed out by the Board of Rev, the data available are, in many instances, altogether unreliable owing to their incompleteness and general inaccuracy and no trustworthy inference can be drawn from them.

2. The first of the above items viz total outturn of food grains, has been calculated with reference to the area under each crop, the average yield per acre and the outturns of 1895-96, 96-97 & 97-98 reported in anna notation; and the sources from which the necessary details have been derived are indicated in paras 6 to 9 of the Board's Resolution. The results obtained cannot, however, be of much value, for the anna valuations based upon the opinion which each village accountant is made to give at the time of the harvest are unreliable and lead generally to an under estimate of outturn, while the estimate of the average yield per acre of the various crops varies most strangely in different districts and its correctness is, in many cases open to question.

Again the information available in regard to the second item, viz the quantity of food grains exported and imported, is ~~incomplete~~ defective in that there are no details for each district nor complete statistics of road traffic, and the information available regarding rail-borne and sea borne trade is not in such detail as to show what quantity of food stocks grown in each district goes out of it and what quantity grown outside comes into it for consumption.

As regards the third item, the Bd has assumed an average consumption of 500 lbs per head of the population but it is doubtful whether the allowance is ~~exp~~ approximately correct

14

~~The statement~~ ~~exhibited~~

Statement III appended to the Board's Procs: which has been worked out on the basis of the above data exhibits a deficit of grain in all the three years dealt with but His Excellency the Governor in Council concurs with the Bd of Rev: in the opinion that the considerable export of grain from this Presidency in 1896-97 & 1897-98 clearly indicate that stocks ~~of grain~~ are not at a low ebb.

RS
1-9-97

1/9/97

Government {1897} of Madras.

REVENUE.

Recd. }
} 1897. *Enclosures*
Regd. } *Spare copies*

G.O., No. 767, 8th September 1897.

SEPTEMBER.

Food-stocks.

Ordering that the report submitted by the Board regarding the existing — in the Madras Presidency be forwarded to the Government of India.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 27th July 1897, No. 532:—

Read—G O., Mis. No. 2477, Revenue, dated 14th May 1897.

Abstract.—Communicating letter from the Government of India forwarding correspondence as to the existing food stocks in the Punjab and in the affected districts of the Bombay Presidency with the request that reports embodying similar information for the Madras Presidency may be prepared and submitted at an early date for transmission to the Government of India.

Read—also G.O., No. 1146, Revenue, dated 15th June 1897.

Abstract.—Requesting the Board of Revenue to expedite the submission of the report regarding the existing food stocks in the Madras Presidency.

Read—also G.O., No. 1277, Revenue, dated 9th July 1897.

Abstract.—Communicating for very early attention reminder from the Government of India requesting early information as to the existing food stocks in the Madras Presidency.

Resolution—dated 27th July 1897, No. 532.

With the order read above, Government forwards certain papers, received from the Government of India, embodying a calculation of food stocks in the Punjab, and in the Bombay Presidency, and desires that a report embodying similar information may be furnished, for the Presidency of Madras.

2. The Board was at first disposed to represent the extreme difficulty of framing for this Presidency any trustworthy estimate of the sort required, owing to the incompleteness and general rottenness of some of the data on which the estimate must be based.

An estimate framed on such data, if any reliance be placed upon it, may be positively mischievous, as tending (according as the figures may happen to work out) either to unfounded panic or to a misplaced sense of security. As, however, data very similar to those used in the Punjab and Bombay are available here, the Board has compiled from them the desired statistics, and will content itself with pointing out, in the proper place, where the errors come in which lead to an absurd result. The Board has not held itself at liberty to fudge, or manufacture for the occasion, estimates of the harvest outturns more sanguine and reasonable than the pessimistic guesses of the village accountants, but will state further on, the extent to which their estimates should, in the Board's opinion, be increased.

3. From the papers received with the Government Order, it may be observed that in the Punjab and Bombay the following calculations were made to arrive at an estimate of the food stocks:—

(1) The outturn of food grains from the total cultivated area,
(2) the quantity of food grains imported and exported,
(3) the consumption of food grains by the total population of the province.

4. In calculating item (1) in the Punjab, the outturn of the spring (rabi), and autumn (kharif), harvests in the three years 1894, 1895 and 1896, and the prospective

outturn of the (rabi) spring crop of 1897, which was still on the ground at the time of the preparation of the estimates, were taken into account. In Bombay, however, the outturn of only the two years 1894–95 and 1895–96 has been calculated, omitting the outturn of the present year of famine.

