Magnitude of the problem in 1896:

As noted earlier, scanty and unseasonable rains, the unusually low flood-level and the abnormal fall in the depth of subsoil water in the drier months during the past two years, accounted largely for the extensive crop failure in Bengal during the winter of 1896.

The problem manifested itself in various forms in the different economic regions — in the marginal lands of north Bihar, i.e. in Saran, Champaran, Muzaffarpur and Darbhanga the kharif crop, so vitally dependent on the hathiya rains, withered for want of water, as did the upland rice in the tribal tracts of Bhagalpur and Chotanagpur. The 'barind' and 'dears' lands in Rajshahi faced the same problem.

In certain other areas the flood level, rather than rainfall, was crucial in determining the extent of crop failure. In Orissa, the rivers rose in spate and high floods caused much damage to the winter rice, while the inundations in Karimpur and Chapra in Nadia washed away a major portion of the crops.

Elsewhere, the extreme lowness of rivers was equally devastating in its impact on agriculture. The abnormally low inundations of the Padma injured the winter harvest and prejudiced the rabi prospects in Rajshahi. (1) The maximum height of the flood this year was 64 feet, while in a normal year it rose up to 66 feet above the mean sea level. In Pabna, the crop depended for moisture on the floods as well as on rain, and "it is notorious that the supply from the former source was never so scanty as in 1896. ... The lowness of the rivers is due to the fact that the drought is more general throughout India than any hitherto known." (2) The aman cultivation in Nadia and Murshidabad, concentrated in the "Kalantar", failed as the bils could not retain moisture as in normal years, due to the unprecedentedly low

---

1. Fam. Sel. III, p. 263, para 6. The average height & duration of the floods of the Padma during the past 3 years:

<table>
<thead>
<tr>
<th>YEARS</th>
<th>AVERAGE HEIGHT OF THE FLOOD ABOVE SEA LEVEL</th>
<th>DURATION OF FLOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1893</td>
<td>63.46'</td>
<td>89</td>
</tr>
<tr>
<td>1894</td>
<td>64'</td>
<td>103</td>
</tr>
<tr>
<td>1895</td>
<td>63'</td>
<td>45</td>
</tr>
<tr>
<td>1896</td>
<td>62'</td>
<td>27</td>
</tr>
</tbody>
</table>

2. Ibid., Vol. III, p 280, para 2.
flood level in 1895 and 1896, there being no alternative method of
irrigation. In the Sunderbans tracts of Khulna and Jessore, the sea
water entering the rivers forced open the dams and impregnated the
soil with a saline efflorescence. The local rivers usually remained
salty from December to June, when the monsoon rains, together with
freshets from the Ganges flowing into the Yamuna –Kalindi, diluted the
salt in the water. During the last 3 or 4 decades, however, the range
of salt water had extended further north due to reasons discussed
earlier. In 1896 the problem was aggravated by the storm wave of 1st
October, which led to a larger volume of salt-water penetration in the
fields, while the scanty rains and low flood-level failed to sweeten
the river water and wash out the salinity from the soil. Likewise in
Orissa, the high salt floods of the Chilka in the Puri district
breached the embankment known as the Nuni Bund at the head of the Lake,
and entirely submerged the paddy fields in the surrounding region,
leading to a loss of more than 13 annas of the rice crop. Ironically,
while the Koyakahai and its tributaries overspilled their banks and
created havoc elsewhere, the supply of river water on the shores of the
Chilka was not sufficient to wash out the saline impregnation from the
fields.

The effects of scanty rainfall and low inundations were accentuated
by the abnormal meteorological conditions of the year. The soil failed
to retain moisture for the usual length of time, due to the rapid fall
in the depth of subsoil water during the past two years, and the hot
westerly winds which quickly dried the surface layers in October 1896.
The problem was particularly acute in areas like Gaya, where the slope
of the soil was very pronounced, or in Karimpur and the Kalantar tract
in Nadia, where the stiff clay could not hold water for long even in
normal times; hence, it dried up too soon in 1896, the moisture
necessary for the support of crops being restored neither by sufficient
rainfall, nor by capillary action from the subsoil.

II

District surveys regarding crop-outturn, reserves and trade-balance in
foodgrains in the famine zones:

The magnitude of the problem was reflected in the crop – size and
extent of deficiency as compared to normal years, in the fifteen
districts most severely affected by the famine, viz. – Shahabad, Saran,
Champanar, Muzaffarpur, Darbhanga, Bhagalpur, Santal Parganas,
Manbhum, Hazaribagh, Palamau, Nadia, Murshidabad, Khulna, Bankura and
Puri. The significance of this shortfall in agricultural production can
be realised in full only in relation to the crop – pattern, stock
position and balance of trade in foodgrains in each of the districts
concerned.
In the Patna Division, the southern district of Shahabad had an outturn of 7 annas of the bhadoi crop, 4 annas of the aghani and between 9 to 11 annas of the rabi in 1896 - 97. The total outturn was 45.33% of the normal, the deficiency thus being 54.65%. The failure was much greater than in 1873-74, when the crops came up to 52.42% of the average, the deficit being 47.58%. (3)

The figures, whether expressed in fractions of the rupee or in percentages, become meaningful only when considered against the relative contribution of each harvest to the total foodgrain production in the district; the extent of shortfall, as far as can be gauged, in the affected areas as distinct from the district average; and the level of reserves as indicated by the yield and carry-over stocks from the previous year.

The bhadoi amounted to 11.19, the aghani to 68.59 and the rabi to 20.21% of the total crop outturn in the district in a normal year. Indeed, Shahabad had comparatively little "deara" or riparian land suitable for bhadoi cultivation. The richer rabi crops, too, could not be grown after the winter rice, which inevitably covered all irrigated lands under the Sone Canal system and came up to nearly 7/10 of the total harvest.

The failure of the monsoon rains, however, would be fatal for the rice lands not thus insured by irrigation, as in the south-western corner of the district consisting of Bhabhua and part of the Sasaram subdivision. Much of this unirrigated and inaccessible tract, covered by the Kaimur range and valley, suffered from a widespread failure of its sole crop, viz. winter rice, due to lack of the monsoon showers. In Bhabhua the rice crop of 1896 was an absolute failure, the outturn being reported as "nothing". The existence of rabi producing tracts in the Chenari outpost of Sasaram partly mitigated the distress there, but even the rabi was damaged by caterpillars, and produced no more than a 6 to 7 anna harvest. It was this total loss of the aghani crop in the affected regions that brought down the district average of rice production this year to as low as 4 annas of the normal, in spite of the protection given by the Sone Canal to a considerable proportion of the areas under winter rice.

As 1895 - 96 had not been a good year for the Patna Division, especially for Shahabad and the north Gangetic districts, the carry-over stocks were low. The yield of winter rice in 1895 was only 10 annas, of rabi in 1895 - 96 11 annas, and of bhadoi in 1896 7 annas of the average. The total crop outturn in Shahabad had been 61.66 and


238
45.35% of the normal in 1895-96 and 1896-97 respectively, the
deficiency thus rising from 38.34% in 1895-96, to 54.65% in 1896-97.
Expressed more tangibly, Shahabad suffered from a total deficiency
of 85,80,624 maunds of foodgrains in 1895-96 and of 1,22,31,901
maunds in 1896-97. The total deficiency was 46.50%, the outturn being
only 53.50% of the normal for the two years taken together.

