Revenue (1897) Department.

MISCELLANEOUS SERIES.

G.O., No. 1407 4396

DATED 27th Aug. 1897.

[Despatch Abstract.]

Covering to the Famine Commr's letter from the Government of India forwarding three copies of a report on the food stocks in the Central Provinces

BACK PAPERS.

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

FURTHER PAPERS.

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1000—19-7-97.

Revenue (1897) Department.

CURRENT No. 7010

Dept 27/8/97

From The Govt of India, R. & A. Dept.

Order mis No 4396 & 27th Aug 1897
Comd Scarlett Famine Comm

No. 25 / 196-2 H.

Dated 9th August 1897

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The Famine Comm
with 4 copies of the
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RS
27-8-97

Note
I have retained one copy
for reference in
H Dept

SUBJECT.

Forwg. three Copies of a report on the food stocks in the Central Provinces.

Secret

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G.O.	No.	Department.	Date.
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FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 3524.

CENTRAL PROVINCES SECRETARIAT.

Revenue Department.

FROM

R. H. CRADDOCK, ESQ., I. C. S.,

THIRD SECRETARY TO THE CHIEF COMMISSIONER,

Central Provinces,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

REVENUE AND AGRICULTURAL DEPARTMENT.

Dated Nagpur, the 24th July 1897.

SIR,

I am directed to address the Government of India in regard to the food-stocks of these Provinces, and to forward for their information copies of two notes recorded on this subject.

2. The first of these notes, which has been drawn up by Mr. L. S. Carey, the Commissioner of Settlements and Agriculture, comprises information regarding the areas placed under food and non-food crops in the kharif and rabi seasons of the agricultural year ending the 31st May 1897, as well as an estimate of the food production in tons based on the anna outturns reported by District Officers, applied to the standard outturns per acre which were worked out by Mr. Fuller in 1894, as the result of crop experiments made during the five years ending in 1893, and have been accepted as standards by the Administration. Mr. Carey shows that, on the basis of these anna estimates converted into tons at the standard rates in question, the outturn of food crops from October 1896 to April last, embracing the kharif and rabi seasons of the agricultural year 1896-97, have been sufficient in only four districts to yield the lowest minimum of food for the year, *i. e.*, one pound per diem per head of population; and this makes no allowance for grain consumed by cattle, for seed, or for the more liberal diet which the well-to-do classes have enjoyed.

The second note, which has been compiled in the Secretariat, examines Mr. Carey's conclusions from the point of view of the trade returns, and for the purpose of estimating the food-supply divides the year into a different period, namely, from April 1st 1896 to April 1st 1897.

The conclusions of this second note are that there is reason to believe that the anna outturns reported have understated the facts, because they are still pitched to a scale in which 16 annas (as in the parlance of the people) represents a full crop and not an average crop.

The Commissioner of Settlements, to whom this criticism has been shown, replies that, although in good years the tendency of officials and non-officials is to return a crop as if 16 annas represented a full outturn rarely attainable, yet in bad years there is a contrary tendency to over-estimate a bad crop, because it is impossible to give full weight to the effect upon the total outturns of the areas, never satisfactorily ascertainable, in which the seed sown failed to germinate or the young seedlings withered before they could come to maturity. He adds also that in the case of the present estimates he was at special pains to obtain accurate reports based on the correct scale of 16 annas representing an average crop, and that, if in some districts the old tendency of regarding 16 annas as a full crop has affected the correctness of the returns, the consequent under-statement of outturns in these districts must be set off against the over-statement which follows the inclusion in the cropped area of the lands in which the crop failed to germinate or to come to maturity, an over-estimate which cannot be adequately allowed for in framing anna estimates.

3. The Chief Commissioner is satisfied that the outturns of previous years have by reason of this divergence between the official and popular scales of anna estimates been considerably understated; but, in the case of the present returns, after considering the reply of the Commissioner of Settlements to the arguments contained in the second note, Sir Charles Lyall prefers to accept the lesser estimates of outturn as approximately correct. It is clear that they will at least not overstate the production, and in forming conclusions on the sufficiency or insufficiency of the food-supply, it is certainly better to be on the safe side.

It is therefore on the basis of Mr. Carey's figures that I am to discuss the returns and to frame an estimate of the food-supply now available in the various districts, as well as the probable addition to that supply which the next kharif harvest will yield according as it may be a 12-anna, an 8-anna or a 4-anna crop.

4. First, as regards areas, the Chief Commissioner has nothing to add to the remarks on this subject contained in Mr. Carey's note. As compared with the normal areas as represented by the returns of 1893-94, there has been a decrease of about two million acres in the area cropped.

The area under kharif shows an increase above the normal, while that under rabi is less than half the usual figure.

The increase of the former is due to favourable rain at sowing time and to the desire of the people to obtain an early food-supply after the deficient crops of 1895-96; the decrease in the latter is due to the drought of last October, and the difficulty of obtaining seed after the crops of the rabi season had been poor for several years past. The drought also reduced the area sown with the after crops, which usually follow rice, to less than a third of the normal.

5. Next, to turn to the outturns, the great, indeed insuperable, difficulty in arriving at an estimate of the amount of food grain existing in any district at any given time is the impossibility of ascertaining with any approach to accuracy the extent of the stocks remaining over from previous harvests; and the figures which will be presently examined must be taken merely as such rough approximations to the truth as can be arrived at after due care is taken to employ the best data that are available.

It must be assumed that, on the 15th April last, the food stocks available were :—

(i) the rabi then just harvested;

(ii) anything left over from the previous kharif;

(iii) any old stocks existing from previous years.

These amounts, which are liable to be increased or decreased by net imports or net exports, should ordinarily suffice to give at least six months' food to the people, namely, till the middle of October next, when the kharif harvest begins to come in. Any surplus, together with the produce of the kharif, will go to feed the people until the next rabi, *i. e.*, 15th April 1898, or for as long a time afterwards as the supply may last.

Of the three items in the account mentioned above, the first two may be deduced from the area and outturn statements supplied by the Commissioner of Settlements; the third can only be guessed at from other facts or inferences.

The tables which are given below for each Division, show the following items :—

(i). The excess, if any, of the kharif of 1896 over the amount required to feed the population for six months, namely, from October 15th 1896 to April 15th 1897. This amount is reckoned on the basis that one ton will feed six people for a year.

(ii). The rabi outturn of April 1897.

(iii). The surplus or deficit in the food-supply from April 15th 1897 to October 15th 1897.

It will be convenient to discuss the figures by divisions, and it is only in respect of whole divisions that the figures relating to exports and imports can be usefully examined.

6. To begin with the Jubbulpore Division, in which the present distress is most acute :—

JUBBULPORE DIVISION.

District.	Kharif, 1896.	Six months' food for people.	Surplus (if any) from kharif.	Rabi outturn of 1897.	Surplus or deficit compared with column 3.	
					+	−
1	2	3	4	5	6	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Saugor	26,794	49,310	*Nil.*	37,720	...	11,590
Damoh	14,978	27,130	"	12,420	...	14,710
Jubbulpore	26,482	62,350	"	91,810	29,460	...
Mandla	11,195	28,280	"	17,010	...	11,270
Seoni	19,821	30,900	"	36,150	5,250	...
TOTAL ...	99,270	197,970	...	195,110	34,710	37,570
				Net deficit ...		2,860

It will be observed that the kharif supply of 1896 was quite unequal to the demand, but it must be presumed that some balance from the preceding rabi or from older stocks was available. During the quarters ending the 31st December 1896 and the 31st March 1897, respectively, the net imports into the Jubbulpore Division were 1,955 tons and 4,644 tons respectively, or a total of 6,599 tons—a very small contribution towards the deficiency in the kharif.

However the deficiency was made up, it may be safely said, in the light of the steady imports into the Jubbulpore Division, that stocks must have been exhausted, and that the only food-supply is the rabi of 1897, which is insufficient to feed the people of the division till the next kharif is reaped.

In the division as a whole it is true that the deficiency is not very large, 2,860 tons; but this leaves no margin for extra consumption. The net imports into the division during April and May have been 5,235 tons.

The details of the surplus or deficit may be expressed in the terms of the number of people it would feed or fail to feed for six months; and the following are the results:—

District.	April to October.	
	Food required for—	Surplus food available for—
	Number of persons.	Number of persons.
Saugor	139,080	...
Damoh	176,520	...
Jubbulpore	...	353,520
Mandla	135,240	...
Seoni	...	63,000
Total ...	450,840	416,520

Jubbulpore may supply Mandla and Damoh with some of her surplus, but Seoni has very little to spare, and Saugor must draw from outside.

About 20,000 tons will be the probable requirements from other divisions or other Provinces to keep the people well supplied till the kharif is reaped.

7. As regards the future, on the basis that the area sown with kharif seed will be equal to that sown last year, the following table illustrates the position of each district of the division from the 15th October next to the 15th April 1898, according as the outturn is, in the ordinary parlance of the people, 12 annas, 8 annas, or only 4 annas:—

District.	Food requirements for six months, October to April, 1897-98.	Outturn of kharif in tons.			(+) Surplus or (—) Deficit.		
		At 12 annas.	At 8 annas.	At 4 annas.	At 12 annas.	At 8 annas.	At 4 annas.
Saugor	49,310	50,470	33,640	16,820	+ 1,160	— 15,670	— 32,490
Damoh	27,130	33,840	22,560	11,280	+ 6,710	— 4,570	— 15,850
Jubbulpore	62,350	67,740	45,160	22,580	+ 5,390	— 17,190	— 39,770
Mandla	28,280	45,720	30,480	15,240	+ 17,460	+ 2,200	— 13,040
Seoni	30,900	49,600	33,060	16,530	+ 18,700	+ 2,160	— 14,370
Total ...	197,970	247,370	164,900	82,450	+ 49,400	— 33,070	— 115,520

If the crop is 12 annas, the first three districts will have just sufficient, and Mandla and Seoni will be well supplied; if it is 8 annas, Mandla and Seoni will have just sufficient, and the other districts will be in serious want; if it is 4 annas, all districts will be very badly off for food.