5. In the Punjab memorandum, it is stated that average yields were calculated in 1892, in the office of the Director of Land Records and Agriculture, in obedience to the Government of India Circular No. 3—45, dated 20th February 1892. The total outturn in maunds was calculated according to these estimated yields and the reported character of the harvests. The statements referred to in the memorandum give information districtwar regarding area cultivated and irrigated, and character of outturn. A second estimate of outturn is also made, with the help of more accurate rates of yield obtained, it is stated, from careful crop experiments made during the three years succeeding 1892.

In Bombay, the method by which the total outturn has been calculated is given in detail in statement B appended to that Government's notification. The area under each food-crop is given, and below it, the outturn of it in the anna notation, as estimated and reported by local officers in each year. The standard yield is then taken, and the outturn is calculated from these three factors. In regard to these standards of yield it is stated that they were originally compiled by a committee of experienced survey officers, and recently revised, so far as the affected districts are concerned, by the Deputy Director of Agriculture.

6. Coming now to the data available for the desired calculations in Madras, the Board possesses the estimates of Mr. Wilson, a former Director of Revenue Settlement, who calculated an average acre outturn for the food crops in each district (*vide* his letter printed in B.P., No. 2563, dated 5th September 1885). The statements A and B referred to in his letter are not now forthcoming, but the yields determined are found in the general review of the outturn of crops prepared by the Board in the next three years (*vide* B.Ps., Nos. 7913, dated 23rd October 1886, 448, dated 15th November 1887, and 628, dated 5th November 1888). Subsequently, in 1892, a circular was received from the Government of India calling for information, at the instance of the Secretary of State, regarding the average yield per acre of the principal crops for representative districts, and in reply thereto, a statement was submitted from this Presidency (*vide* B.P., No. 473, dated 29th June 1892) in which standard rates of yield have been given for the following districts only, and for such only of the food crops in them as were adopted as staples at settlement:—

(1) Ganjám.
(2) Kistna (uplands).
(3) Kurnool.
(4) Cuddapah.
(5) Nellore.
(6) Chingleput.
(7) South Arcot.
(8) Tanjore.
(9) Madura.
(10) North Arcot.
(11) Salem.
(12) Coimbatore.
(13) Trichinopoly.

7. The districts omitted were:—

(1) Vizagapatam.
(2) Gódávari.
(3) Kistna (delta).
(4) Anantapur.
(5) Bellary.
(6) Tinnevelly.
(7) Nilgiris.
(8) Malabar.
(9) South Canara.

For districts Nos. (1), (2), (4) and (5), and also for the districts of Tanjore and Trichinopoly in which revised settlements were introduced subsequent to 1892, average acre-yields have now been calculated in the Board's office from the outturns as estimated in the Settlement reports of those districts. For Kistna delta, the rates obtained for Gódávari delta have been adopted. For Tinnevelly Mr. Wilson stated in paragraph 10 of his letter in B.P., No. 2563, dated 5th September 1885, that no abstracts of the settlement results were available in the Central office and that the average of other settled districts was therefore taken. For this and the remaining three districts, and for such crops in the other districts also as were not adopted as staples at settlement, the standards given in B.P., No. 628, dated 5th November 1888,

and paragraph 12 of Mr. Wilson's letter in B.P., No. 2563, dated 5th September 1885, have been adopted. All that the Board can say regarding these yield-estimates is that it possesses no better, and that the data upon which they are calculated have not been manufactured for the occasion.

8. Collectors now send to the Board an half-yearly statement showing the estimated outturn of crops in terms of annas—one on 15th December for the earlier crops harvested up to the end of November, and the other on 15th July for all crops harvested in the year—early and late. In recent years, the average outturn in annas calculated from the latter of these returns has been embodied in the Board's jamabandi reports.

9. The area cultivated with each food crop is available in the returns of agricultural statistics submitted annually to the Government of India—*vide* B.Ps., Nos. 38, dated 7th March 1896, and 174, dated 1st March 1897, for 1894–95 and 1895–96; but the statistics refer only to Government and inam lands (including whole inam villages) and exclude Zamindaris, and Agency Tracts in Ganjám and Vizagapatam, for which no information is available.

10. Statement No. I submitted herewith shows the estimated quantity of food grains produced in each district in the fasli years (ending June 30th) 1894–95, 1895–96 and 1896–97. For the first two of the said years, the outturns have been calculated on the data explained above.

As noted above, the outturn for the year of famine (1896–97) has been estimated in the Punjab, but not in Bombay. In this Presidency, the Collector's returns of outturn for the year are not yet in, but an attempt has been made to estimate the yield. In the case of non-affected districts, the estimate is based on a consideration of the comparative cultivation up to March last and the state of the season. For affected districts, the average-yield report by Collectors for affected parts, in connection with their proposals for dry remissions, has been taken into account, while for the non-affected parts generally an average yield of 8 annas has been adopted.