From October 1896 to September 1897, 5,29,053 maunds of foodgrain were
imported and 5,23,628 maunds exported by rail, leaving a net balance of
5,425 maunds. The river-borne trade showed an excess of exports by
71,834 maunds. These statistics, however, are based on widely varying
ratios, none of which can be regarded as even approximately correct, so
that the result is more a "feat of arithmetical calculation" than a
record of facts. (4)

In the affected area food stocks were soon exhausted, prices of common
rice in Bhabhua going up from 11 seers per rupee in the first half of
October 1896, to 9 seers in the second half and 8 at the end of
December. From June to August 1897, it rose to 7 seers for a rupee.
Such prices had never before been reached in this purely agricultural,
backward and remote tract inhabited mainly by Kherwars, Dhangars and
Ahirs. The region lacked resources even in normal times, and the
incidence of land revenue, paid in kind, was higher in proportion to
the rental than in any other pargana of the district. Indebtedness
being general, the rabi harvest of the famine tract was largely exported
by the mahajans, who had bought up the crop before it was reaped. A
police estimate of foodstocks gave about two months' supply in hand on
1st April, 1897. (5) Rice was imported in small quantities from
Sasaram, and principally from Burma via Howrah. The district imports of
rice from Calcutta between January and September 1897 were recorded to
be 1,33,003 maunds. No figures, however, are available for the famine
tracts, where the condition worsened and the crisis persisted till the
bhadoi season in August, 1897.

(ii) Saran

The crops in Saran, too, were severely affected by the scanty and ill-
distributed rains in 1896, the deficiency amounting to 48.9% of the
normal fall. The bhadoi and aghani in consequence gave only a 6 and
1 1/4 anna outturn respectively, while the rabi, helped by the winter
rains, came up to 12 3/4 annas. The total outturn of foodgrains in the
district was 42.28% of the normal in 1896-97, the deficit being as much
as 57.72%. As in the case of Shahabad, the outturn was much lower than
in 1873-74, when the total yield had been 50.22% of the average, and
the deficit no more than 49.78%. (6)

---
4. Ibid., Ch. III, paras 9, 11.
5. Ibid., paras 10, 11.
239
The bhadoi, aghani and rabi crops took up 32.58, 28.73 and 38.67% of the acreage under foodcrops in an ordinary year, yielding 31.73%, 28.35% and 39.90% of the total harvest, respectively. Rabi was thus of most value, and aghani rice the least important crop according to outturn, in Saran. No other district in the Patna Division except Champaran had such an equitable distribution of crops throughout the year, which greatly mitigated the distress in lean seasons. This balance in the proportion of crops was accounted for largely by the conformation of the land in Saran, which consisted of large rice swamps interspersed with higher lands and riverside "dearas" suitable for maize and millets in the autumn, and cold weather crops of a large variety.

The stress was greatest in the swamps scattered throughout the district, which grew little else but winter rice. This explains the "curiously variegated character of the Saran famine map". The Gopalganj subdivision was the most severely affected, for it contained many large rice tracts in the south-east, north and north-western parts of both its thanas. Two-thirds of Siwan and about half of the Sadar subdivision also fell within the famine zone. The floods of 1890 and 1893 had inflicted great hardships on the people of this region, from which they had barely recovered. In Basantpur thana, 15% of the high lands were under indigo, while the soil was better adapted to the bhadoi than the rabi; the recurrence of the floods in June, however, destroyed 9/10 of the indigo, and the whole of the germinating bhadoi. Meanwhile, large areas of rice in the Sadar subdivision had not been sown at all for want of rain, the remainder producing only fodder for cattle. When the stress relaxed a little, relief was first felt in the tracts growing bhadoi crops, while in the rice lands the crisis continued till the end of September.

Grain reserves were always low in Saran, which even in normal years could not support itself, and supplemented its food supply by substantial imports. Moreover, the previous season had been less than satisfactory, leaving a deficiency of 18.60%. Expressed in maunds, Saran had a crop deficiency of 35,40,852 in 1895-96, and 1,09,84,589 in 1896-97, as compared to a normal harvest. In these circumstances Mr. Earle, the Collector of Saran, was unable to ascertain with any degree of accuracy the quantity of foodstocks existing in the district, if any. He tried, rather, to estimate the requirements of the district, the deficit in normal years and the increase in deficiency caused by crop failure, which would have to be covered by importation. According to his report dated 5th February, 1897, the total deficit in Saran was 244,261 tons in an ordinary year, while in 1896-97 it was 410,525 tons; the latter amount, equalling 114,94,700 maunds had, therefore, to be imported. The eventual net imports amounted to 18,88,345 maunds, leaving a deficit of 96,06,355 maunds. It was roughly estimated that at


240
the beginning of the scarcity the district had about 9 weeks' food supply in hand.

The extent of shortfall in Saran would have led to deeper distress over a longer period, had it not been for certain factors peculiar to the district. As noted, the relatively proportionate distribution of the three harvests in Saran enabled it to avoid overdependence on a single crop; elsewhere, an average aghani harvest of 1 1/4 annas would have spelled disaster, but Saran managed to survive on hopes of a fair rabi prospect, boosted by substantial imports. Indeed, the very fact that the district had an active import trade in normal years became an asset in times of crisis, for the grain merchants merely had to extend their operations rather than to improvise new trade connections. The extension of the import trade, however, was only possible due to the relatively high level of purchasing power in Saran, resulting partly from its opium and indigo cultivation, and mainly from the substantial cash remittances sent by the large number of its emigrant labourers.

Yet the fact remains that in 1896-97 Saran had a net deficit of 96,06,355 maunds due to crop failure, which could not be made good by importation, while exports of the bhadoi and rabi crops to the NWP increased by 20,000 maunds by rail alone, compared to the previous year. As to imports, the increase was mainly in rice and paddy supplies throughout the famine, while other grain imports decreased slightly, thus indicating once more the complete failure of the rice crop. (8) The usual sources of supply to the district were Muzaffarpur, Champaran, Darbhanga, Purnea and Bhagalpur, which even in 1895-96 provided 97% of its total imports of rice, maize, etc. In 1896-97, however, imports fell off considerably from these famine-hit districts, causing acute distress in Saran, where the pressure of population was the most intense. Monghyr, Murshidabad, Birbhum and Burdwan supplied it with rice this year, but the price level had to be consistently high in order to draw grain from these new sources and to divert them from flowing into the markets of the NWP. Cash crops did not effect any substantial increase in local resources, as indigo covered only 0.59% of the total bhadoi acreage, while for the past nine years there had been a succession of partial failures of the poppy. Besides, both opium and indigo cultivation were carried on in the areas chiefly dependent on the bhadoi and rabi harvests, and hence provided little relief in a famine which affected mainly the ricelands. In fact, the crop failure in Saran led to famine so far as it formed part of a general failure throughout North and Central India, ending in a sharp price rise. Prices in Saran had been high for years, and in 1894-95 nearly touched the famine rate. This over-populated district always depended on outside supplies both of food and wages; in 1896-97, with famine raging over a vast area, the critical question for Saran was

8. Ibid., Pt. III, p 1151 - 1152. FRFRO, Saran, Ch. III, paras 24 - 25.
whether either of them would be sufficient for it to tide over the crisis, while the NWP drew upon its rabi and bhadoi resources with unrelenting force.

(iii) Champaran

In Champaran, the rainfall was only 44% of the normal, causing the outturn of the bhadoi, rice and rabi harvests to be no more than 8, 3 1/2 and 12 annas of an average crop, respectively. The total foodgrain production was 44.5%, the deficiency amounting to 55.5% . In the famine year of 1873 – 74 the situation was far better, the outturn being 52.95% of the normal, and the deficiency 47.05%

There was an equitable distribution of crops, as in Saran, the bhadoi taking up 36.98%, the aghani 38.41% and the rabi 24.59% of the cultivated area in an ordinary year. As to outturn, these three crops amounted to 33.13, 39.75 and 27.12% respectively, of the total yield. Thus in Champaran aghani rice was the most important, as the rabi was in Saran, forming about 40% of the entire foodgrain production. When the monsoon rains were scanty and ill distributed as in 1896, Champaran suffered more than Saran, for it had relatively little rabi to fall back on, the bhadoi and winter rice accounting for nearly 73% of the harvests of the district.