The deficiency in the event of an 8-anna crop represents the food-supply of the following population:—

Saugor	188,040
Damoh	54,840
Jubbulpore	206,280

Against this Jubbulpore can set off some surplus from the last rabi crop (1897); but Saugor and Damoh must continue to import largely.

If the kharif should be only a 4-anna crop, the position of affairs will be very serious, as the harvest will fail to supply the following population with food:—

	Population without food.	Percentage on total.
Saugor	389,880	65
Damoh	190,200	58
Jubbulpore	477,240	62
Mandla	156,480	46
Seoni	172,440	46

The only other factor in the situation which must be recognised as possibly modifying the result is that the town population will continue to import during the rains, so that there may be more surplus from the rabi for the rural population to eke out the kharif yield than appears from the tables; but the amount required in the event of such a failure could hardly be less than 100,000 tons.

Nerbudda Division.

8. The table below gives the same figures for the Nerbudda Division:—

District.	Kharif 1896.	Six months' food for the people.	Surplus (if any).	Rabi outturns of 1897.	Surplus.	Deficit.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Narsinghpur ...	11,325	30,590	*Nil.*	27,540	...	3,050
Hoshangabad ...	9,082	43,770	*Nil.*	50,810	7,040	...
Nimar ...	33,265	20,870	10,000	6,020	...	4,850
Betul ...	25,175	26,930	*Nil.*	29,250	2,320	...
Chhindwara ...	29,662	28,290	*Nil.*	37,610	9,320	...
Total ...	108,509	150,450	10,000	151,230	18,680	7,900
				Net Surplus ...	10,780	...

The rabi of 1896 in the Nerbudda Division is estimated at roughly 220,000 tons, so that there must have been a surplus in the rabi districts as well as old stocks of kharif grains in Nimar, of which district previous harvests had been fair to good.

Consequently we find that the Nerbudda Block (the Nerbudda Division exclusive of Nimar), exported net no less than 31,000 tons during the year ending the 31st March 1897, while Nimar, having exported 4,990 tons during the first three quarters, began in the last quarter to import and received 1,640 tons in that quarter. Its net imports since the reaping of the kharif of 1896 were 1,225 tons. Thus the deficit in the rabi, which is never very important in Nimar, must probably have been met from imports and stocks with something to spare, the previous exports of the preceding quarters having been made from stocks.

Similarly, in Narsinghpur and Hoshangabad the continuous export up till the end of last March argues the existence of stocks which must be now exhausted, but which indicated a food-supply sufficient to cover the deficiency of the kharif of 1896.

During April and May the net imports of the Nerbudda Division were about 5,400 tons, a result largely due to the fact that the agricultural population are holding up as much of the last rabi harvest as they can. These imports may be expected to continue over the rains, and until a renewal of the food-supply in the shape of the kharif harvest tempts the rural stock-holders to bring their rabi stocks to market.

Betul and Chhindwara have a bare sufficiency to carry them over the rains, which is fortunate, as imports on a large scale into these districts would be a matter of difficulty.

Until the next kharif is reaped, the Chief Commissioner believes that the Nerbudda Division will be able to maintain itself, with the aid of about 15,000 tons for its non-agricultural population who live in towns situated on or near the railway.

9. As for the future, *i. e.*, from October next until the next rabi crop can be reaped, the position of affairs may be seen from the following table :—

District.	Food requirements for six months (October 1897 to April 1898).	Outturn of kharif in tons.			Surplus (+) or Deficit (—).		
		At 12 annas.	At 8 annas.	At 4 annas.	At 12 annas.	At 8 annas.	At 4 annas.
Narsinghpur ...	30,590	27,640	18,420	9,210	—2,950	—12,170	—21,380
Hoshangabad ...	43,770	22,530	15,020	7,510	—21,240	—28,750	—36,260
Nimar ...	20,870	59,570	39,720	19,860	+38,700	+18,850	—1,010
Betul ...	26,930	38,310	25,540	12,770	+11,380	—1,390	—14,160
Chhindwara ...	28,230	57,000	38,000	19,000	+28,710	+9,710	—9,290
Total ...	150,450	205,050	136,700	68,350	+54,600	—13,750	—82,100

If the kharif is 12 annas, the last three districts will have ample food supplies, the first two will be very short; but here will come in the consideration already referred to. The rabi grains which are being held up by the people, their place being taken by imports, will be brought out directly their holders are assured of a food-supply in their own kharif crops. These stocks may, on the figures referring to the last rabi crop, be taken to be at least the equivalent of the imports now being brought in to feed the towns. Nimar will also be able to help substantially, and there should be no apprehensions in that case regarding the food-supply.

Even if the crop is only 8 annas, the deficiency over the division can be met from the balance of the last rabi, which may be placed at about 20,000 tons. If, however, the crop should be only 4 annas, there will be reason to fear very serious shortage of food, especially in the two districts of Narsinghpur and Hoshangabad, a deficiency of not less than 60,000 tons, or a six months' food-supply for 720,000 people, 40 per cent. of the total population of the division.

Nagpur Division.

10. A similar table is given for the districts of the Nagpur Division, in which the kharif crop is much more important than in the two divisions already dealt with :—

District.	Kharif of 1896.	Food requirements for 6 months.	Surplus (if any) from kharif.	Rabi outturns of 1897.	Surplus.	Deficit.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Wardha	41,193	33,400	7,000	14,820	...	11,580
Nagpur	80,030	63,160	16,000	50,980	3,820	...
Chanda	71,169	46,760	24,000	9,290	...	13,470
Bhandara	94,295	61,900	33,000	26,050	...	2,850
Balaghat	25,338	31,950	*Nil.*	3,440	...	28,510
Total ...	312,025	237,170	80,000	104,580	3,820	56,410
					Net Deficit ...	52,590

These figures require some explanation. Except in Balaghat, the kharif of 1896 yielded a considerable surplus over the food requirements for the six months following the kharif harvest. On the other hand, the rabi has been by itself quite inadequate to meet the wants of the people up to the next kharif. This is only natural; in Nagpur, the areas generally devoted to rabi and kharif crops respectively are about equal; but in all the other districts kharif largely prevails, and it is on this crop that the people are almost entirely dependent.

It may be assumed in this division that the kharif should yield 9 months' and the rabi 3 months' food-supply, each crop supplying over and above a considerable surplus for export. The kharif crop of 1895 and the rabi crop of 1896 were both far from full; but they yielded, with the possible exception of Balaghat, considerably over a year's food-supply. The kharif may be taken at 400,000 tons, without exaggeration (*i. e.*, less than an 8-anna crop), and the rabi was about 140,000 tons, the whole being about 60,000 tons in excess of the minimum food requirements.

In Balaghat alone was the kharif crop of 1895 barely adequate for the year's food, and so in the current year, when the kharif has not amounted to even six months' food-supply, there is serious deficiency in this district. In the other districts the deficiency of the period from April last to next October will be met from existing stocks.

In Balaghat imports will be necessary to feed about two-thirds of the total population. According to the statistics of the preceding table it would be about seven-eighths, but even in this district there must be some local supplies available in particular localities where irrigated crops were produced.

During the year ending the 31st March last, the Nagpur Division received net imports of nearly 15,000 tons; but a great deal of this was due to the imports into towns like Nagpur and Kamptee, which contain large wheat-eating populations. Balaghat also took large supplies from the Gondia Station.

During the first two months of the current half-year the division has imported 12,177 tons towards a net deficiency for the whole period of 52,590, if the last two harvests alone are taken into account; but, as in the Nerbudda Division, so in this, there is reason to believe that the people are holding on to the last rabi harvest, leaving the town population to be fed from imports; while, as has been stated above, surplus food of previous years will meet most of the deficiency, except in Balaghat.

The imports into Wardha, for instance, have been very small, only 630 tons, while Chanda has actually exported 675 tons. Balaghat has received the greater part of the 5,900 tons shown against Bhandara.

It is of course very difficult, in the absence of any reliable information as to stocks, to make any forecast of the probable future imports which the division will require until the next kharif harvest is reaped, but on such indications as the figures supply, the Chief Commissioner would place them at the amount sufficient to feed—

(*a*) Two-thirds of the population of Balaghat.
(*b*) The urban populations of Bhandara, Wardha and Nagpur.

The population to be provided for would then be :—

	Persons.
Balaghat	250,000
Other districts	290,000
Total ...	540,000

To feed these for six months 45,000 tons are required, but it is possible that 40,000 tons will suffice.

11. If, as would appear from these statistics, the Nagpur Division is likely to require more food from outside than even the Jubbulpore Division to tide over the time till the next kharif is reaped, it is equally certain that this division will be far better off if the next kharif harvest is a fairly good one. The table next given illustrates this :—

District.	Food requirements for 6 months from October 1897 to April 1898.	Outturn of kharif in tons.			Surplus (+) or deficit (—)		
		At 12 annas.	At 8 annas.	At 4 annas.	At 12 annas.	At 8 annas.	At 4 annas.
	Tons.						
Wardha ...	33,400	79,100	52,800	26,400	+45,700	+19,400	—7,000
Nagpur ...	63,160	114,420	76,280	38,140	+51,260	+13,120	—25,020
Chanda ...	46,760	113 360	75,580	37,790	+66,600	+28,820	—8,970
Bhandara ...	61,900	202,130	134,760	67,380	+140,230	+72,860	+5,480
Balaghat ...	31,950	115 030	76,680	38,340	+83,080	+44 730	+6,390
Total ...	237,170	624,040	416,100	208,050	+386,870	+178,930	—29,120

On a 12-anna outturn there will be a return of plenty in this division, and even at 8-annas the rice districts will have a year's supply of food. At 4-annas the food supply would be insufficient to last till the rabi harvest in Nagpur, Wardha and Chanda, but in the other two districts would last till then, after which severe distress must follow in Balaghat and Bhandara, where the rabi crop is comparatively unimportant.