11. The next item to be considered in the calculation of food-stocks are the imports and exports of grain. Statement No. II shows the rail-borne and sea-borne grain trade of the Presidency with places outside it for the five official years ending 1896–97, and during the first quarter of the current official year. No information is available regarding the exports and imports of food grains for each district, which can be made use of to check the estimates of outturn of food stocks therein. A large portion of the trade between adjoining districts is carried on by cart roads, and no information is available regarding such trade. Nor is the available information regarding rail-borne and sea-borne trade in such detail as to show what quantity of food stock grown in each district goes out of it, and what quantity grown outside comes into it for consumption. Even as between the Presidency as a whole and outside places, no information for recent years is available in respect of road traffic except as regards a few roads which are mainly those connecting the British territory with the French Settlements on the Coast. It is only from the statistics of rail-borne and sea-borne trade that an imperfect idea can be formed as to how far the stock of food grain produced within the Presidency is more than sufficient for its requirements, or how far it has to be supplemented by imports from without. A glance at statement II shows that in the last 15 months over 500 million lbs. of grain have left the Presidency, though ordinarily (*vide* paragraph 18 below) the Presidency does not produce any surplus of food grain over and above its requirements.

12. The next item in the calculation is the population. As already stated no data are available regarding cropped areas, or outturns, in the Zamindaris and Agency Tracts, which comprise about one-third of the Presidency area. The population of these tracts must therefore be omitted, and the remainder was 27,960,000 in 1891. One per cent. per annum may be allowed for increase since 1891, and the population for each of the three years 1894–95, 1895–96 and 1896–97 is arrived at by adding 3 per cent., 4 per cent., and 5 per cent., respectively, to the population of 1891.

13. The next step is to fix a mean daily grain ration for each head of the population. For the Punjab the allowance is fixed at 6 maunds (about 494 lbs.) per head

per annum, which is taken as including a sufficient margin for seed grain, feed of cattle, &c. For Bombay—after making allowance for the smaller consumption of infants, children and women—$6\frac{1}{4}$ maunds (514 lbs.) per annum is taken as the consumption per head of population, and to this is added nearly one-quarter as much again as an allowance for seed-grain, feed of cattle and shrinkage and wastage. The total annual allowance per head of population is thus over $7\frac{2}{3}$ maunds, or 630 lbs.

14. For reasons which will be only too plain when "consumption" is deducted from "outturn," the Board cannot emulate the liberality of the Bombay assumptions, but must restrict itself to the parsimonious allowance of the Punjab.

In dealing with 28 millions of mouths, a mouthful more or less at each meal makes a prodigious difference in the consumption of a year. It appears, however, futile to attempt any new calculation with a view to show that if due allowance be made for the slender appetites of infants, children, women and old people, and for the vast quantities of food consumed in the shape of meat, fish, fruit, vegetables, jaggery, milk and toddy, a grain ration of 1 lb. a day per head all round is probably an adequate estimate of the actual consumption.

Even if this be admitted, the Punjab allowance of one-third more to cover seed-grain, feed of cattle and wastage by husking and pounding, leaves the estimate of the daily mean ration lower than could be wished.

Following closely the Punjab allowance, the Board (to facilitate calculations) will take 500 lbs. per annum as representing the grain consumption per head of population. One million pounds of grain will then suffice for 2,000 people. Multiplying the mean daily ration by the population and comparing the result with the grain outturn, we arrive at the result exhibited in statement No. III.

This statement shows that in 1895–96, described in the jamabandi report as "a season generally favourable for agricultural operations," and when there was no expectation of scarcity, there was no grain for over 5 millions of the population! The deficiency in 1894–95, which was also not a bad year, was even larger. Though fully alive to the unreliability of its data, and aware that the karnams' "anna valuations" of the harvest would certainly lead to a ridiculous under estimate of outturns, the Board was hardly prepared for so absurd a result.

15. The truth is that some of the most important factors of the calculation are, as the Board has already said, utterly rotten.

First in delusiveness come the "anna valuations." Each village accountant at the time of harvest is called on to give his opinion as to how many annas in the rupee each crop has yielded, taking sixteen annas to represent an average crop.