Though the proportion of crops determined to a great extent the fate of the district in general in years of famine, it had little relevance for the affected tracts, which were normally inaccessible regions depending most often on a single crop of rice. In Champaran two main areas were always worst off when the rains failed – a portion of the Dhaka thana and a large tract to the north west of Bettiah, with its centre at Ramnagar. Both depended solely on winter rice, which was a total failure in 1896. The soil was poor and communications difficult in the Ramnagar tract, there being no railway line or proper road beyond Bettiah, which lay 28 miles from Ramnagar and 21 miles from Shikarpur. One of the worst tracts to the north of Bagaha thana was 50 miles away from the railway. This situation made imports almost impossible, while locally, "owing to the failure of all crops no one had any stock for sale..." (9) In August, 1897, a good bhadoi crop ended the crisis in other parts of the district. The Ramnagar tract, however, remained unrelieved, as it had little or no bhadoi ; the deficiency of rainfall continued there for a longer period ; while due to its climate and northerly position, the harvests came in two to three weeks later than in the remainder of Champaran.

With this widespread failure of crops, so complete in the affected tracts, the most potent question was how long the district reserves

9. FRFRO, Champaran, Ch. III, para 51, by D. J. Macpherson Esq., Collector of Champaran ; extract from accounts of Charles Still, Relief superintendent of Hardih.
could feed the local population. The outturn in 1895 - 96 had been 83.82%, the shortfall amounting to 16.18%. In 1896 - 97, the deficiency rose to 55.5%. Taking the two seasons together, Champaran had an outturn of 64.16% and a deficiency of 35.84%. The winter rice, covering about 40% of the total foodgrain production in the district, was specially hard-hit by the vagaries of the weather during the last three years. The aghani crops of 1894 and 1895 had been deficient by 10.4% and 20.8% respectively, while in 1896 it was 81.9% below the normal, taking into account a contraction of about 16.5% in the area sown. Expressed in maunds, the total deficit in foodgrains in 1895 - 96 and 1896 - 97 were 33,08,740 and 1,13,50,271 respectively. Moreover Champaran, unlike Saran, was an exporting district in normal times; hence, in a year of widespread crisis in north and east India as in 1896-97, the outflow persisted and even increased in volume, till by April 1897 the stocks were reduced approximately to 10,76,590 maunds, i.e., less than 1 1/2 months' supply in hand. The deficiency to be made good by imports in the next six months was more than 33 lakhs of maunds.

In an ordinary year Champaran exported 450,000 maunds of foodgrain approximately, 150,000 by rail and the rest by road and river to Saran and Muzaffarpur. An equal amount of Nepal rice was re-exported from this district, 150,000 maunds by rail and 300,000 by road to Saran. Exports from Champaran continued in full volume due to a higher level of purchasing power in the NWP upto the first half of November 1896, when local prices rose by 16% and the current was reversed. The export fund of foodgrains till then must have drawn upon the relatively good crop of 1895 - 96, as well as a sizeable portion of the bhadoi harvest of the current year held by the dealers as a result of hypothecation. The returns, however, were only for the railborne trade in foodgrains, estimates of the traffic by road and river, especially that of smuggled rice from Nepal, being largely speculative. By mid-March the district reserves were seriously reduced, and prices made it remunerative to import Burma rice and paddy from Calcutta, which accounted for 83% of the total importation by rail into Champaran. The total inflow during the year of famine amounted to about 1,200,000 maunds against an export of only 150,000 leaving an excess of 10,50,000 maunds in the district. Very little of the rabi harvest came into the market in mid-March, increased importations after the harvest proving once again the minor importance of the crop in this region. A monthly balance-sheet of foodstocks shows a deficit in current supplies during January, February, July and August, when 12,82,818 maunds were estimated to be brought out from old reserves. Imports and previous stocks drawn upon throughout the year thus covered only about 2/3 of the total deficit during the six months from April to December, 1897.

Though calculations of the district reserves and the balance of trade in foodgrains were no doubt speculative in nature, the existence of a serious shortfall in supplies cannot be ruled out. Even official estimates, generally optimistic, warned that the scarcity would deeply affect 9.6% of the population by mid-November 1896, 37.1% by the end
of December, 71.1% in mid-February next year, and as much as 79% by the end of April. (10) The estimates tally with the fact that the maximum numbers on relief were found in mid-March and June 1897, while prices reached the peak at the end of December, February and July. Mr. Macpherson, the district Collector, notes: "... So far as the district of Champaran is concerned, a comparison of all available relevant facts leads me to regard the present famine, in intensity combined with duration, as more grievous than those of 1866 and 1874, or than any that have occurred during the present century". (11)

(iv) Muzaffarpur

Though the deficiency in rainfall ultimately amounted to less than 25% of the normal in Muzaffarpur, its erratic distribution severely damaged the crops. The bhadoi gave only a 5 to 6 anna outturn, the rice 3 annas in all subdivisions, and the rabi 11 1/2 annas of the average. Subdivisional returns are unfortunately not available for the bhadoi and rabi crops. The total foodgrain production in 1896-97 thus came up to 41.20% and the deficiency to 58.80%, as against an outturn and shortfall of 62.71 and 37.29% respectively, in 1873-74. Of all the districts in the Patna Division, Muzaffarpur seems to have suffered the most serious shortfall in 1896-97. As to commercial crops, the district stood lowest among those that received anything from opium, while the indigo outturn was roughly 2/3 of that in the previous year.

Of the total cultivated area 28.02% was covered by the bhadoi, 40.63% by the aghani and 31.34% by the rabi crop. Of the total outturn in a normal year the aghani, rabi and bhadoi harvests represented 45.65, 30.21 and 24.11%, respectively. Though the proportion of the aghani rice was only about 5% higher than in Champaran, the weakness of the district lay in the fact that rice cultivation was so exclusively concentrated in one part of it, that its loss brought great distress to a relatively large area unrelieved by the prospect of a second crop.

In fact, aghani rice was the chief crop in the district due to the great extent of rice cultivation in the Bitamarhi subdivision. Distress was most severe in this tract, as well as in the north of the Sadar subdivision at the end of 1896, gradually spreading over the entire district except the southernmost tip of Hajipur. The north of the district, especially Sitamarhi, was very prone to famines: it suffered acutely in 1866 and again in 1873-74, in 1875-76 and 1888-89. Distress was felt in the north of Sitamarhi, while in 1891-92 it was particularly severe in the Belsand and Shiuhar thanas of the subdivision. The winter of 1895 was not the best of seasons for this region and gave no more than 12 annas of the average aghani crop, so that it was ill-prepared to face the crisis in 1896. Whatever little of

10. LRP Aug. 1898, Pt. III.FRFRO, Champaran, Ch. III, para 57.
11. Ibid., Ch. XVI, para 186.
rabi and bhadoi existed also yielded poor crops this year, the strain being felt as early as in July.

Stocks were low throughout the district in 1896 - 97, the total outturn of foodgrains in the previous year being 69.77%, and the deficiency 30.23%. The deficit in maunds is roughly estimated at 62,72,417 and 1,22,40,283 respectively, for 1895 - 96 and 1896 - 97. Taking the two years together, Muzaffarpur seems to have obtained 55.48% of an average crop, the shortfall being 44.52%. Direct enquiries indicated that the foodgrain reserve in December 1896 amounted to only 14 1/2 lakh maunds, which could not feed the district even for a month. Dismissing the figure as absurdly low, the Collector, Mr. Hare, estimated the stocks in the district to be around 70 lakhs of maunds during the five months from 1st April to 31st August, 1897. According to his calculations the requirements during this time would be 82 1/2 lakhs, so that 12 1/2 lakh maunds would have to be imported to keep the district going. The import of foodgrains far exceeded the exports in 1897, reaching the peak in May. Yet the net balance in favour of the district came to no more than 8,42,211 maunds, leaving a deficit of 4 lakh maunds between 1st April and 1st September, 1897.