Only in the contingency of the coming kharif crops falling as low as 4 annas, would imports be necessary after October next, although it is possible that the town populations may continue to import wheat until after the next rabi harvest.

Chhattisgarh Division.

12. Any estimate of the food-supply in Chhattisgarh is still more difficult than in the case of Nagpur, because that division has been continuously exporting out of stocks of which the extent can only be guessed.

During the year ending the 31st March last, the net exports of the Chhattisgarh Division have been 114,975 tons, and of these a little over 67,000 tons represent the exports since the kharif harvest of 1897.

If, however, the figures in this division be analysed in the method adopted in the case of the other divisions, we arrive at the following results :—

District.	Kharif of 1896 in tons.	Food requirements for 6 months.	Surplus (if any) from kharif.	Rabi outturns of 1897 in tons.	Surplus or deficit till next kharif.	
					Surplus.	Deficit
Raipur	130,649	104,880	25,000	35,730	...	44,150
Bilaspur	76,893	86,520	*Nil.*	37,180	...	49,340
Sambalpur	135,434	39,090	96,000	4,880	61,790	...
Total ...	342,976	230,490	121,000	77,790	61,790	93,490
				Net deficit ...		31,700

It is evident that these figures must be open to a large correction on a consideration of stocks. For, in addition to the 67,000 tons exported up to the end of March last, during the months of April and May Raipur has exported 3,300 tons, and Sambalpur 6,470 tons, while the net imports of Bilaspur have only been 1,493 tons. But the Chief Commissioner finds it impossible to estimate what the correction on this account should be. In Sambalpur there is of course an ample supply of food, and in Bilaspur the excess of imports points to the fact that stocks must, if they exist, be very low.

As regards Raipur there can be no doubt of the existence of stocks in parts of the district (such as the Dhamtari Tahsil) in which the rice crops of both 1895 and 1896 were much superior to those reaped in less favoured portions of the district; but owing to the difficulties attendant on transport of grain in the rains, it is likely that parts of Raipur may be dependent on imports by rail for their food. But the Chief Commissioner anticipates no serious deficiency in the food-supply of this district, which he believes can tide over its difficulties until the next rice crop is cut.

In Bilaspur however considerable imports will be required during the time remaining before the kharif harvest, although it is improbable that the deficiency will be as large as the preceding table shows. Possibly 20,000 tons may be required; probably not as much, if any judgment can be based both on the fact that imports of Burma rice during the quarter ending March last, which were very large in the other divisions, were quite nominal in Chhattisgarh,* as well as on the smallness of the imports in April and May.

	Maunds.
*Jubbulpore Division	63,053
Nerbudda ,, ...	14,869
Nagpur ,, ...	18,661
Chhattisgarh ,, ...	376
Total ...	96,959

As for the future, as in the Nagpur Division, a good kharif crop would fully replenish the food-supply of these districts. This is shown by the following table of the same kind as that set out in the case of the other divisions :—

District.	Food requirements for six months October 1897 to April 1898.	Outturn of Kharif in tons.			Surplus (+) or Deficit (—)		
		At 12 annas.	At 8 annas.	At 4 annas.	At 12 annas.	At 8 annas.	At 4 annas.
	Tons.						
Raipur	104,880	348,960	232,640	116,320	+244,080	+127,760	+11,440
Bilaspur ...	86,520	247,020	164,680	82,340	+160,500	+78,160	—4,180
Sambalpur ...	39,090	165,360	110,240	55,120	+126,270	+71,150	+16,030
Total ...	230,490	761,340	507,560	253,780	+530,850	+277,070	+23,290

The crop in Chhattisgarh should yield a full year's supply. This would be just attained by an 8-anna crop in Raipur and Sambalpur. In Bilaspur there would be a slight deficiency. With a 4-anna crop the deficiency would be very large in Bilaspur (where not even a six months' supply would be yielded), and considerable in the other districts. In such an event a good rabi might cover part of the deficiency in the two former districts, but Sambalpur with no rabi to speak of would suffer.

13. In summing up the results of the foregoing examination of the figures, the Chief Commissioner must repeat that they can only be accepted as rough approximations to the truth. But, so far as they go, they show that the districts which have the largest deficiency of food-supply to make up from imports till the next kharif harvest, are Damoh, Saugor and Mandla in the Jubbulpore Division, Balaghat in the Nagpur Division, and Bilaspur in the Chhattisgarh Division. After these come Narsinghpur and Hoshangabad in the Nerbudda Division. With a 12-anna kharif (or just below an average crop in the ordinary parlance of the people), the only districts which may still be rather pinched for

food are the rabi-growing districts of Saugor, Narsinghpur and Hoshangabad. With only an 8-anna kharif the deficiency will be much accentuated in these districts, and the districts of Damoh, Jubbulpore and Betul will be added to their number. If the kharif only reaches 4 annas (a calamity which there is at present no ground for anticipating), all districts will suffer immediate and acute distress, except perhaps the rice-growing districts of Raipur, Sambalpur, Bhandara and Chanda; but in these, although the immediate food-supply may suffice till the rabi harvest, the rabi is not of sufficient importance to afford any material relief.

These estimates are based on the supposition that the full kharif area will be sown. A falling off of 33 per cent. in this area would reduce the outturn produced by a twelve-anna crop to the equivalent of an eight-anna crop on the full area, but the Chief Commissioner has no reason for thinking that a falling off of this kind is at all likely. If there is any falling off, it will not in his opinion prove to be more than, at the utmost, 10 per cent. of the normal.

14. In conclusion, I am to add that the compilation of the figures contained in this letter and its enclosures illustrate very forcibly the disadvantages of adopting a scale of anna outturns for official returns which is divergent from the scale understood by the people. The returns for several years past would indicate that an average crop is seldom or never attained, a conclusion which is a contradiction in terms. In the Chief Commissioner's opinion it would conduce greatly to the accuracy of crop forecasts, in these Provinces at all events, if the Government of India recognized the scale generally understood by the people, in accordance with which 16 annas represents a full crop, 13 annas an average crop and 20 annas an absolute bumper.

I have the honour to be,

Sir,

Your most obedient Servant,

R. H. CRADDOCK,

Third Secretary.

No. C-296, dated Pachmarhi, the 4th June 1897. **Enclo. I.**

From—L. S. CAREY, Esq., I. C. S., Commissioner of Settlements and Agriculture, Central Provinces,

To—The Chief Secretary to the Chief Commissioner, Revenue Department, Central Provinces.

I have the honour to submit a brief note on the crop statistics of 1896-97, an advance copy of which was placed at your disposal a few days ago.

Note on the Crop Statistics of 1896-97.

First, as to Statement E, which contrasts the net cropped and fallow areas for the past three years. The comparison is a fair one for the three Divisions of Jubbulpore, Nerbudda and Nagpur; but in considering the Chhattisgarh figures it has to be noted that whereas the figures for 1895-96 include details for much of the Zamindari area in all three districts, those of Raipur and Sambalpur for 1896-97 include nothing on Zamindari account.

To make the contrast a true one, I would add to the figures of 1896-97, 400,000 acres to column 10 of Statement E against Raipur and 225,000 against Sambalpur; total 625,000 acres.

The net cropped area for the year 1896-97 for all surveyed tracts throughout the Provinces I would then take at 14,557,000 as compared with 16,064,000 recorded in 1894-95 and 15,807,000 in 1895-96.

But the figures for 1894-95 do not include much of the Zamindari area in Bilaspur and Sambalpur, statistics for which only became available for the first time in 1895-96. It may then be accepted that for similar areas the corresponding figures for the triennial period should be approximately as follows :—

1894-95.	1895-96.	1896-97.
Acres.	Acres.	Acres.
16,464,000	15,807,000	14,557,000

This implies that during the past three years almost 2 out of 16½ millions of acres have temporarily gone out of cultivation throughout the Provinces.

The decrease has taken place in almost all districts, but is more marked in the Jubbulpore Division than elsewhere. Approximate figures for Divisions are as follows :—

		Acres.
Jubbulpore a decline of	... ...	830,000
Nerbudda „	... ...	450,000
Nagpur „	... ...	300,000
Chhattisgarh „	... ...	250,000

The only district in which there is an increase in cropping is Nimar. This feature is however only apparent, being due to the transfer of part of Hoshangabad to Nimar.

2. Further detailed analysis appears to indicate that about ½ a million of acres has gone out of occupation. There is not much increase in the old fallow area; but about 1½ million acres have passed into resting fallows, the unfavourable nature of the rabi sowing seasons of 1895-96 having rendered it impossible to sow large areas.

3. I pass on now to Statements D-1 and D-2, the jinswars.

Comparative figures of kharif and rabi cropping for three years are as follows :—

Figures for 1895-96 classified in this manner are not yet available, *i. e.*, until the Chief Commissioner's Resolution on the Revenue administration of the Central Provinces for the year ending 30th September 1896 issues.

		1893-94.	1894-95.	1896-97.
		Acres.	Acres.	Acres.
Kharif	... ...	10,067,581	10,422,811	10,526,941
Rabi	... ...	8,023,105	7,357,287	3,986,638
	Total ...	18,090,686	17,780,098	14,513,579
	Deduct double-cropping ...	1,803,784	1,715,997	581,218
	Net ...	16,286,902	16,064,101	13,932,361

These figures indicate that there has been on the whole no decline in the kharif cropping, whereas the areas devoted to rabi have contracted from 8 millions to 4¼ millions of acres But there can be little doubt that the kharif area has in many districts been recruited to a material extent from the rich black soil areas usually placed under rabi crops, and that a considerable amount of poor kharif land has been temporarily abandoned.

The Assistant Settlement Officer, Saugor, has brought this point out in a useful note that he has recorded on the statistics. He compares the statistics for 1893-94 and 1896-97 as follows:—

Saugor.