Any intelligent, careful man who makes the experiment may satisfy himself how difficult the task is. He will remember spells of bad weather, fields which were attacked by blight, ridges whereon the crops withered, hollows where damage was done by flood and so on, until he has persuaded himself that it would be quite unsafe to reckon the total outturn as up to the average. Thus it comes about that in a fair agricultural season like 1895–96, the average anna valuation of the harvest of the staple food-grains for the whole Presidency was as shown in the margin. The Board believes that it would be safe to raise the karnams' anna valuations by one-third, *i.e.*, where the karnam has estimated the outturn at 12 annas, the Board would estimate it at 16 annas on the ground that the karnam insists on regarding 12 annas, as the proper representation of an average crop. If this be done, the alarming deficiency in the two years specified disappears at once, and the Presidency is left with a handsome surplus of over 1,400 million lbs. A net import of 416 million lbs. by rail and sea, during the two years, raises the surplus to over 1,800 million lbs., as an opening balance for 1896–97. By similar treatment the great deficiency in 1896–97 can, without much juggling, be made to disappear.

Grain.	Yield in annas.
Paddy	11
Cholam	10
Cumbu	9
Ragi	10
Varagu	9
Varigalu	10
Korra	9

16. The estimate of the average yield per acre of the various crops presents another stumbling-block, for it varies most strangely in different districts, and its correctness is, in many cases, plainly open to challenge. The Board indeed doubts the possibility of framing any correct estimate of the average yield per acre for an area so large and various as is embraced in a Madras district. At any rate when it is found that the average yield of cumbu and korra is taken in Cuddapah as 210 lbs. and 310 lbs. per acre, and in Bellary as 400 lbs. and 600 lbs., we have got far towards an explanation why Bellary shows a good surplus of food, when Cuddapah exhibits a large deficiency. The Board doubts whether in truth there is any difference between the two districts in their average productiveness per acre.

To those who have local knowledge, the figures of the different districts, comparing outturn with consumption, will be seen to be replete with gross absurdities, all of which are traceable either to errors in the "anna valuations" of crop, or to errors in the estimate of the "average district yield per acre," or to both.

17. If it be asked why a better "average yield per acre" should not now be calculated, the answer is that past mistakes can only be corrected by years of patient continued experiment, conducted in a uniform manner, by a trained trustworthy establishment, which can devote its whole attention to the work. If experience teaches anything it is that crop experiments are worthless when made in a hurry by low-paid, over-driven native officials, or by superior officers pressed by more urgent revenue and magisterial duties.

18. Unless Government otherwise directs, the Board does not think it profitable to pursue the subject in the direction of exposing further instances and sources of error. It must, however, be remarked as a solid fact that, during the ten years ending March 1896, the imports of grain by rail and by sea into the Madras Presidency have exceeded the exports of grain by an annual average of about 220 millions of pounds, and that it was only in two years of that period, viz., 1888–89 and 1889–90, that the exports of grain exceeded the imports. Since the commencement of the past official year, however, this state of things has been reversed, and the remarkable spectacle is presented of a steady increase in grain exports and decrease in grain imports. The grain exports of 1896–97 exceeded the grain imports by 380 million pounds, and from April to the middle of July in the current year the net grain exports are 27 million pounds by rail and 108 million pounds by sea, total 135 million pounds. This change in the current of the grain trade is doubtless due to famine, and consequent high prices, in other parts. It is, of course, a striking confirmation of the worthlessness of the Board's calculations. If stocks were at a low ebb it appears unlikely that the unusual outward drain would continue, but more than this the Board cannot venture to say.

(True Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department,
with enclosures returned.

Copy to all Collectors.

STATEMENT I.

Estimate quantity of food-grains produced in each district in the fasli years 1894–95, 1895–96 and 1896–97.