(v) Darbhanga

Darbhanga suffered less from the deficiency of rainfall than from its ill - distribution during the crucial months of August, September and October, which severely damaged its main crop of winter rice. The bhadoi gave a 10 - anna outturn, the aghani a mere 5 annas, and the rabi 14 1/2 annas of an average crop. The percentage of outturn of all the crops taken together came to 42.99, with a deficiency of 57.017 as compared to normal years. The situation had been marginally better in 1873 - 74, the percentages of the total yield and shortfall being 45 and 55, respectively.

The shortfall is significant in the context of the crop proportions of the district. Of the entire cultivated area, aghani rice normally took up as much as 54.26%, the bhadoi 24.02% and the rabi merely 21.71%. As to outturn, about 57.71% of the total foodgrain production was contributed by the aghani, 21.23% by the bhadoi and 21.05% by the rabi. Since the aghani rice thus accounted for more than half the total harvest in the district, a loss of more than 2/3 of it as had occurred in the winter of 1896, would obviously lead to a crisis.

The figures noted were for the district as a whole, and could by no means reflect the extent or intensity of distress in the worst affected parts, where the yield was bound to be lower. The problem was aggravated in Darbhanga by the close concentration of the rice tracts in the northern half of the district, stretching in a broad belt across the north of the Madhubani subdivision, along the Nepal border. It depended entirely on the rice crop, which was mostly grown on fairly high lands whence the rain water ran off quickly, unless the rivers were in high flood. In the southern tracts of Samastipur and
Dalsingserai, however, the main staples were provided by the bhadoi and rabi, while rice was grown in large chaurs which held the rain water throughout the winter. Indigo, tobacco and oilseed plantations were also concentrated in the south. Hence, in normal years the import of foodgrains in these tracts far exceeded the exports, which stood them in good stead in times of drought and famine. The affected tracts in the Madhubani and Sadar subdivisions, however, had little experience in importing foodgrains, as they normally had a surplus of rice and were rather remote from the railway.

Stocks ran low in Darbhanga, as the crops had been consistently below average from 1891 to 1894. In 1894 - 95 the bhadoi and winter rice yielded bumper crops, but again in 1895 - 96 the bhadoi was just about normal, while the winter rice was poor and the rabi much below average. The total deficiency in 1895 - 96 was stated to be 37.13%, which, added to the shortfall in 1896 - 97, rose to 47.07% for the two years together. According to the Collector's estimate, the deficit in maunds for 1896 - 97 was 1,68,02,550. Including the indifferent rice and rabi crops of 1895 - 96, there was a total deficiency of 2,09,69,524 maunds in the crops harvested from December 1895 to March - April, 1897. During April to September 1897, the net imports in maunds were 10,01,616; the returns, however, are for railborne trade alone, to the exclusion of cart and boat traffic. Deducting the amount required for food and seedgrain during these six months from a total stock of 27,92,315 maunds, Mr. Carlyle arrives at a net surplus of 11,65,340, i.e. barely a month's supply, before the harvesting of the bhadoi in 1897. (12)

**Total deficit in the Patna Division:**

By a very general estimate, admittedly speculative in nature, the five affected districts in the Patna Division were in the following position as regards supplies from 1st April to 1st October, 1897:

<table>
<thead>
<tr>
<th>DISTRICTS</th>
<th>ESTIMATED STOCK IN HAND ON 1ST APRIL 1897</th>
<th>NUMBER OF MONTH'S SUPPLY</th>
<th>DEFICIENCY TO BE MADE GOOD BY 1ST OCT 1897</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shahabad</td>
<td>34, 86, 055 mds.</td>
<td>4.28</td>
<td>13, 89, 971 mds.</td>
</tr>
<tr>
<td>Saran</td>
<td>9, 50, 637 &quot;</td>
<td>0.97</td>
<td>44, 75, 411 &quot;</td>
</tr>
<tr>
<td>Champaran</td>
<td>10, 76, 590 &quot;</td>
<td>1.47</td>
<td>33, 16, 435 &quot;</td>
</tr>
<tr>
<td>Muzaffarpur</td>
<td>2, 26, 678 &quot;</td>
<td>0.21</td>
<td>61, 82, 447 &quot;</td>
</tr>
<tr>
<td>Darbhanga</td>
<td>20, 43, 905 &quot;</td>
<td>1.85</td>
<td>45, 73, 712 &quot;</td>
</tr>
</tbody>
</table>

Source: Famine Report, Patna Div., 1896-97, paras 107 - 9 J.

The estimates are based on the assumption that in October 1696 each district had about half the bhadoi crop in reserve. The total is arrived at by adding to it the produce of the aghani and rabi harvests for 1896 – 97, plus or minus the net excess of imports or exports by rail, as the case may be. Deducting from this amount the quantity required for seed and foodgrain consumption (1 1/2 seer per head per day), the figures obtained as above were taken to represent the available reserve in each district before the harvesting of the bhadoi in 1897. According to this estimate, the Division had on the whole a stock for 1.75 months, or 50 days, on the average. Though the data are very imprecise and the Collectors’ reports often grossly contradictory, the calculations, for all they are worth, broadly indicate a real deficit both in old reserves and current stocks. Neither could it be made good by the import of foodgrains which was, after all, “a mere trifle”, equivalent only to 33 days’ food requirements of the Division.

Bhagalpur Division

In the districts of the Bhagalpur Division, the total food produce was about half of the average in 1896 – 97 (14):

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>PERCENTAGE OF AVERAGE CROP OUTTURN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BHADOI</td>
</tr>
<tr>
<td>Monghyr</td>
<td>65.62</td>
</tr>
<tr>
<td>Bhagalpur</td>
<td>56.25</td>
</tr>
<tr>
<td>Purnea</td>
<td>53.12</td>
</tr>
<tr>
<td>Malda</td>
<td>60.93</td>
</tr>
<tr>
<td>Santhal Parganas</td>
<td>62.50</td>
</tr>
</tbody>
</table>

Source: Figures taken from Final Reports of the Directorate of Land Records and Agriculture, as noted in DCAR Bhagalpur Div., 1896-97, Sec. III, para 28.

Winter rice was everywhere affected by the want of moisture. Important non-food crops like tobacco and jute in Purnea were below average. Indigo, grown extensively in the Sadar and Araria subdivisions in Purnea, came only up to 10 annas, partly due to the Kosi floods. Ill-distributed rains severely injured the mango crop in Malda, which also suffered from the low yields of mulberry, jute and indigo. The damage done to cash crops throughout the Division naturally lowered the

13. FRFRO, Patna Division, 1896, 97, Ch. III, paras 107 - 9.

247
level of purchasing power, thus deepening the crisis arising from food shortage.

(i) Bhagalpur

The Bhagalpur district had a bhadoi and aghani outturn of 9 and 8 annas approximately in 1896, followed by a rabi crop of 12 annas in 1897. In fact, the good bhadoi crop of 1895 had been followed by five indifferent crops, the aghani and rabi coming up to 11 3/4 and 10 annas respectively in 1895 - 96, followed by the three deficient harvests of 1896 - 97. In the affected area in north Bhagalpur, covering a large portion of the Gupaul and Madhipura subdivisions, the situation was even worse. Its poor soil was most suited for the cultivation of indigo, which had also declined in recent years. The famine tract lying in the western side of north Bhagalpur, adjacent to Darbhanga, suffered from distress throughout the year, the crisis being severest in pargana Kabkhand in the Bongong thana.