Year.	Rabi.	Kharif.	Total.
	Acres.	Acres.	Acres.
1893-94 ...	680,542	360,129	1,040,671
1896-97 ...	310,731	445.444	756,175

Whereas then there has been an enormous shrinkage in rabi cultivation and in the total area cropped, the kharif area has been enlarged by the diversion to autumn cultivation of 85,300 acres which were formerly under rabi. A similar feature would probably be observable in Jubbulpore, Hoshangabad, Damoh and Narsinghpur were the crop statistics analysed in detail. In the rice tracts of Chhattisgarh and the Wainganga Valley, part of the shortage of area has probably taken place in the poorer kharif areas.

Comparative figures for the Plateau district of Betul show that there has been a falling-off both in kharif and rabi cropping; but the decline in the latter is much more marked. Details are as follows:—

Betul.

Year.	Kharif.	Rabi.
	Acres.	Acres.
1893-94 ...	388,942	272,802
1894-95 ...	409 608	268,222
1896-97 ...	389.447	177,639

In my wheat forecast of 13th May 1897, I have shown that the area under wheat has shrunk from 4 millions of acres to * 1,898,022, which accounts for more than 2 million acres of the contraction in rabi cropping. The area under linseed has fallen by almost 1 million acres; but this has taken place to a very great extent in the double-cropped area, which according to the statistics given above has declined from 1,800,000 to 581,000 acres. Large areas of the black soil rice lands of Raipur, Bilaspur, Bhandara, Balaghat and Chanda have failed to bear a second crop during the past two years owing to the abrupt cessation of the rains in the early autumn.

* Deputy Commissioners now report 1.926,393 acres. They will be asked to explain the discrepancy.

District details are as follows:—

District.	Double-cropped Area.		
	1893-94	1894-95.	1896-97.
	Acres.	Acres.	Acres.
Raipur	661,249	613,016	240,077
Bilaspur	403 418	348,812	51,087
Bhandara	216,187	209,406	71,315
Balaghat	135,707	128,727	29,584
Chanda	51,405	55.335	24.956
Total.	1,467,966	1,355,296	417,019

The contraction is then most serious in Bilaspur, but is also very marked in Balaghat. Fortunately parts of Raipur, Chanda and Bhandara, which lie further to the south, received showers late in September which enabled the double-crop to be put down.

4. The areas under the principal crop are compared below with those of the two preceding years:—

	1894-95.	1895-96.	1896-97.
	Acres.	Acres.	Acres.
Rice	4.533,400	5,000,242	4,433,245
Wheat	3,309.471	2,714,412	1,926,393
Gram	1,178,309	1,149,024	866,025
Juari	1,280,142	1,468,776	1,645.965
Linseed	1,486,361	730,750	508,591
Til	520,593	619.977	681,546
Cotton	602,762	559.581	709,522

It will be observed that the area under rice has shrunk. This is due in part to the exclusion of the Zamindari statistics. The area under gram is considerably less. This may be attributed to the hardening of the soil at sowing time, and was to be expected in a season when the areas under wheat and linseed had so far contracted. I mentioned in my wheat forecast that in sowing *birra* the people had used a larger proportion of gram than usual owing to the scarcity of wheat seed. The two statements do not conflict.

The only satisfactory features in the statement are the large expansion of the area under cotton and the greater popularity attained by juari. The area under til has also increased largely.

5. I come now to the statement in which the outturn of the food-crops during the current year has been worked out with as much approach to accuracy as circumstances permit. I would explain that Deputy Commissioners reported the outturns of rice and kodo in an unhusked state. This has been rectified in my office, and the total outturn, of 1,391,513 tons, which the crops of the year are estimated to have yielded, represents cleaned produce For purposes of comparison I have worked out the outturn that the areas sown this year would have yielded at standard rates. The result is 2,936,060 tons. Further, having regard to the fact that the *areas under crop in 1895-97 were much below the average, I have applied the standard outturns to the acreage of 1893-94, and in this way I arrive at 3,528,932 tons as the outturn of standard areas at standard rates.

* There are 12,038,651 acres under food-crops as against 14 440,220 acres in 1893-94.

Working on similar lines in 1892 (*vide* page 11 of his report on the progress of the Central Provinces during the past 30 years) Mr. Fuller calculated that the outturn of the Provinces after *making due allowance for seed-grain* and deducting $\frac{1}{10}$th so as to be on the safe side, was 2,434,374 tons.

It may be accepted that my figure of 3½ millions tons is somewhat above the mark inasmuch as due allowance must be made for the fact that the meteorological conditions of no year are suitable to *all* crops. But on the other hand, I would draw attention to the fact that Mr. Fuller's calculations are based on an area of 13,100,000 acres, whereas in 1893-94 almost 14¼ millions of acres were under food-crops.

I am disposed then to hold that for the area with which we are now dealing, 3 millions of tons may be accepted as a fairly normal gross outturn over an average of years. The actual yield of the year is estimated to amount to 1,391,513 tons. There is then a very great shortage which is sufficient to explain the acute distress that is now prevailing in these Provinces when taken in connection with the losses of the past few years and the consequent attenuation of food stocks.

6. The difficulties of any contrast between the figures of present and past years have been alluded to above. The areas for which statistics are available have been constantly expanding from year to year. It occurred to me then that the best way of gauging the situation in each district was to work out in lbs. and decimals of lbs. the quantity of food yielded by this season's crops per head of population per diem. In districts such as

Bilaspur, care has been taken to eliminate the population of those Zamindaris for which crop statistics were not available. According to Sir Charles Elliott (*vide* his lecture on the Indian Famine delivered in London on the 11th March), twenty million tons will feed 120 million people in a year of famine.

In other words, 1 ton will feed 6 people per annum, or again—

2,240 lbs. will feed 6 people for 365 days:

373 lbs. will feed 1 person for 365 days.

The rate allowed is then approximately 1lb. per diem per head of the population inclusive of women and children.

Judged by this standard, the districts of Betul, Chhindwara and Nagpur have produced just sufficient food for the needs of their population, while in Jubbulpore, Seoni, Nimar and Bhandara, the deficit is not great. Nimar is not really so well off as would appear, for part of its population is shown against Hoshangabad, whilst its whole outturn is exhibited in the statement. But its cotton crop doubtless fetched a considerable sum of money whereby its people have been placed in funds for the purchase of food supplies. The position of affairs in Wardha is similar. Til and cotton have done very well, and these staples account for 35 per cent. of the cropping in this district. Sambalpur has a considerable surplus for export. In Raipur and Bilaspur there were unquestionably old stocks, especially in the Dhamtari Tahsil, which has been exporting largely throughout the season. The yield in Chanda has, I think, been much under-estimated. Rice is taken as an 8-anna crop, whereas about 70 per cent. of this crop is irrigated.

It would of course be unwise to place too much reliance upon these rough estimates, but they tally with such other information as is available, in so far as they indicate that Balaghat, Mandla and Damoh are the districts which have been hardest hit this year. The position of affairs in Jubbulpore and Seoni has been much improved by the good wheat crop which has recently been reaped.

The necessity of supplementing the grain stocks of Mandla has been recognized by the Administration, and grain is being poured into this district to supplement the local supplies before the rains break. The magnitude of recent purchases in the Jubbulpore market has materially raised the rates during the past week. Similar action is being taken by Government for the Baihar Tahsil of Balaghat, which is a very distressed tract; while private enterprise is supplying the wants of the Balaghat Tahsil through Gondia. The weekly returns of export and import traffic show considerable imports into the Bhandara District, the bulk of which, it is understood, is consigned to Balaghat *vid* Gondia.

7. According to my calculations 1,630,000 tons would just suffice to feed the population of the surveyed tracts =9,796,012 at 1 lb. per head per diem and about 2,000,000 tons would enable them to do fairly well. The seed-grain requirements would absorb the equivalent of about 300,000 tons of cleaned produce.

The plough-cattle, according to Mr. Fuller, could be trusted to consume about 240,000 tons in ordinary years when grain was available for them, and in good years the average exports would be about 360,000 tons.

Thus we may take it roughly that 1,930,000 tons is the minimum required annually for food and seed-grain, and about 2,300,000 tons if there is to be no stinting in the matter of food. Against this we have less than 1,400,000 tons from this year's crops. If to 2,300,000 tons be added, 600,000 tons for the plough-cattle and export, the result is 2,900,000 tons, which does not differ markedly from my assumed average outturn of 3 millions of tons. According to the last *Gazette of India*, the Central Provinces Districts have imported 44,800 tons, and exported 48,264 tons of food-grains and pulse, during the period 30th January to 22nd May 1897.

L. S. CAREY,

Commissioner of Settlements and Agriculture,

Central Provinces.

PACHMARHI:

The 4th June 1897.

STATEMENT A.—Showing the progress of cultivation in each District of the Central Provinces during 1896-97 (*details of area*).