	Paddy.						Cholam.						Cumbu.					
	Estimated average rate of yield per acre.	1894–95.			1895–96.		Estimated average rate of yield per acre.	1894–95.			1895–96.		Estimated average rate of yield per acre.	1894–95.			1895–96.	
		Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Outturn in millions of lbs.		Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Outturn in millions of lbs.		Area in thousands of acres.	Estimated outturn in annas.	Outturn in millions of lbs.	Area in thousands of acres.	Outturn in millions of lbs.
	Lbs.						Lbs.						Lbs.					
Ganjam	1,500	315	11	323	328	397	500	2	7	..	2	1	500	1	11	..	1	3
Vizagapatam	1,550	92	11	98	102	129	500	13	7	3	9	3	500	3	13	1	3	3
Gódávari	1,720	620	11	734	622	670	1,000	98	9	55	80	35	690	35	10	15	35	13
Kistna	1,300	84	11	31	41	34	690	406	9	158	462	160	380	24	12	14	24	6
Nellore	1,720	478	11	566	491	634	380	372	9	80	385	101	420	209	10	44	209	44
	1,560	21	11	22	21	24	420	538	10	141	536	154	330	26	10	13	26	5
Kurnool	1,430	236	10	211	234	209	330	34	9	7	36	7	480	63	10	30	63	14
	1,450	31	10	28	29	26	480	848	9	223	771	253	380	18	10	7	18	3
Bellary	1,680	53	9	48	53	63	380	270	9	58	302	64	410	50	10	21	50	8
	1,450	20	9	16	20	18	410	366	11	103	378	87	500	117	10	59	117	27
Anantapur	1,680	39	11	46	43	50	500	52	8	13	63	16	500	88	10	44	88	20
	1,720	68	10	73	109	117	500	13	7	3	15	3	750	47	8	35	47	11
Cuddapah	1,630	86	11	97	86	88	750	67	8	25	72	27	770	310	8	238	310	47
	970	74	11	49	77	47	770	77	9	34	96	47	400	264	10	264	264	66
North Arcot	1,650	366	8	294	376	310	400	682	9	153	731	183	520	435	11	452	435	113
Chingleput	1,040	477	8	247	510	264	520	149	11	64	176	64	500	138	13	144	138	36
South Arcot	1,350	492	10	415	516	435	500	1	7	..	1	..	430	102	13	106	102	26
Salem	1,610	109	10	109	125	138	500	177	8	39	213	46	500	252	8	210	252	63
Coimbatore	1,360	90	11	84	93	102	430	104	7	23	114	25	..	1,414	9	1,273	1,414	353
Tríchinopoly	1,360	206	11	206	214	252	500	2	8	..	1	..	600	104	10	104	104	26
Tanjore	1,450	1,077	12	1,293	1,087	1,414	..	..	..	..	..	..	..	180	9	135	180	45
Madura	1,600	183	7	81	205	104	600	..	..	..	..	..	..	4	10	3	4	1
Tinnevelly	1,010	236	7	140	266	180	..	..	..	..	..	..	..	627	11	517	627	156
Nilgiris	1,360	5	9	4	5	4	..	..	..	..	..	..	..	418	..	..	418	104
Malabar	1,350	687	10	563	743	627	..	..	..	..	..	..	..	..	..	..	..	..
South Canara	1,350	436	11	452	433	418	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENT I—*cont.*

Estimate quantity of food-grains produced in each district in the fasli years 1894–95, 1895–96 and 1896–97—*cont.*

—	Estimated average rate of yield per acre.	1894–95. Area in thousands of acres.	1894–95. Estimated outturn in annas.	1894–95. Outturn in millions of lbs.	1895–96. Area in thousands of acres.	1895–96. Estimated outturn in annas.	1895–96. Outturn in millions of lbs.	Estimated rate of yield per acre.	1894–95. Area in thousands of acres.	1894–95. Estimated outturn in annas.	1894–95. Outturn in millions of lbs.	1895–96. Area in thousands of acres.	1895–96. Estimated outturn in annas.	1895–96. Outturn in millions of lbs.
				Cumbu.							*Ragi.*			
	LBS.			LBS.			LBS.	LBS.			LBS.			LBS.
Ganjám ..	400	6	7	1	6	6	1	510	83	7	19	68	6	13
Vizagapatam ..	550	33	6	7	34	10	12	560	33	7	8	29	10	10
Gódávari ..	800	16	10	8	13	8	5	1,200	32	10	23	26	10	20
Kistna ..	370	204	10	47	181	10	42	650	29	7	8	26	12	13
Nellore ..	300	64	8	9	68	9	12	650	59	9	22	58	9	21
Kurnool ..	400	78	8	16	77	9	17	650	36	8	12	36	9	13
Bellary ..	400	72	9	16	71	10	18	650	39	10	16	37	12	18
Anantapur ..	400	69	8	14	69	8	14	460	80	9	21	87	10	25
Cuddapah ..	400	328	10	44	301	9	36	650	152	11	68	159	10	65
North Arcot ..	210	115	8	24	123	7	23	480	143	8	34	138	8	33
Chingleput ..	420	13	7	2	14	7	3	490	60	7	13	63	7	14
South Arcot ..	400	314	9	84	312	8	74	700	154	9	61	150	9	59
Salem ..	480	324	9	130	335	9	134	740	279	10	129	279	10	129
Coimbatore ..	710	657	8	122	637	9	132	390	200	10	49	195	11	53
Trichinopoly ..	370	195	10	77	170	11	74	810	117	12	71	104	11	68
Tanjore ..	630	17	7	4	25	11	9	670	42	7	13	41	11	19
Madura ..	540	112	8	23	101	8	20	650	97	7	27	88	8	29
Tinnevelly ..	400	169	6	25	170	8	34	650	54	8	18	53	7	15
Nilgiris ..	400	..	8	..	..	9	..	650	3	8	1	3	10	1
Malabar ..	..	..	..	..	..	..	..	650	6	8	2	5	10	2
South Canara ..	..	..	..	..	..	..	..	650	3	11	1	3	11	1