Relatively low reserves and a poor outturn, combined with excessive exportation, aggravated the problem in Bhagalpur. The district usually exported rice, and the poor crop this year was no deterrent. "Excessive and vigorous exportation of grain to regions affected by famine has been the most pronounced feature of the year, and it is to this cause very much more than to local failure of crops, if not entirely so, that prices were forced up to famine rates, that scarcity and distress appeared, and that the introduction of measures of relief was found to be required". (15) The Collector estimated a surplus of 40 lakhs of maunds in foodgrain even in this year of famine, but it flowed out of the district incessantly, instead of being channelised to the distress areas within.

As soon as the bhadoi was reaped in 1896 and a famine became imminent in other parts of India, an immense activity in grain-dealing began. The standing crops were gathered and stocks bought up in all directions, local middlemen competing with buying agencies of large firms in other districts. During October 1896 to September 1897, exports by rail exceeded the imports by 23,36,013 maunds, and in not one month did the imports ever exceed the exports. From October 1896 to March 1897 trade was most brisk. The exports were 19,01,106 maunds in excess of the total imports during this period, the latter amounting to no more than 49,323 maunds. Anxiety was heightened during the lean months from April to July, the stocks being depleted and prices reaching the peak. The highest price of common rice was 7 seers 12 chitaks per rupee in August in Madhipura, and 7 seers, 10 chitaks to the rupee in the second half of June, and in Banka at 7 1/2 seers throughout July. In 1873 - 74, the highest price ever reached was 10 to

11 seers, though allowance should be made for the general rise in prices during the last two decades. The imports from April to July 1897 rose to 2,04,222 maunds, i.e. more than six times the previous rate, yet exports were still in excess by 1,80,874 maunds.

(ii) **Santhal Parganas**

Due to the increasing pressure of population in the Santhal Parganas, large tracts of uplands previously producing dry crops like maize and millets were turned into poor rice lands, to increase food output and to share in the larger profits yielded by rice. The old rice tracts in the ravines, being extraordinarily fertile, produced an average crop. As the same family did not often hold both types of land, the lines of division and distress were deeply marked. The district had been better situated in 1873 – 74, as the rice crop was less extensive and less precarious. The fast spread of upland rice cultivation with its inherent risks in the next twenty years intensified the problem in 1896 – 97. The bhadoi gave 10 annas, and the aman only 8 annas of an average crop for the whole district this year.

The stress was severest in the Jamtara and Deoghar subdivisions, which had a smaller proportion of bhadoi than elsewhere and hardly any spring crops. The distress in these subdivisions was attributed by Mr. Oldham "to the failure of the upland rice and other upland crops which could not be artificially irrigated except at prohibitive cost". (16) The crop deficiency in these two subdivisions was as follows:

<table>
<thead>
<tr>
<th>SUBDIVISION</th>
<th>NORMAL IN MDS.</th>
<th>1895 - 96 IN MDS.</th>
<th>1896 - 97 IN MDS.</th>
<th>PERCENTAGE OF DEFICIENCY IN 1896 - 97.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deoghar</td>
<td>24,40,000</td>
<td>15,00,000</td>
<td>12,66,000</td>
<td>48.11</td>
</tr>
<tr>
<td>Jamtara</td>
<td>13,18,000</td>
<td>10,00,000</td>
<td>7,12,000</td>
<td>45.97</td>
</tr>
<tr>
<td>TOTAL</td>
<td>37,58,000</td>
<td>25,00,000</td>
<td>19,78,000</td>
<td>47.36</td>
</tr>
</tbody>
</table>


Taking the average food consumption at 12 chittaks per head, the whole outturn which in normal years covered the requirements for food, rentals, and exports against cloths, groceries, etc., was in both years insufficient for food alone. As the uplands and fertile tracts were held by different people, the deficiency was felt deeper than mere

averages would show. (17) As to the rest of the district Rajmahal, especially the Damin, was in deep distress, while there was less of strain in the Godda, Dumka and Pakour subdivisions.

The sole great industry throughout the Santhal Parganas was the production of foodgrain, on which the bulk of its 1 3/4 million inhabitants relied. The district needed about 12 million maunds of grain to feed its population, the normal outturn being about 15 million. The loss in 1896 - 97 was estimated at 6 1/2 million, leaving a deficit of 3 1/2 million maunds in the food reserves. As it was generally an exporting district grain continued to flow out, though on a moderate scale. A limited quantity of Burma rice was imported into Deoghar, the total inflow of grain from without being negligible. Locally, however, some amount of foodgrain moved from the south-centre of the district towards the centre and west, where supplies were running out fast, grain being practically out of the market for a long time in many places. So far as prices went, this year was the hardest on record, common rice rising up to 6 3/4 to 7 seers per rupee, which was much higher than in 1873 - 74. The district failed to hold an adequate supply of grain at such high rates, the purchasing power being low due to the falling demand for labour in mines and stone quarries, and reduced rates for reaping in the neighbouring areas where the crops had also failed.

Chotanagpur Division

Though the divisional averages in Chotanagpur show that the winter rice gave about 2/3 or 10.14 annas, the bhadoi a little over 1/4, i.e. 4.51 annas and the rabi not more than 1/12 or 1.33 annas of the total food supply, the importance and proportion of each harvest varied from district to district. While an average rabi crop gave about 4 months' food supply in Palamau, in Lohardaga its yield was most insignificant; again, a good bhadoi harvest may have been equivalent to a 4 1/2 and 4 months' supply of food in Lohardaga and Palamau respectively, while in Manbhum it would signify no more than a 5 weeks' reserve. In addition to the usual foodgrains the poorer sections in the wilder parts resorted largely to the use of edible forest products, particularly in years of scarcity. The most important of these was the flower of the mahua tree, grown in equal profusion in cultivated as well as forest tracts in all parts of the Division. Seeds of the sal tree, the fruit of the banyan and peepul, mangoes, wild yams, the 'bhelwa', 'piar', 'bear' and a wide range of the jungle fruits and roots supplemented the common man's diet, especially in lean seasons. However, such scanty meals of forest produce, if taken continuously without a cereal base, weakened their physique and made them most vulnerable to prevailing disorders like cholera and dysentery. (18)

18. Ibid., Aug. 1898 Pt. II, p 613, paras 7, 8
For the four successive years from 1893 to 1896, the total outturn in the districts of Hazaribagh, Manbhum and Palamau, which were hit hardest by the famine of 1896 - 97, amounted to 12.56, 14.33, 11.20 and 7.69 annas of a full crop. The collective deficit was thus 21.5, 10.44, 30 and 51.9% for 1893, 1894, 1895 and 1896, respectively. This very sharp fall of nearly 22% in agricultural production in 1896, combined with the indifferent harvests of the three previous seasons, naturally had a grave and penetrating effect on the economy of the region.

In order to carry on till the next bhadoi season after a widespread failure of the aghani rice, the people relied heavily on the approaching rabi harvest as well as the mahua, mango and other edible forest products. As noted, the rabi was of little consequence except in Palamau, where it provided approximately 1/3 of the total food supply. The normal acreage was further contracted due to the premature cessation of the rains in 1896, which did not leave sufficient moisture in the soil for the rabi sowings. In Hazaribagh, for instance, they came up to only 1/4 of their usual extent. Showers at the end of November led to later sowings, but these, being out of season, yielded poor results and could not compensate for the shrinkage in the original area of the regular crop. As a result, the crop estimates were 10, 6 3/4, 6 and 5 annas only for Hazaribagh, Palamau, Lohardaga-Singhbhum and Manbhum, respectively.