District.		Actual area under kharif crop.	Actual area under rabi crop.	Double-cropped area.	Net cropped area.	Area of new fallow.	Area of old fallow.	Total area in occupation.	Remarks.
1		2	3	4	5	6	7	8	9
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Jubbulpore Division.	Saugor ...	445,444	310,751	8,884	747,291	306,676	130,054	1,184,021	
	Damoh ...	255,782	176,557	4,315	428,024	178,480	100,425	706,929	
	Jubbulpore ...	499,709	412,214	65,344	846,579	470,890	81,048	1,398,517	
	Mandla ...	394,724	78,874	8,971	464,627	275,310	54,605	794,542	
	Seoni ...	371,918	205,783	6,630	571,071	269,083	53,569	893,723	
	Total ...	1,967,577	1,184,159	94,144	3,057,592	1,500,439	419,701	4,977,732	
Nerbudda Division.	Narsinghpur ...	296,172	238,777	22,177	512,772	140,637	58,947	712,356	
	Hoshangabad ...	259,037	574,114	5,680	827,471	182,581	181,666	1,191,718	
	Nimar ...	501,043	62,170	12,213	551,000	63,485	151,183	765,668	
	Betul ...	389,447	177,639	7,851	559,235	323,636	142,022	1,024,893	
	Chhindwara ...	452,680	202,897	8,452	647,125	196,533	47,757	891,415	
	Total ...	1,898,379	1,255,597	56,373	3,097,603	906,872	581,575	4,586,050	
Nagpur Division.	Wardha ...	632,418	225,591	4,763	853,246	147,665	134,093	1,134,404	
	Nagpur ...	682,500	514,566	7,247	1,189,819	147,445	237,907	1,575,171	
	Chanda ...	308,631	276,919	24,956	560,594	126,568	202,441	889,603	
	Bhandara ...	661,972	208,419	71,315	799,076	182,335	93,959	1,075,370	
	Balaghat ...	352,172	48,225	29,584	370,813	112,779	37,742	521,334	
	Total ...	2,637,693	1,273,720	137,865	3,773,548	716,192	706,142	5,195,882	
Chhattisgarh Division.	Raipur ...	1,849,245	414,983	240,077	2,024,151	414,340	47,887	2,486,378	
	Bilaspur Khalsa ...	1,050,266	143,462	47,852	1,145,876	269,445	22,376	1,437,697	
	Bilaspur Zamindari ...	227,481	23,245	3,235	247,491	60,977	4,922	313,390	
	Sambalpur ...	582,483	5,289	1,672	586,100	169,760	52,412	808,272	
	Total ...	3,709,475	586,979	292,836	4,003,618	914,522	127,597	5,045,737	
	Grand Total ...	10,213,124	4,300,455	581,218	13,932,361	4,038,025	1,835,015	19,805,401	

STATEMENT B.—*Showing the outturn in Tons of Kharif and Rabi Crops during 1896-97—Food Crops.*

District.		Kharif. Rice, husked.	Kharif. Juar and Bajra.	Kharif. Kodon and Kutki (husked).	Kharif. Arhar or Tur.	Kharif. Miscellaneous.	Kharif. Cane (Compost or Gurh).	Kharif. Total Kharif.	Rabi. Wheat.	Rabi. Gram.	Rabi. Masur.	Rabi. Miscellaneous.	Rabi. Total Rabi.	Grand Total of columns 8 and 13.	Population of District.	Quantity available per head per diem.	Remarks.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	No.	lbs.	
Jubbulpore Division.	Saugor	2,880	20,987	1,182	863	882	...	26,794	14,542	18,672	2,866	1,644	37,724	64,518	591,743	·67	
	Damoh	4,773	8,152	1,255	352	446	...	14,978	3,961	7,302	566	595	12,424	27,402	325,613	·51	
	Jubbulpore	15,055	3,321	2,308	954	4,195	649	26,482	52,377	28,615	8,299	2,520	91,811	1,18,293	748,146	·97	
	Mandla	6,113	82	2,283	...	2,717	...	11,195	6,833	9,066	1,110	...	17,009	28,204	339,373	·51	
	Seoni	5,799	2,406	1,313	...	9,984	319	19,821	26,028	5,710	2,352	2,057	36,147	55,968	370,767	·93	
	Total	34,620	34,948	8,341	2,169	18,224	968	99,270	103,741	69,365	15,193	6,816	195,115	294,385	2,375,642	·76	
Nerbudda Division.	Narsinghpur	4,852	2,762	1,252	1,214	558	687	11,325	13,608	7,435	3,672	2,824	27,539	38,864	367,026	·65	
	Hoshangabad	996	5,556	749	966	518	297	9,082	37,335	10,865	465	2,144	50,809	59,891	(f) 525,276	·70	
	Nimar	4,736	22,672	883	2,600	2,233	141	33,265	4,211	·898	385	527	6,021	39,286	250,486	·95	
	Betul	1,093	6,829	2,644	720	9,003	4,886	25,175	21,865	3,132	1,521	2,732	29,250	54,425	323,196	1·03	
	Chhindwara	991	15,704	794	2,854	6,006	3,313	29,662	30,716	5,848	756	290	37,610	67,272	339,443	1·22	
	Total	12,668	53,523	6,322	8,354	18,318	9,324	108,509	107,735	28,178	6,799	8,517	151,229	259,738	1,808,427	·88	
Nagpur Division.	Wardha	637	37,261	...	3,016	279	...	41,193	13,238	1,315	...	273	14,826	56,019	400,854	·85	
	Nagpur	4,401	57,528	30	14,914	2,876	281	80,030	39,092	3,002	...	8,884	50,978	131,008	757,862	1·06	
	Chanda	40,714	(a) 27,568	19	...	1,833	1,035	71,169	4,122	1,516	...	3,657	9,295	80,464	561,099	·88	(a). Includes the outturn of Ringni-Juar also, which is grown as rabi crop.
	Bhandara	72,454	6,234	534	4,894	5,872	4,307	94,295	9,539	4,886	43	11,584	26,052	1,20,347	742,850	·99	
	Balaghat	21,584	299	929	207	2,319	...	25,338	865	1,378	160	1,040	3,443	28,781	383,331	·46	
	Total	139,790	128,890	1,512	23,031	13,179	5,623	312,025	66,856	12,097	203	25,438	104,594	416,619	2,845,996	·90	
Chhattisgarh Division.	Raipur	98,479	15	19,061	429	12,379	286	130,649	23,927	4,057	1,084	6,660	35,728	166,377	1,258,610	·81	
	Bilaspur	60,073	...	7,582	2,348	3,259	3,631	76,893	26,879	1,032	3,220	6,053	37,184	114,077	1,038,243	·67	
	Sambalpur	127,774	...	...	...	5,447	2,213	135,434	115	23	...	4,745	4,883	140,317	469,094	1·82	
	Total	286,326	15	26,643	2,777	21,085	6,130	342,976	50,921	5,112	4,304	17,458	77,795	420,771	2,765,947	·93	
Grand Total		473,404	217,376	42,818	36,331	70,806	22,045	862,780	329,253	114,752	26,499	58,229	528,733	1,391,513	9,796,012	·87	

(f). The figures for Hoshangabad and Nimar must be considered together, as the population shown against Hoshangabad includes that of the villages transferred to Harsud.

STATEMENT C.—Showing the outturn in annas per rupee, taking 16 annas to represent an average crop—1896-97.

District.	Kharif crops.							Rabi crops.			
	Juar.	Tur.	Rice.	Cotton.	Til.	Kodon and Kutki.	Sugar-cane.	Wheat.	Gram.	Masur.	Linseed.
1	2	3	4	5	6	7	8	9	10	11	12
Saugor	10	6	6	...	5	3	...	8	8	7	7
Damoh	8	5	6	...	6	4	...	5	6	4	7
Jabbalpore	9	10	5	7	3	3	16	14	12	11	16
Mandla	6	...	4	...	4	2	...	16	14	12	14
Seoni	5	...	3	7	8	2	8	12	10	8	13
Narsinghpur	6	10	6	7	8	4	12	8	5	5	5
Hoshangabad	7	8	4	7	10	2	15	6	6	5	4
Nimar	8	9	14	8	7	9	14	6	7	6	2
Betul	6	4	6	10	8	4	8	10	10	6	6
Chhindwara	6	12	8	14	12	2	10	13	10	8	8
Wardha	8	6	6	8	14	...	...	7	8	...	5
Nagpur	10	8	6	12	16	4	12	10	8	...	4
Chanda	12	...	8	10	14	4	4	6	8	...	4
Bhandara	10	12	6	4	14	4	12	9	10	6	4
Balaghat	6	8	3	...	12	5	...	5	7	8	2
Raipur	4	4	5	4	4	6	6	12	12	6	5
Bilaspur	...	8	4	6	6	6	12	22	12	12	12
Sambalpur	...	...	12	5	6	...	10	10	8	...	6

STATEMENT D.—Showing the Area under each of the principal Crops in each District of the Central Provinces during 1896-97.

(1) CROPS GROWN IN THE KHARIF (OR SEHARI) SEASON, INCLUDING PERMANENT ORCHARDS AND GROVES.