STATEMENT I—*cont.*

Estimate quantity of food-grains produced in each district in the fasli years 1894–95, 1895–96 and 1896–97—*cont.*

—	Estimated average rate of yield per acre.	1894–95. Area in thousands of acres.	1894–95. Estimated outturn in annas.	1894–95. Outturn in millions of lbs.	1895–96. Area in thousands of acres.	1895–96. Estimated outturn in annas.	1895–96. Outturn in millions of lbs.	Estimated average rate of yield per acre.	1894–95. Area in thousands of acres.	1894–95. Estimated outturn in annas.	1894–95. Outturn in millions of lbs.	1895–96. Area in thousands of acres.	1895–96. Estimated outturn in annas.	1895–96. Outturn in millions of lbs.
				Varagu							*Varigalu.*			
	LBS.			LBS.			LBS.	LBS.			LBS.			LBS.
Ganjám ..	600	1	7	..	1	6	..	..	..	..	..	..	..	..
Vizagapatam ..	600	4	8	1	5	9	1	..	..	..	..	..	..	..
Gódávari ..	600	7	9	2	11	8	3	600	4	9	2	1	8	..
Kistna ..	600	8	9	3	17	12	7	720	295	9	120	291	10	132
Nellore ..	500	81	7	18	64	10	20	630	103	8	32	91	10	35
Kurnool ..	300	141	9	24	131	10	25	600	18	9	6	16	10	6
Bellary ..	600	4	10	2	5	11	2	..	..	..	..	..	..	..
Anantapur ..	600	30	10	11	28	12	13	..	..	..	..	..	..	..
Cuddapah ..	600	58	10	22	38	9	13	..	..	..	..	..	..	..
North Arcot ..	520	107	7	24	104	7	24	..	..	..	..	..	..	..
Chingleput ..	700	59	8	21	47	6	12	..	..	..	..	..	..	..
South Arcot ..	730	302	8	111	269	9	111	..	..	..	..	..	..	..
Salem ..	600	82	9	28	75	9	25	..	..	..	..	..	..	..
Coimbatore ..	600	6	8	2	5	9	2	..	..	..	..	..	..	..
Trichinopoly ..	1,090	184	11	136	172	11	129	..	..	..	..	..	..	..
Tanjore ..	930	82	9	43	80	11	52	..	..	..	..	..	..	..
Madura ..	600	111	7	29	106	7	28	..	..	..	..	..	..	..
Tinnevelly ..	600	39	6	9	33	6	7	..	..	..	..	..	..	..
Nilgiris ..	..	..	8	..	..	8	..	..	..	..	..	..	..	..
Malabar ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Canara ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENT I—*cont.*

Estimated quantity of food-grains produced in each district in the fasli years 1894–95, 1895–96 and 1896–97—*cont.*

	Other cereals and pulses.								Korra.								Total outturn of all grains in millions of lb.		
	1894–95.			1895–96.					1894–95.			1895–96.							
	Estimated average rate of yield per acre.	Area in thousands of acres.	Outturn in millions of lbs.	Estimated outturn in annas.	Area in thousands of acres.	Outturn in millions of lbs.	1894–95.	1895–96.	Estimated average rate of yield per acre.	Area in thousands of acres.	Outturn in millions of lbs.	Estimated outturn in annas.	Area in thousands of acres.	Outturn in millions of lbs.	1894–95.	1895–96.	1894–95.	1895–96.	1896–97.
	Lbs.		Lbs.			Lbs.	Lbs.	Lbs.	Lbs.		Lbs.			Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Ganjam ..	600	56	15	7	58	13	6	..	600	..	..	6	..	..	..	1	358	365	112
Vizagapatam	600	44	13	8	46	15	9	9	600	2	1	9	3	1	1	1	131	171	74
Godavari ..	600	106	36	9	130	39	8	8	600	5	2	8	4	2	1	1	893	807	717
Kistna ..	600	193	67	9	191	86	12	12	600	60	20	9	42	19	19	4	1,011	1,117	1,031
Nellore ..	600	87	23	7	94	32	9	9	600	12	3	7	11	4	4	45	426	461	460
Kurnool ..	600	143	48	9	165	56	9	9	290	330	53	9	278	46	45	174	371	394	278
Bellary ..	600	227	85	10	239	99	11	10	606	437	80	11	463	76	174	76	573	614	261
Anantapur ..	600	345	130	10	359	118	8	7	600	323	109	9	280	22	76	22	416	427	186
Cuddapah ..	600	197	74	10	241	81	9	8	310	109	4	10	110	..	22	..	481	439	250
North Arcot	600	75	20	7	96	25	7	8	600	1	..	7	2	..	..	..	409	431	392
Chingleput	600	12	3	7	14	4	8	8	600	18	5	8	1	..	6	8	289	300	290
South Arcot	600	55	17	8	60	18	8	8	600	21	7	8	19	6	9	9	718	730	650
Salem ..	600	399	134	9	391	132	9	9	600	23	8	9	26	9	10	10	671	614	583
Coimbatore	600	398	119	8	387	130	9	9	600	2	1	9	21	8	11	11	537	610	580
Trichinopoly	600	85	33	12	78	32	11	11	600	..	..	12	2	1	1	1	585	610	610
Tanjore ..	600	36	10	7	40	17	11	11	600	..	..	7	..	..	..	1	1,363	1,511	1,465
Madura ..	600	228	60	7	246	65	7	7	600	..	..	7	5	1	7	7	260	293	287
Tinnevelly	600	292	76	7	337	64	6	6	600	1	..	7	1	..	6	6	291	325	325
Nilgiris ..	600	20	6	8	20	6	8	8	600	..	..	8	..	..	2	8	11	11	11
Malabar ..	600	38	12	8	41	14	9	..	600	..	..	..	..	..	..	..	577	643	643
South Canara	600	34	14	11	33	14	11	..	600	..	..	..	..	..	..	..	467	463	463
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10,738	11,336	9,663