More important as a food staple was the mahua flower, a full crop of which reaped in March - April was estimated to provide 2 to 3 months' food supply in each of these districts. But severe storms and rain at a crucial time when the trees were in full bloom at the end of March, caused considerable damage to the crop, which in consequence gave only a 6 anna outturn in Palamau, 8 annas in Manbhum, and from 10 to 12 annas in the other three districts. It was reported from Lohardaga that even the sal fruit or 'sarai', as well as other edible roots and leaves, were unprecedentedly scarce this year. The wind and rain in March also destroyed the mango blossoms, causing a total failure of the mango crop which in normal years considerably augmented the food supply during May and June. (19)

The cash crop sector was affected as well by adverse weather conditions. The lac industry suffered due to the dullness of the Calcutta market and the local failure in produce. Sugarcane yielded 3/4 of the average in Hazaribagh and Palamau, and only 1/2 a crop in the other three districts. Tobacco and jute gave 8 annas of the normal outturn while oilseeds, an important item of export, came to no more than 6 1/2 annas on the average. Tea plantations also suffered in Hazaribagh and Lohardaga, as the weather in 1896 was not conducive to the growth of the tea saplings. Opium alone did reasonably well, though it was grown only in Hazaribagh and Palamau, where it gave an outturn of 14 and 13 annas, respectively.

The crisis in 1896 may be compared to that of 1873 - 74, in which also a year of short crops was followed by famine (20):  

TABLE IV

<table>
<thead>
<tr>
<th>DISTRICTS</th>
<th>Percentage of BHADOI</th>
<th>Percentage of WINTER RICE</th>
<th>Percentage of RABI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1873-74</td>
<td>1896-97</td>
<td>1873-74</td>
</tr>
<tr>
<td>Hazaribagh</td>
<td>31.25</td>
<td>53.12</td>
<td>62.50</td>
</tr>
<tr>
<td>Manbhum</td>
<td>-</td>
<td>50.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Palamau</td>
<td>Failed</td>
<td>62.50</td>
<td>28.12</td>
</tr>
</tbody>
</table>

[Source: DCAR, Chotanagpur Div., 1896 - 97 Sec. V, para 24.]

The bhadoi seems to have yielded a better crop in 1896 - 97. Yet the principal harvest of winter rice, occupying 2/3 of the acreage in Hazaribagh and increased by 13.12% in 1896 to cover 81.25% of the cultivated area in Manbhum, was definitely worse. The mahua and mango, so vital in years of scarcity, provided much relief in 1874, the former yielding a bumper crop and the latter at least an average one; in 1897, however, the mahua did not anywhere give more than a 10 anna outturn, while the mango crop failed completely. In 1873 - 74 the lac industry was very active and the yield exceptional, while in 1896 - 97 the baisakhi lac was almost a total failure. Thus, the shortfall in agricultural production in the districts of Chotanagpur in 1896 - 97 affected both the food and cash crop sectors, which substantially reduced the local level of grain reserves and purchasing power. The "pull" factor being present only in a very mild form during the lean months in 1897, and there being hardly any big grain dealers in the region, the volume of foodgrain imports could not make good the shortfall in agricultural output.

In order to analyse the nature and extent of shortfall in each district, the figures for the famine-hit regions of Hazaribagh, Palamau and Manbhum are the most relevant in 1896 - 97. The proportion and size of each harvest in Lohardaga and Singhbhum are also of interest, to the extent of their bearing on the inter district trade and the supply position in the Division as a whole. Though Singhbhum with 10 annas and Lohardaga with 8 annas of an approximate total food supply as compared with a year of full crops managed to escape acute distress during the famine, they were hardly in a position to reinforce the dwindling supplies in the neighbouring districts.

(i) **Hazaribagh**

The available figures relating to the proportion and average outturn of the three main crops in the district of Hazaribagh in 1896 shows a vast deficit, as compared to the preceding seasons of 1893 to 1895:

![TABLE V](#)

<table>
<thead>
<tr>
<th>FOOD CROPS</th>
<th>PERCENTAGE OF AREA UNDER EACH KIND OF FOOD CROP TO TOTAL CULTIVATION</th>
<th>PERCENTAGE OF OUTTURN OF EACH FOOD CROP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabi food crops</td>
<td>8.12 8.12 8.12 8.12 8.12</td>
<td>87.50 75.00 90.62 73.75</td>
</tr>
<tr>
<td>Bhadoi food crops</td>
<td>28.12 28.12 28.12 28.12 28.12 28.12</td>
<td>53.75 70.00 95.00 53.12</td>
</tr>
<tr>
<td>Winter rice</td>
<td>63.75 63.75 63.75 63.75 63.75</td>
<td>87.5 100.00 62.50 50.00</td>
</tr>
</tbody>
</table>

Approximate total food supply compared to normal. Total annual outturn obtained by multiplying the respective crop areas by the corresponding crop outturns, and adding the results.

[Source: Ibid, p.9, para 21.]

Thus, the bhadoi and winter rice in Hazaribagh yielded no more than an 8.5 and 8 anna crop respectively, while the rabi, though yielding 11.8 annas of a full outturn, covered only 1.3 annas or 8.1% of the total cultivated area. Though the mahua crop was relatively good, the total outturn of food crops was only 8.4 annas or 52.5%, as compared to a year of full crops. This, together with the indifferent harvests of the previous year (11.8 annas or 73.75%), resulted in acute food shortage and soaring prices. (21)

The estimated quantity of the local stocks for 1897 was about 5 million maunds of paddy and 4 million maunds of other food grains. This could just about meet the consumption requirements of the district, leaving out the quantity needed for sowing the ensuing crop. Besides, a sizeable amount of the stock was not available in the market, being kept in reserve for paying the labourers during the cultivating season. The price index for rice corresponded with the stock position, moving up from 8/9 seers to the rupee in March 1897, to less than 8 seers in April and a minimum of 6 seers in September, after which it again fell to 8 or 9 seers in October 1897. Mahua sold at 30


253
to 19 seers between April and August, while the rates for marua and makai rose from 12 and 11 seers respectively in November 1896 to 9 and 7 seers per rupee in June 1897, after which they fell again due to the new crops reaped. (22)

In Hazaribagh, the figures for the rail-borne imports of foodgrain passing through Giridih show a distinct increase in the monthly average from January to May 1897, when it rose to more than 40,000 maunds as against the ordinary rate of 16,000 maunds per month approximately. However, it fell lower than the regular monthly imports in August - September, due to the reaping of a bumper bhadoi harvest and the prospects of a good aman crop.

(ii) Palamau

The proportion and outturn of the food crop in Palamau were as follows:

<table>
<thead>
<tr>
<th>FOOD CROPS</th>
<th>PERCENTAGE OF AREA TO TOTAL CULTIVATION</th>
<th>PERCENTAGE OF OUTTURN</th>
</tr>
</thead>
</table>

Approximate total food supply as compared with year of full crops:

Approximately total food supply as compared 96.87 95.00 68.75 44.81

Source: DCAR, Chotanagpur Div., 1896 - 97 p. 9, para 21 J.

Palamau had a better balance in terms of the contribution of the three main harvests to the total food supply. The area under rabi and winter rice had been reduced by 6.25% and 9.37% respectively in 1896, while the bhadoi acreage was extended to cover this gap of 15.62%. Yet the bhadoi food crops still amounted to only about 1/3 (32.5%), while the winter rice took up 1/2 (49.3%) of the total area under food crops. Hence, a 5-anna (31.25%) crop of winter rice inevitably led to a

crisis, which could hardly be resolved by drawing upon the reserves of an indifferent (10 - anna) bhadoi outturn.