Districts.		Rice.	Juari and bajra.	Kodon and kutki.	Arhar (tur).	Urad, mung and môth.	Cotton.	Til.	Castor.	San (hemp).	Sugarcane.	Groves and orchards.	Garden crops.	Miscellaneous food crops.	Miscellaneous non-food crops.	Total.	Remarks.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Jubbulpore Division.	Saugor	29,930	(a) 158,652	72,280	12,462	6,303	14 379	58,558	14	2,097	2,020	...	1,064	16,265	71 370	445.444	
	Damoh	59.395	(a) 73,043	56,239	6,304	2,436	3,886	25,539	62	340	425	477	481	7,879	19,276	255,782	
	Jubbulpore	212,096	31,796	137,874	8,551	6,835	14.001	39.653	479	3 467	1,212	9,084	220	16,848	17,593	499 709	
	Mandla	107,615	1,399	204.557	667	6,239	141	45.043	21	6,548	569	...	226	21,697	2	394.724	
	Seoni	96,216	(a) 43,121	117,697	...	6,195	5.369	23.043	...	8,175	953	...	...	23.382	47,767	371,918	
	Total ...	505,302	308,011	588,647	27,984	28,008	37.776	191,836	576	20,627	5,179	9,561	1,991	86,071	156,008	1,967,577	
Nerbudda Division.	Narsinghpur ...	69,136	36,614	63,723	10,873	654	30,099	32,143	413	2 395	1,710	2,854	415	17,611	27.532	296,172	
	Hoshangabad ...	23,112	(a) 59,834	62,103	9.968	362	14.075	80,378	...	...	600	...	...	9,407	47,148	306,987	
	Nimar	20,205	163,930	20,082	34,468	19,606	146,152	55.104	...	2,333	103	...	...	29,580	9,480	501,043	
	Betul	15,521	90,619	118,459	14.303	9,240	* 3,667	27,388	3.370	4.430	6,254	...	2,084	32,361	61,721	389,447	
	Chhindwara ...	10,567	170,762	71,162	28,415	3,843	46,310	16,740	4,542	1,951	3,394	142	1,195	36,616	57,041	452,680	
	Total ...	138,541	521,759	335,529	98,057	33.705	240.303	211.753	8,325	11,109	12,061	2,996	3,694	125.575	202,922	1,945,329	
Nagpur Division.	Wardha	9,075	238,472	160	60,329	3,369	255,898	44,042	1,736	2,328	124	1,066	2,472	1,151	12,196	632,418	
	Nagpur	36,513	358,582	1,551	98,257	2,939	149,883	91,827	5.505	2 311	280	3,628	4,706	3,387	16,572	775.941	
	Chanda	199.945	(a) 137,226	1,007	20.572	16,878	18,087	53.582	4,482	423	2,318	775	644	2,882	5,129	463.950	
	Bhandara	480,878	(a) 72,967	27,339	18,272	49.450	55	10,904	1,954	635	3,675	384	2,453	3,500	6,613	679,079	
	Balaghat	268,598	5,114	38,208	3.085	13,829	...	1,325	977	189	1,416	349	980	16,237	1,865	352,172	
	Total ...	995.009	812,361	68,265	200,515	86,465	423.923	201,680	14,654	5,886	7,813	6,202	11,255	27,157	42,375	2,903,560	
Chhattisgarh Division.	Raipur	1,308,376	343	311,114	7,690	132,782	7,661	25.314	15,237	1,109	569	12,842	7,324	3,929	14.955	1,849,245	
	Bilaspur ... Khalsa ...	841,049	944	119,406	15,031	25.925	3,686	14,289	18,104	...	2,595	...	9,246	1,702	405	1,277.747	
	Bilaspur ... Zamindari ...	155.712	2,547	45.484		6,321		5.505	2,584	...	1,743	...	3,414	1,195	860		
	Sambalpur	489,256	...	...	...	38,652	2,342	31,169	...	...	1,983	...	693	16,410	1,978	582,483	
	Total ...	2,794,393	3.834	476,004	22,721	203.680	13,689	76,277	35.925	1,109	6,890	12,842	20,677	23,236	18,198	3,709.475	
	Grand Total ...	4,433,245	1,645.965	1,468,445	349.277	351,858	715,691	681,546	59,480	38,731	31,943	31,601	37,617	262,039	419,503	10,526,941	

(a) Includes only jur.

STATEMENT D.—Showing the Area under each of the Principal Crops

2.—CROPS GROWN IN THE

Districts.			Wheat.	Gram.	Peas.	Masur.
			Acres.	Acres.	Acres.	Acres.
Jubbulpore Division.	Saugor	...	98,000	164 949	1.455	19.591
	Damoh	...	49,023	96,781	479	10,139
	Jubbulpore	...	209 508	137,844	1,934	42.934
	Mandla	...	25,510	38.543	670	6,032
	Seoni	...	125,508	34,107	1,319	16,465
	Total	...	507,549	472224	5,857	95,161
Nerbudda Division.	Narsinghpur	...	92,369	83.275	2 217	36,555
	Hoshangabad	...	351,386	114,803	93	6,675
	Nimar	...	36,995	10,211	1,160	4,183
	Betul	...	121,881	18,097	1,734	14 971
	Chhindwara	...	141,282	41 980	1,010	6,773
	Total	...	743.913	268,366	6.214	69,157
Nagpur Division.	Wardha	...	116,752	9.819	1,859	361
	Nagpur	...	241,895	22 414	2.962	2.436
	Chanda	...	42.457	12.347	3,825	477
	Bhandara	...	70,348	35,021	1,965	1,287
	Balaghat	...	10.708	11.781	1,365	1,192
	Total	...	482,160	91,382	11,976	5.753
Chhattisgarh Division.	Raipur	...	119,102	26,964	33,852	21,684
	Bilaspur — Khalsa	...	61,889	5.315	15,628	19,116
	Bilaspur — Zamindari	...	11,092	1.541	1,988	2,137
	Sambalpur	...	688	233	953	...
	Total	...	192 771	34.053	52,421	42,937
	GRAND TOTAL	...	1,926,393	866,025	76,468	213,008

in each District of the Central Provinces during 1896-97.

RABI (OR UNHARI SEASON).

Teura, lac.	Linseed.	Tobacco.	Melons.	Garden crops.	Miscellaneous food crops.	Miscellaneous non-food crops.	TOTAL.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
5,210	15,075	274	...	4,111	1,992	74	310,731
3.539	14,035	111	...	1,581	779	90	176,557
1,212	10,982	117	...	2,898	4.719	66	412,214
807	2,075	215	...	4,677	333	12	78,874
12,645	5.966	206	...	...	...	9 567	205,783
23,413	48,133	923	...	13,267	7,823	9,809	1,184,159
15.779	6,888	234	...	1,216	176	68	238,777
20,118	19,035	745	...	...	13,309	...	526,164
...	6,205	60	...	...	3.356	...	62,170
13,434	5,833	175	...	804	578	132	177,639
3.987	5.684	210	...	1,420	89	462	202,897
53,318	43,645	1,424	...	3,440	17,508	662	1,207,647
10,217	84,819	446	...	733	413	172	225,591
38,598	104,500	394	...	5,697	2,046	183	421,125
23,078	32,625	484	...	5,033	1,273	1	121,600
47.358	29.301	237	...	4,175	1,325	295	191,312
11,746	5,140	899	...	2,224	3,001	169	48,225
130,997	256,385	2,460	...	17,862	8,058	820	1,007,853
58,386	144,169	1,347	...	5,592	2,404	1,483	414,983
19,627	14,465	508	...	5,735	1,066	50	143,399
466	1,522	237	...	3,210	1,062	53	23,308
...	272	...	...	1,065	2,069	9	5,289
78,479	160,428	2,092	...	15,602	6,601	1,595	586,979
286,207	508,591	6,899	...	50,171	39,990	12,886	3,986,638

STATE

Area in occupation during 1896-97

Districts.		1894-95.				1895-96.				1896-97				Remarks.
		Net cropped area.	Area of new fallow.	Area of old fallow.	Total area in occupation.	Net cropped area.	Area of new fallow.	Area of old fallow.	Total area in occupation.	Net cropped area.	Area of new fallow.	Area of old fallow.	Total area in occupation.	
1		2	3	4	5	6	7	8	9	10	11	12	13	14
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Jubbulpore Division.	Saugor	1,000,829	96,098	132,677	1,229,604	886,843	197,225	131,197	1 215 265	747,291	306,676	130,054	1,184,021	
	Damoh	553.471	86,625	98,816	738,912	485,645	145,601	96,852	728,098	428,024	178,480	100, 425	706,929	
	Jubbulpore	1,074,075	312,685	67,301	1,454,061	890,461	463 424	76,653	1,430,538	846,579	470,890	81,048	1,398,517	
	Mandla	558,733	65,053	66,149	689,935	598,955	185,291	45.274	829,520	464 627	275 310	54,605	794 542	
	Seoni	699,265	164,526	49,861	913,652	649.254	203,867	55,621	908 742	571,071	269,083	53,569	893,723	
	Total Jubbulpore Division	3,886.373	724.987	414,804	5.026,164	3,511,158	1,195.408	405.597	5,112,163	3.057,592	1,500,439	419.701	4.977.732	
Nerbudda Division.	Narsinghpur	622,893	53.613	51,486	727 992	584,084	80,912	56,370	721,366	512,772	140,637	58,947	712,356	
	Hoshangabad	1,045.933	75.423	209,143	1,330,499	1,012,946	108,745	205 307	1,326,998	827,471	182,581	181,666	1,191,718	
	Nimar	507,098	45,171	94 345	646,614	502,461	48.524	90,010	640 995	551,000	63,485	151,183	765,668	
	Betul	664,682	308,399	87,468	1,060,549	641,144	271,396	143,122	1,055,662	559,235	323,636	142,022	1,024,893	
	Chhindwara	710,296	134,634	48.932	893,862	693,054	160,476	47.777	901,307	647,125	196,533	47.757	891,415	
	Total Nerbudda Division	3,550,902	617,240	491,374	4,659	3,433,689	670,053	542,586	4,646,328	3,097,603	906,872	581,575	4,585,050	
Nagpur Division.	Wardha	897,381	133,468	109,097	1,139.946	869,118	150 894	117,201	1,137,213	853,246	147,065	134,093	1,134.404	
	Nagpur	1,221,321	125,891	229.620	1.576,832	1,194,588	151,408	229,820	1,575,816	1,189.819	147,445	237,907	1,575,171	
	Chanda	634,115	140,645	179,244	954,004	660,215	143.343	181,767	985,325	560,594	126 568	202,441	889,603	
	Bhandara	872,844	95.155	87,130	1,055,129	841,070	132,773	91,649	1,065,492	799,076	182,335	93,959	1,075.370	
	Balaghat	452,336	68,136	30 961	551,433	428,752	79.533	33,076	541,361	370,813	112,779	37,742	521,334	
	Total Nagpur Division	4,077.997	563.295	636,052	5.277.344	3.993.743	657.951	653.513	5.305,207	3.773.548	716,192	706,142	5,195.882	
Chhattisgarh Division.	Raipur	2,528,258	305,084	43,015	2,876,367	2,452,278	430,928	54.557	2 937,763	2,424,151	414 340	47,887	2,486,378	
	Bilaspur	1,422,415	150,927	14.773	1,588,115	1,590,649	265.375	22,022	1,878,046	1,393,367	330 422	27,298	1,751,087	
	Sambalpur	598,156	156,899	46,701	801,756	825,782	219 948	65,803	1,111,533	811,100	169,760	52.412	808,272	
	Total Chhattisgarh Division	4,548,829	612,910	104.489	5,266,228	4,868,709	916,251	142,382	5,927,342	4,628,618	914,522	127.597	5,045.737	
	Grand Total	16,064,101	2,518,432	1,646.719	20,229,252	15,807,229	3.439,663	1,744.078	20,991,040	14 557,351	4,038,025	1,835,015	19,805 401	

MENT E.

as compared with those of the two preceding years.