STATEMENT II.

Statement showing Rail-borne and Sea-borne exports and imports of food-grains from and into the Madras Presidency.

—	1892–93.	1893–94.	1894–95.	1895–96.	1896–97.	3rd April to 17th July 1897.	Remarks.
Rail-borne .. { Imports	3,659	3,695	1,876	1,611	1,468	210	Thousands of maunds.
Rail-borne .. { Exports	710	639	767	1,117	1,956	535	
Net .. { Imports + .. / Exports — .. }	+2,949	+3,056	+1,109	+494	—488	—325	
In millions of lbs. ..	+243	+251	+91	+41	—40	—27	
Sea-borne .. { Imports	4,056	5,063	3,765	4,007	1,562	* 414	Thousands of cwts.
Sea-borne .. { Exports	1,590	2,003	2,750	2,489	4,598	1,377	
Net ..	+2,466	+3,060	+1,015	+1,518	—3,036	—963	
In millions of lbs. ..	+276	+343	+114	+170	—340	—108	
Total, Rail-borne and Sea-borne in millions of lbs.	+519	+594	+205	+211	—380	—135	

* April, May and June.

STATEMENT III.

Consolidated statement showing outturn, population, consumption, and trade in food-grains.

Districts.	1894–95 (Fasli 1304).					1895–96 (Fasli 1305).					1896–97 (Fasli 1306).				
	Outturn in million lbs.	Population in thousands (3 per cent. more than Census of 1891).	Consumption million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 2 and 4).		Outturn in million lbs.	Population in thousands.	Consumption in million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 7 and 9).		Outturn in million lbs.	Population in thousands.	Consumption in million lbs. at 500 lbs. per head per annum.	Outturn as compared with consumption (cols. 12 and 14).	
				Excess.	Deficiency.				Excess.	Deficiency.				Excess.	Deficiency.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ganjám *	358	695	348	10	..	365	702	351	14	..	112	709	354	..	242
Vizagapatam *	131	462	231	..	100	171	467	234	..	63	74	472	236	..	162
Gódávari	893	1,414	707	186	..	807	1,428	714	93	..	717	1,442	721	..	4
Kistna *	1,011	1,528	764	247	..	1,117	1,542	771	346	..	1,031	1,557	779	252	..
Nellore	426	977	488	..	62	461	987	493	..	32	460	996	498	..	38
Kurnool	371	842	421	..	50	394	850	425	..	31	278	859	429	..	151
Bellary	573	907	454	119	..	614	916	458	156	..	261	925	463	..	202
Anantapur	416	750	375	41	..	427	757	378	49	..	186	764	382	..	196
Cuddapah	481	1,310	655	..	174	439	1,323	662	..	223	250	1,336	668	..	418
North Arcot	469	1,493	747	..	338	431	1,507	754	..	323	392	1,522	761	..	369
Chingleput	289	1,010	505	..	216	300	1,020	510	..	210	290	1,030	515	..	225
South Arcot	718	2,190	1,095	..	377	730	2,211	1,106	..	376	650	2,232	1,116	..	466
Madras	..	466	233	..	233	..	470	235	..	235	..	475	237	..	237
Salem †	571	1,422	711	..	140	614	1,436	718	..	104	583	1,450	725	..	142
Coimbatore	537	2,011	1,005	..	468	610	2,031	1,015	..	405	580	2,050	1,025	..	445
Trichinopoly *	585	1,192	596	..	11	610	1,203	602	8	..	610	1,215	608	2	..
Tanjore	1,363	2,195	1,097	266	..	1,511	2,216	1,108	403	..	1,465	2,238	1,119	346	..
Madura	260	1,587	793	..	533	293	1,602	801	..	508	287	1,618	809	..	522
Tinnevelly	291	1,510	755	..	464	325	1,524	762	..	437	325	1,539	769	..	444
Nilgiris	11	103	51	..	40	11	104	52	..	41	11	105	52	..	41
Malabar	577	2,720	1,360	..	783	643	2,746	1,373	..	730	643	2,772	1,386	..	743
South Canara	467	1,088	544	..	77	463	1,098	549	..	86	463	1,109	554	..	91
Total ..	10,738	27,872	13,935	869	4,066	11,336	28,140	14,071	1,069	3,804	9,668	28,415	14,206	600	5,138
Net ..	..	..	..	..	(a) 3,197	..	..	..	..	(b) 2,735	..	..	..	..	(c) 4,538