Expressed in maunds, the average outturn in a normal year would amount to 835,030 of bhadoi, 1,235,680 of winter rice, 1,757,952 of rabi and 791,077 of double - cropped rabi crops, with a total of 4,639,739 maunds. Taking the district population at 6,20,640 and allowing an average of 3/4 of a seer of food per head per day, as suggested by Sir A. P. Macdonnell in his Report on the Foodgrain Supply in Bihar and Bengal, the annual food consumption would amount to 4,247,505 maunds. The district requirements for seed being 400,718 maunds, the total quantity of grain needed would be 4,648,233 maunds in a year. Hence, even in a normal year the outturn of foodgrains in the district was deficient by 8,484 maunds.

Indifferent harvests in 1895 and the large - scale crop failure in 1896 - 97 greatly increased the deficit. Ill-distributed rains led to an 11 anna bhadoi, 10 anna winter rice and 8 anna rabi crop in 1895. In 1896 the three crops came up to 9 1/2, 5 and 6 1/4 annas of the normal outturn, respectively. The rabi crops on the threshing floors rotted to a great extent, as did the mahua flower on the trees. Hailstorms and rain were frequent, hailstones the size of betelnuts falling in the eastern part of the district in early March, and the temperature falling to 20° below normal at the end of the month. Lightning being very injurious to mahua, the inclement weather in early March reduced it to a 6 anna crop, nearly all of which had been consumed by the end of April. Comparing the rainfall returns of the past 7 years for March, Mr. Renny finds that the conditions in 1897 more nearly approached those of 1891, when the mahua gave only a 5 anna yield. Yet that year the situation was saved by an early yield of a 12 anna rabi crop; in 1897, however, rains on and off since November last greatly delayed the rabi harvest. Besides adverse weather, the late rabi sowings as well as those sown on higher lands in October, were seriously damaged—wheat and barley by rust (harda), and the gram by insects (ghungri). (23)

Extensive local enquiries were made in November 1896, at important trade centres of the district such as Daltonganj, Leslieganj, Balumath, Garhwa etc, to ascertain the local stock position and to estimate the probable deficit in foodgrains. The result of the enquiry showed that the local reserves in the beginning of December 1896 amounted to about 3,00,000 maunds, i.e. approximately a month's supply. (24)


The yield of the ensuing rice and rabi crops was estimated to be 3,92,400 and 12,74,514 maunds respectively, the former being calculated at 5 annas and the latter at 8 annas of the usual outturn. In fact it was even lower, the rabi harvest yielding no more than 6.75 annas of the average, which amounted to 10,75,371 maunds approximately. Adding another 3,00,000 maunds from the mahua harvest, the total food supply in the district would amount to 20,67,771 maunds. The total quantity of food and seedgrain required from 1st December 1896 to 31st August 1897, would amount approximately to 35,89,256 maunds, thus leaving a deficit of 15,21,485 maunds in the food supply of the district during these 9 months.

Allowing for the large number of children under 14 among the rural population of Palamau (40% according to the Census of 1891),(25) and the reduced rate of food consumption in general during years of scarcity and famine, the average rate of food intake may be calculated at 1/2 rather than 3/4 seer per head per day. This would bring down the food and seedgrain requirements of the district from 35,89,256 to 25,24,470 maunds during the 9 months from 1st December 1896 to 31st August, 1897. However, as Mr. Renny notes, "It is very difficult to compute to what extent the consumption of food can be curtailed without endangering life and health, or to what extent it was curtailed in the present year: but that it was curtailed was very evident from the emaciated condition of the poorer classes during July and August". It possibly fell to less than 1/2 a seer per day, which, according to the scale of ration prescribed in the Famine Code and in Macdonell's Report on the Foodgrain Supply in Bihar and Bengal, would be "inadequate to sustain life for any length of time". (26)

Even this reduced rate of consumption, however, would leave a deficit of 4,56,699 maunds approximately for 9 months, i.e. more than 50 times the total annual deficit in normal years (8,484 maunds), to be made good by importation. The full implications of the crisis are realised only on considering the peculiarly unfavourable position of the district as regards trade and communication. Palamau was "probably the most isolated district in the whole province of Bengal—a district which in a time of scarcity... may not inaptly be compared, in the words of the late Sir George Campbell, to 'a ship at sea running short of provisions'." (27) It had neither railways, nor metalled roads or reliable water communication. Daltonganj was over 100 miles from the nearest railway station of Gaya, the journey by bullock cart being extremely slow and expensive. There were no big grain merchants in

Palamau who could face such a challenge in the midst of a crisis, local dealers normally carrying on a petty barter trade in foodgrains involving little capital or knowledge of inter-district trade.

With the closure of the normal sources of supply in Lohardaga, Sirguja, Gangpur and Jashpur, the crisis deepened into famine. The lowness of stocks was evident from a statement on the quantities of rice exposed for sale at the grain marts of the district in February, March and April, 1897:

TABLE VII

<table>
<thead>
<tr>
<th>DATE OF REPORT</th>
<th>QUANTITY EXPOSED FOR SALE</th>
<th>NUMBER OF MARKETS REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>13th Feb 1897</td>
<td>3,652 mds.</td>
<td>91</td>
</tr>
<tr>
<td>20th Feb 1897</td>
<td>2,548 &quot;</td>
<td>90</td>
</tr>
<tr>
<td>27th Feb 1897</td>
<td>3,270 &quot;</td>
<td>83</td>
</tr>
<tr>
<td>6th Mar 1897</td>
<td>3,099 &quot;</td>
<td>88</td>
</tr>
<tr>
<td>13th Mar 1897</td>
<td>2,751 &quot;</td>
<td>88</td>
</tr>
<tr>
<td>20th Mar 1897</td>
<td>2,094 &quot;</td>
<td>84</td>
</tr>
<tr>
<td>27th Mar 1897</td>
<td>2,066 &quot;</td>
<td>86</td>
</tr>
<tr>
<td>3rd Apr 1897</td>
<td>1,717 &quot;</td>
<td>94</td>
</tr>
<tr>
<td>10th Apr 1897</td>
<td>1,827 &quot;</td>
<td>91</td>
</tr>
</tbody>
</table>

Source: LRP Aug. 1898, pt. II, para 25 J.

The supply of rice in each market thus dwindled from an average of 40 maunds on 13th February to 31 maunds on 18th March and 20 maunds on 10th April,— a decline of about 25% in every 4 weeks. (28)

The acute scarcity was reflected in the price-index, which moved up from 66% above the normal rate in October 1896 to 144% in August 1897, rice selling at a little over 5 seers to the rupee. According to Renny, Deputy Commissioner of Palamau, "the prices in the district during the present famine rose to double the prices that ruled in any previous famine, and ... were higher ... than anywhere else in India". (29) The high rates prevailing for the rabi just harvested was an ominous sign, as also the price for mahua, selling 30 seers per rupee. (30)

The demand, however, was not always effective when prices went beyond a certain level. The local level of purchasing power, in fact, was not such as to induce outsiders to invest in such expensive and risky
ventures. Of Rs. 25,000 sanctioned by the government for payment of an 8 anna bounty on every maund of Burma rice (and later on all rice) imported into Palamau, only Rs. 9,895, 10 annas and 10 paise could be expended. The total quantity of rice brought into the district by private trade till June 1897 was 23,692 maunds, while the government directly imported 15,000 maunds for supplies to relief works between June and August, 1897. The entire amount thus covered only 8.4% of the total deficit in the district from 1st December 1896 to 31st August 1897, leaving a shortfall of approximately 4,18,007 maunds.