Notes on Crops and Stocks in the Central Provinces. **Enclo II.**

I have read Mr. Carey's figures and note with great interest. He has dealt with the subject most carefully, and I should not like to say that his conclusions are wrong, but for certain reasons which will be explained I would suggest that his total figures of production may somewhat understate the reality. Mr. Carey's view is that the normal outturn on the normal area is 3 million tons, that food, seed and cattle will take 2,540,000 tons, and that the balance is 460,000 tons, of which 360,000 may be taken as the average exports.

If therefore crops fall 20 per cent. below the average, the outturn will be only 2,400,000 tons, and there will be nothing available for export except out of stocks.

If we examine the exports for several years past we shall be able in some measure to check the figures of production. The following table gives these figures:—

Year.	Exports of food grains in tons.	Imports of food grains in tons.	Net exports.
1888-89	427,227	13,114	414.113
1889-90	231,372	9,832	221,540
1890-91	306,547	10,759	295,788
1891-92	475,118	28,325	446,793
1892-93	367,753	29,551	338,202
1893-94	367,811	8,562	359,249
Average for normal years ...	362,638	16,690	345,948
1894-95	197,163	52,623	144,540
1895-96	138,022	47,863	90,159
1896-97	145,682	38,721	106,961
Average for bad years	160,289	46,402	113,887

For the first six years of the series the average net exports have only fallen short of Mr. Carey's standard export by a very small amount. For the last three the average is less than a third of that figure. Now we must endeavour to see what kind of crops were produced in the years to which these returns relate. The years are the financial years, and it is practically true to say that any financial returns relate exactly to the crops of the preceding agricultural year.

The main export crops are wheat, juar, gram and rice, and the general character of the harvests of these crops in the years in question are as follows:—

Year.	Crops of previous year in annas.					Net exports.	Remarks.
	Wheat.	Juar.	Rice.	Gram.	Average.		
1888-89 ...	14	12	14	12	13·6	414,113	Exports of wheat highest on record.
1889-90 ...	10	14	10	12	11·1	221,540	
1890-91 ...	12	14	13	10	12·3	295,788	
1891-92 ...	10	10	14	12	11·6	446,793	Opening of the Bengal-Nagpur Railway, and enormous increase in rice traffic.
1892-93 ...	10	8	13	10	10·6	338,202	
1893-94 ...	9	10	14	10	11·0	359 249	
1894-95 ...	6	12	12	13	10·2	144,540	
1895-96 ...	7	8	13	8	9·3	90,159	
1896-97 ...	8	12	7	9	8·5	106 961	
						Net imports.	
1897-98 ... 1st April to 1st June.	10	8	5	9	6·1	14 514	(Approximate figures).

The anna outturns in the above statement are of course rough generalizations on the varying outturns of the several districts, but the averages represent some allowance for the relative importance of the four crops, and in the last year a further allowance is given for the decrease in cultivation. To work out the production in tons for all these years would entail immense labour, which is not needed for the purposes of rough illustration which the statement is intended to serve.

We have really not had a good all-round wheat crop since 1887-88 and 1889-90. Juari has also not been a really good all-round crop for several years. Gram has been fair and rice up to the two last years fair to good.

Now the crops of 1887-88 which affected the traffic returns of 1888-89 may fairly be considered to represent the all-round average which Mr. Carey estimates as yielding three million tons, and affording 100,000 tons for stocks and 360,000 tons for exports. But the returns show net exports of 414,000 tons, and this while Chhattisgarh rice was not exploited.

The returns of 1891-92, 1892-93 and 1893-94 no doubt show that the Chhattisgarh stocks were drawn upon, but the crops which affected those years clearly fall a good deal short of the three million tons which the crops of the first year (1887-88) may on Mr. Carey's estimate be considered to have yielded. And in none of the subsequent seasons should there be on this basis any balance at all available for export, especially when it is considered that the areas cropped had in the latter years shown an increasing decline.

And the export figures are the more remarkable if we consider the traffic of the five blocks into which the Provinces are divided for the last four quarters ending the 31st March last:—

		Quarter ending			
		June 1896.	September 1896.	December 1896.	March 1897.
Jubbulpore ...	Exports	73,686	17,570	162,481	166,759
	Imports	109,578	203 993	43,979	74,097
	Net ...	+35,892	+186423	—118,502	—92,662
Nerbudda ...	Exports	595,306	120,960	317,642	90,604
	Imports	22,243	73,670	11,196	43,729
	Net ...	573,063	—47,290	—306,446	46,875
Nimar ...	Exports	76,485	36,445	49,338	35,524
	Imports	53,495	25,775	23,330	70,050
	Net ...	—22,990	—10,670	—26,008	—34,526
Nagpur ...	Exports	112,004	75,418	246,599	196,378
	Imports	139,422	144,198	14,807	25,285
	Net ...	+27,418	—68,780	—231,792	—171,093
Chhattisgarh ...	Exports	495,638	205,925	508,399	495,967
	Imports	2,036	1,573	687	1,061
	Net ...	—493,602	—204,352	507,712	—494,906
Whole Provinces ...	Exports	1,353,119	456,318	1,284,459	985,232
	Imports	326 774	449,209	93 999	214,222
	Net ...	—1,026,345	—7,109	—1,190,460	—771,010

We find then although the kharif of 1896-97 was so poor, and the prospects of rabi bad, that the blocks which were large importers after the harvests of 1895-96 began to export rather largely directly the new kharif began to come into the market.

The figures of local trade for the same quarters are as follows:—

Districts.		June.	September.	December.	March.
		Maunds.	Maunds.	Maunds.	Maunds.
Jubbulpore	Exports	2,648	790	2,757	9,146
	Imports	213,005	141,688	175,999	259,837
	Net	+ 210,357	+ 140,898	+ 173,242	+ 250,691
Nerbudda	Exports	27,328	27,618	25,684	18,029
	Imports	79,299	66,869	13,343	30,338
	Net	+ 51,971	+ 39,251	— 12,341	+ 12,319
Nimar	Exports	48,602	52,382	3,102	1,430
	Imports	3,744	2,853	17,412	12,809
	Net	— 44,858	— 49,529	+ 14,310	+ 11,379
Nagpur	Exports	2,050	1,677	9,024	7,130
	Imports	182,243	110,127	137,449	311,081
	Net	+ 180,193	+ 108,450	+ 128,425	+ 303,951
Chhattisgarh	Exports	399,536	239,797	305,087	580,004
	Imports	1,873	727	1,451	1,664
	Net	— 397,663	— 239,070	— 303,636	— 578,340
Total	Exports	480,164	322,264	345,654	615,729
	Imports	480,164	322,264	345,654	615,729

By adding these figures to the previous table we find what the total grain traffic was in these quarters of the several blocks:—

Districts.		Net Exports and Imports.			
		June.	September.	December.	March.
		Maunds.	Maunds.	Maunds.	Maunds.
Jubbulpore	External	+ 35,892	+ 186,423	— 118,502	— 92,662
	Provincial	+ 210,357	+ 140,898	+ 173,242	+ 250,691
	Net	+ 246,249	+ 327,321	+ 54,740	+ 158,029
Nerbudda	External	— 573,063	— 47,290	— 306,446	— 46,875
	Provincial	+ 51,971	+ 39,251	— 12,341	+ 12,319
	Net	— 521,092	— 8,039	— 318,787	— 34,556
Nimar	External	— 22,990	— 10,670	— 26,008	+ 34,526
	Provincial	— 44,858	— 49,529	+ 14,310	+ 11,379
	Net	— 67,848	— 60,199	— 11,698	+ 45,905
Nagpur	External	+ 27,418	+ 68,780	— 231,792	— 171,093
	Provincial	+ 180,193	+ 108,450	+ 128,425	+ 303,951
	Net	+ 207,611	+ 177,230	— 103,367	+ 132,858
Chhattisgarh	External	— 493,602	— 204,352	— 507,712	— 494,906
	Provincial	— 397,663	— 239,070	— 303,636	— 578,340
	Net	— 891,265	— 443,422	— 811,348	— 1,073,246

The net exports of the Provinces during the last three quarters of the calendar year 1896 and the first quarter of 1897 expressed in tons were as follows:—

	Tons.
June 1896	36,655
September 1896	254
December 1896	42,516
March 1897	27,536
Total	106,961

and the transactions of the various blocks over the same period as under:—

	Net exports(—) Net imports(+)
Jubbulpore	+ 28,083
Nerbudda	— 31,517
Nimar	— 3,352
Nagpur	+ 14,800
Chhattisgarh	— 114,975
Net exports	106,961

We find then that after the disastrous season of 1895-96 the Nerbudda Division has continued to export food steadily; while Chhattisgarh has poured out enough food to feed her own population of 3½ millions for 2½ months. Nimar for the first three quarters exported food, but had to import in the fourth. Jubbulpore has in that year imported steadily; but in the crucial quarter October to December she imported less than 2,000 tons. Her net imports over the whole year are less than one month's supply for her population. Nagpur exported only when the kharif was reaped; in the other quarters she imported, but her total net imports for the year sufficed to feed her population for only 11 days.

As a whole the Provinces during that time despatched a net amount of 106,961 tons, or 30 per cent. of the standard exports to other parts of India.

This was the state of things before the last rabi harvest was cut, and up to that time therefore and during the year reckoned from the cutting of the previous rabi crops (of 1896), we may say that Jubbulpore had to obtain 27 days' supply from outside, and Nagpur 11 days' supply, the other Divisions having a surplus to export.