(a) Net deficiency after deducting the net import of 205 million lbs. .. 2,992 million lbs.
(b) Do. do. 211 ,, .. 2,524 ,,
(c) Do. adding the net export of 380 ,, .. 4,918 ,,

* The figures entered against these districts exclude certain whole inam villages for which statistics of cultivation are not available.
† The figures entered against this district exclude all whole inam villages therein.

Order—No. 767, Revenue, dated 8th September 1897.

Miscellaneous.

Ordered to be forwarded to the Government of India.

(True Extract.)

(Signed) G. STOKES,
Ag. Secretary to Government.

To the Board of Revenue (Revenue Settlement, Land Records and Agriculture).

Ind. Shaik Karim.

80 Copies.

1897.

REVENUE AND AGRICULTURAL DEPARTMENT.

From

The Government of Fort St. George.

Recd. } 1897. *Enclosures*

Regd. } 1897. *Spare copies*

Letter, No. 768, 8th September 1897.

SEPTEMBER.

FORWARDING to the Government of India, with remarks, a copy of the Proceedings of this Government embodying a report from the Board of Revenue on the existing food-stocks in this Presidency.

REVENUE DEPARTMENT.

From

The Hon'ble Mr. G. STOKES, I.C.S.,
Ag. Secretary to the Government of Madras,

To

The SECRETARY to the GOVERNMENT of INDIA,
Revenue and Agricultural Department,

Dated Ootacamund, 8th September 1897.

Sir,

With reference to Mr. Holderness's letter of the 5th May last, No. 1193/151-2, I am directed to forward the marginally-noted Proceedings of this Government embodying a report from the Board of Revenue on the existing food-stocks in this Presidency. The items which have been taken into consideration in arriving at an estimate are as in the Punjab and in Bombay—

Miscellaneous.

No. 767, dated 8th September 1897.

(*a*) the outturn of food-grains from the total cultivated areas;
(*b*) the quantity of food-grains exported and imported; and
(*c*) the consumption of food-grains by the total population of the province.

But, as pointed out by the Board of Revenue, the data available are, in many instances, altogether unreliable owing to their incompleteness and general inaccuracy, and no trustworthy inference can be drawn from them.

2. The first of the above items, viz., total outturn of food-grains, has been calculated with reference to the area under each crop, the average yield per acre and the outturn of 1895-96, 1896-97 and 1897-98 reported in anna notation; and the sources from which the necessary details have been derived are indicated in paragraphs 6 to 9 of the Board's Resolution. The results obtained cannot, however, be of much value, for the anna valuations based upon the opinion which each village accountant is made to give at the time of the harvest are unreliable and lead generally to an under-estimate of outturn, while the estimate of the average yield per acre of the various crops varies most strangely in different districts and its correctness is, in many cases, open to question.

3. Again, the information available in regard to the second item, viz., the quantity of food-grains exported and imported, is defective in that there are no details for each district nor complete statistics of road traffic, and the information available regarding rail-borne and sea-borne trade is not in such detail as to show what quantity of food-stocks grown in each district goes out of it, and what quantity grown outside comes into it for consumption. As regards the third item, the Board has assumed an average consumption of 500 lb. per head of the population, but it is doubtful whether the allowance is even approximately correct.

4. Statement III appended to the Board's Proceedings which has been worked out on the basis of the above data exhibits a deficit of grain in all the three years dealt with, but His Excellency the Governor in Council concurs with the Board of Revenue in the opinion that the considerable exports of grain from the Presidency in 1896-97 and 1897-98 clearly indicate that stocks are not at a low ebb.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) G. STOKES,
Ag. Secretary to Government.

Exd. Shaik Karim.

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