Since that date and up to the beginning of June the local source of supply was the rabi crop, and for the months of April and May, according to the Government of India's figures, which are of course somewhat rough, we find the following:—

Districts.	Exports.	Imports.	Net.	Number of days, food-supply.
	Tons.	Tons.	Tons.	
Jubbulpore	4,315	9,550	+ 5,235	5
Nerbudda	1,707	5,221	+ 3,514	7
Nimar	428	2,339	+ 1,911	
Nagpur	2,980	15,157	+ 12,177	9
Chhattisgarh	12,740	4,425	— 8,315	5

Such are the actual facts so far as they can be gleaned from the figures; but to draw any precise conclusions from them as to the amount of food stocks available in the Central Provinces is a far more difficult task.

But the following rough estimates on the basis of Mr. Carey's figures and calculation may possibly give some rough idea.

Allowing for differences of area and differences of outturn, I deduce the rabi crop of 1895-96 to have been as follows as compared with the rabi crop of 1896-97. In the Nagpur Division I have transferred to kharif outturns the sum of 10,000 tons included in rabi owing to the inclusion of some kharif crops in the rabi miscellaneous food crops. The result is as follows:—

	Outturn of rabi crops in tons.	
	1895-96.	1896-97.
Jubbulpore	183,000	195,115
Nerbudda	220,000	151,229
Nagpur	146,000	94,594
Chhattisgarh	82,000	77,795
Total ...	628,000	518,733

On the basis of this calculation we can deduce the following as the result of the year's movements and consumption of grain.

On the 1st April 1896 the people in the several Divisions had only what was left to them of old stocks from the previous years and the preceding kharif, a poor harvest.

This is an uncertain quantity. But on that date we may take it they received the rabi crop of 1896. The exports and imports which are contained in the statement, and the kharif outturns according to Mr. Carey's note, show what food they had to go on with up to 1st April 1897:—

	Produce of rabi crops of 1896.	Produce of kharif crops of 1896-97.	Net exports or imports.	Net produce available for consumption.	Amount required to give one ton per annum to every 6 people.
	Tons.	Tons.	Tons.	Tons.	Tons.
Jubbulpore	180,000	99,270	+ 28,083	307,353	395,940
Nerbudda	220,000	108,509	— 34,869	293,640	301,604
Nagpur	146,000	322,025	+ 14,800	482,825	474,332
Chhattisgarh	82,000	342,976	—114,975	310,001	461,000

The figures in the above statement seem to point to one of two conclusions,—either that Jubbulpore had some stocks to meet the deficiency and Nerbudda could even export as well, or that the outturns are under-estimated. And inasmuch as no allowance is made for seed at all, there seems no doubt but that the latter explanation is the correct one. It also bears out the conclusions which I have already indicated, that if the produce were only three million tons, in most of the recent years there could have been no balance for exports at all.

Now, the only way in which the outturn may have been under-estimated is this. The standard outturns adopted represent a 13-anna outturn as an average; but the anna outturns returned by District Officers refer to a 16-anna standard. The calculations of produce have treated the standard outturns as if the 16 annas was correctly estimated as an average, whereas 16 annas is a full crop in the ordinary parlance both of the people and of the officials.

Say that 600 lbs. equals a 13-anna crop in the ordinary parlance of the people, then an 8-anna crop in the same parlance equals $\frac{8 \times 600}{13}$ or 370 lbs.; but for the calculations of the produce it has been taken as 300 lbs.

To arrive at the true produce we should then add 3/13ths of the estimate according to Mr. Carey, thus in our illustration 3/13ths of 300 equals $\frac{900}{13}$ equals 70 lbs. By correcting the last table in this way the following results are obtained:—

	Produce of rabi crops of 1896.	Produce of kharif, 1896-97.	Total produce.	Add net imports. Deduct net exports.	Balance.	Total required to give 1/6th ton equals 373 lbs., to each man.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Jubbulpore ...	222,000	122,000	344,000	+ 28,000	372,000	395,940
Nerbudda ...	271,000	133,000	404,000	— 35,000	369,000	301,600
Nagpur ...	180,000	395,000	575,000	+ 14,800	589,800	475,000
Chhattisgarh ...	101,000	422,000	523,000	—115,000	408,000	461,000

The results now obtained seem to be more according to expectations than the former figures. We know that stocks in the Jubbulpore Division must have been reduced to almost *nil*, and we find that imports have been most continuous there and that the people have been on very short commons. In the Nerbudda Division the continuance of exports indicated the existence of stocks, and a fair margin was available over the bare minimum required for human consumption. In Nagpur we find that in spite of an adequate food-supply over the Division as a whole, considerable amounts were imported. This is not surprising: the food-supply was unevenly distributed over the Division, there was a tendency for those who *had* to keep their produce, so that Balaghat, and the cities of Nagpur and Kamptee have imported food, in spite of the existence of stocks in outlying parts of Nagpur, Wardha and Chanda, and probably in the best rice tracts of Bhandara.

The Chhattisgarh figures show the existence of large stocks, the accumulations of the succession of good rice years ending with 1894-95. These are, in the case of the Dhamtari Tahsil and the Sambalpur District, not yet exhausted. The several Divisions have now begun the current financial year as follows:—

	Stocks. Tons.	Rabi 1897. Tons.
Jubbulpore ...	*Nil.*	... +240,000
Nerbudda ...	Insignificant	... +186,000
Nagpur ...	150,000 (?)	... +116,000
Chhattisgarh ...	300,000 (?)	... + 96,000

Now a month's food-supply is as follows—

(Surveyed tracts).	Tons.
Jubbulpore	33,000
Nerbudda	25,000
Nagpur	40,000
Chhattisgarh	38,500

Therefore, exclusive of stocks, of which we have no reliable figures, the Jubbulpore Division has 7 months', Nerbudda 7 months', Nagpur 3 months' and Chhattisgarh about 2½ months' food-supply in the rabi crops lately reaped.

Since the 1st April the following traffic has taken place up to the 5th June (as already shown):—

	Tons.
Jubbulpore	+5,235
Nerbudda	+5,425
Nagpur	+12,177
Chhattisgarh	—8,315

The rural population in Nagpur (and doubtless elsewhere also) are holding tight to their rabi produce in order that it may feed them in the event of the coming kharif being a failure, hence the urban populations are obliged to import from localities where the rural population are not under this necessity. On the whole we may, I think, assume that the food-

supply of the rural tracts (with a few exceptions, such as Balaghat or parts of Mandla) will last out until the kharif is reaped, provided that the wants of the large towns Nagpur, Kamptee, Jubbulpore and Saugor are met by imports from abroad.

In Chhattisgarh the continued exports seem to prove that stocks are holding out well. But it is impossible to form any very definite conclusions. We know that there are always certain persons, money-lenders and large proprietors who keep stocks on which to draw for seed purposes, and to supply food to their clients or tenantry until harvest time. These stocks will be closely guarded by their owners, and will not come on the general grain market, and their existence is not inconsistent with large imports for the purpose of feeding the non-agricultural population. Such stocks exist everywhere, but must of course be very low in the Jubbulpore Division, and in Balaghat and Bilaspur, and low in the Nerbudda valley; elsewhere they are still considerable.

They are, however, naturally, very unevenly distributed, and can never be reckoned upon to feed any one but the persons in whom the owners of the stocks are specially interested.

In putting forward the above remarks, I do not wish to press the view suggested, as I am conscious that so many of the factors are based on guess work. I have taken the seasons differently from the order adopted in Mr. Carey's note, because this method shows more clearly what the people have in hand to cover the interval between the last rabi and the coming kharif harvests. If, however, Mr. Carey's method of estimating the food-supply be adopted, and his figures be raised by 3/13ths as suggested by me, the last column of his table of produce works out as follows :—

District.	Quantity available per head per diem in lbs.	Number of months' food-supply.
Saugor ...	0·82	9-4/5
Damoh ...	0·63	7⅓
Jubbulpore ...	1·19	14¼
Mandla ...	0·63	7⅓
Seoni ...	1·14	13⅔
Jubbulpore Division ...	0·93	11⅛
Narsinghpur ...	0·80	9⅔
Hoshangabad ...	0·86	10⅓
Nimar ...	1·17	14
Betul ...	1·27	15¼
Chhindwara ...	1·50	18
Nerbudda Division ...	1·08	13
Wardha ...	1·06	12¾
Nagpur ...	1·30	15⅔
Chanda ...	1·08	13
Bhandara ...	1·21	14-2/5
Balaghat ...	0·56	6¼
Nagpur Division ...	1·11	13⅓
Raipur ...	1·00	12
Bilaspur ...	0·82	9-4/5
Sambalpur ...	2·24	26-8/9
Chhattisgarh Division ...	1·15	13-4/5
TOTAL CENTRAL PROVINCES	1·07	12-5/6

At this rate the Provinces as a whole from October 1896 onwards have received from their crops just the barest minimum of food with no margin for seed, cattle, or for the larger quantity consumed by all but the very poor, and the next three trade quarters ending June 30th, September 30th and December 31st should show net imports. If they do not, it will only go to show that stocks are larger than is thought, or that outturns were still underestimated.

R. H. CRADDOCK,

Third Secretary to the Chief Commissioner.

Dated the 29th June 1897.

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No. 25-196-2 L.

FROM

T. W. HOLDERNESS, ESQ., I.C.S.,
Deputy Secretary to the Government of India,
Department of Revenue and Agriculture (Famine),

TO

The Secretary to the Government of Madras.

Simla, the 9th August *1897.*

Department of Revenue and Agriculture.
(*Famine.*)

SIR,

In continuation of my letter No.1193-151-2, dated 5th May 1897, I am directed to forward for the information of the Governor in Council, 3 copies of a letter from the Third Secretary to the Chief Commissioner, Central Provinces, No.3524, dated 24th July 1897, containing a report on the food stocks in those Provinces.

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

T. W. Holderness
Deputy Secretary.

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