(iii) Manbhum

The crop proportions and outturn in Manbhum were as follows:

<table>
<thead>
<tr>
<th>FOOD CROPS</th>
<th>PERCENTAGE OF AREA TO TOTAL CULTIVATION</th>
<th>PERCENTAGE OF OUTTURN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1893</td>
<td>1894</td>
</tr>
<tr>
<td>Rabi</td>
<td>21.25</td>
<td>21.25</td>
</tr>
<tr>
<td>Bhadoi</td>
<td>10.62</td>
<td>10.62</td>
</tr>
<tr>
<td>Winter rice</td>
<td>68.12</td>
<td>68.12</td>
</tr>
</tbody>
</table>

Approximate total food supply compared with a year of full crops

|                                             | 60.62 | 84.37 | 67.50 | 46.87 |

The crop proportions and outturn in Manbhum were as follows:

<table>
<thead>
<tr>
<th>FOOD CROPS</th>
<th>PERCENTAGE OF AREA TO TOTAL CULTIVATION</th>
<th>PERCENTAGE OF OUTTURN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1893</td>
<td>1894</td>
</tr>
<tr>
<td>Rabi</td>
<td>21.25</td>
<td>21.25</td>
</tr>
<tr>
<td>Bhadoi</td>
<td>10.62</td>
<td>10.62</td>
</tr>
<tr>
<td>Winter rice</td>
<td>68.12</td>
<td>68.12</td>
</tr>
</tbody>
</table>

Approximate total food supply compared with a year of full crops

|                                             | 60.62 | 84.37 | 67.50 | 46.87 |

Though in Manbhum the rabi yielded a 13 anna crop in 1896, its acreage had been reduced by 15%. The proportions of bhadoi and winter rice were increased by 1.88 and 13.12% respectively, yet the yield was no more than 8 and 7 annas, i.e. 50 and 43.75% of a full outturn. (31)The winter rice in some areas came down to a 5 anna crop, while the rabi in 1897 gave only 3 1/2 annas of the average. The mahua was severely damaged by untimely showers. Coming after the generally poor harvests of the preceding year (with winter rice yielding 10 annas and the rabi 12 annas), this extensive crop failure in 1896 - 97 considerably reduced the level of the local reserves.

Almost the entire district was affected. The worst tracts were purely agrarian, with 1/4 of the population subsisting on unskilled labour and hence liable to be hit hard by any contraction of the agricultural operations or by a shortfall in output. In 1896, the normal sown area of the bhadoi and winter rice were reduced by 24,400 and 41,100 acres respectively, leading to a corresponding cut in the size of labour required. (32) Under the circumstances many small farmers were unable

to feed, or utilise the services of, their bonded labourers or kamias. The latter, left to fend for themselves, swelled the ranks of the agricultural labourers. Moreover, due to the plague in Bombay and the general slackness of trade following the poor harvest, a large number of those employed in the coal trade were discharged. The lac trade was dull too, as usually happened in such years.

Though Mr. Luson thought that the food supply in the district would suffice till August 1897, his calculations of the reserve of paddy and old rice (25,00,000 maunds), as well as the outturn of the new winter rice and rabi (37,33,359 and 1,34,062 maunds respectively), were based on mere guesses. The price range seems to indicate an acute shortage. The rates for rice and makai spiralled from 11 1/4 and 14 seers per rupee in the beginning of October 1896 to 7 and 8 seers respectively, in July-August 1897. Even in the straitened circumstances of 1895 their prices had not risen above 17 1/2 and 20 seers per rupee, respectively. Considering the condition of the labour market, as noted, this steep rise in food prices was shattering in its impact.

Though foodgrain imports increased in 1896 and surpassed the exports in 1897, the deficit remained. Moreover, the figures for 1897 represented the trade in all foodgrains, as against that of rice alone for the other years. Besides, much of the quantity imported was re-exported to Lohardaga, for which no statistics are available.

Presidency Division

In the Presidency Division, the outturn of the staples in the affected districts during 1895 – 96 and 1896 – 97 were as follows (33):

TABLE IX

<table>
<thead>
<tr>
<th>DISTRICTS</th>
<th>YEAR</th>
<th>PERCENTAGE OF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Nadia</td>
<td>1895 - 96</td>
<td>68.75</td>
</tr>
<tr>
<td></td>
<td>1896 - 97</td>
<td>42.16</td>
</tr>
<tr>
<td>Murshidabad</td>
<td>1895 - 96</td>
<td>62.50</td>
</tr>
<tr>
<td></td>
<td>1896 - 97</td>
<td>53.12</td>
</tr>
<tr>
<td>Jessore</td>
<td>1895 - 96</td>
<td>62.50</td>
</tr>
<tr>
<td></td>
<td>1896 - 97</td>
<td>56.25</td>
</tr>
<tr>
<td>Khulna</td>
<td>1895 - 96</td>
<td>75.00</td>
</tr>
<tr>
<td></td>
<td>1896 - 97</td>
<td>56.25</td>
</tr>
</tbody>
</table>


33. Ibid., p 378, From E.V. Westmacott, Com. Presidency Div., to the Sec. to the Govt. of Bengal, Rev. Dept., para 5.

259
In Nadia, the affected tract consisted of two distinct divisions - the black, clayey soil of the low-lying Kalantar in the centre and north, subject to inundations mainly from the Jalangi, and growing only aman rice; and the ex-Kalantar or light, sandy soil of the higher 'char' lands lying along the Bhagirathi and Jalangi, which grew mainly aus and rabi crops. The distress was initially felt in the Kalantar, covering about 1/12 of Kaliganj thana, 1/3 of Nakashipara and 1/2 of Tehatta, the first two forming part of the Sadar subdivision, and the third of Meherpur. It spread later to the Daulatpur, Karimpur, Meherpur and Gangni thanas. The total area affected was 1,182 sq. miles, the effects being felt most severely over 503 sq. miles; more than half of which fell within the Kaliganj and Karimpur thanas.

Aman rice was the main staple in the district except for the Kalantar, where the aman predominated. The percentages contributed by the aman, aus and rabi crops were 9, 44 and 47 in the ex-Kalantar and 71, 8 and 21 in the Kalantar, respectively (34).

In 1896-97, the absence of the usual inundations in the Kalantar and the total failure of rains from September onwards, caused extreme dryness of the soil precisely at a time when moisture was most needed for the grain to form in the ears. Hence the crop, which had initially seemed promising, came to no more than 1/8 of the average, i.e. 2 annas (12.5%) and even 1 anna or 6.25% in the worst affected regions. In fact, the district average of aman rice in 1896-97 was no more than 2 3/4 annas, being 2 annas in the Sadar, 4 annas in Kushtia, 1 anna in Meherpur and 4 annas in Ranaghat. (35) The aus, most important in the rest of the famine tract, yielded no more than 37.5%, or 6 annas of the average, due to failure of the rains in August 1896.

Carru - over stocks were low in the Kalantar, due to recurring floods in the recent past. The average outturn of the aman in the district for the preceding 9 years was less than 8 annas, i.e. nearly 3 annas lower than in any other district in Bengal. In 1894 and 1895 the yield was 12 1/2 and 7 annas, respectively. The aus crop, too, had been indifferent for the last decade, being 10 annas for the preceding 9 years, and 9 annas only in 1895.

Parts of the district, especially the Kalantar, suffered from problems typical of the moribund delta. The productive power of the soil, which


35. LRP Aug. 1898 Pt. II, p 466, para 45 C

260
could grow little else but aman rice in the bils and aus in the surrounding ‘char’ lands, declined further as it was no longer enriched by fresh silt deposits. Neither jute, which was a lucrative crop in the eastern half of the district, nor sugarcane, were grown in the affected tract to any appreciable extent. Date trees were scarce too, not to mention their regular plantations as in Ranaghat and Chuadanga east. Moreover, the soil in the Kalantar and Bonaj failed to nurture indigenous fruit trees like the mango and jack, which usually supplemented the diet of the poorer classes in years of scarcity and famine.

Not only the quality, but also the size of the crop was affected, as the floods became erratic with the clogging up of the water channels and offshoots carrying freshets from the main rivers into the bils. Formerly the floods rose gradually, in pace with the growth of the rice saplings. However, with the choking of the access lines, the floods were shut out till they rose to a dangerous height, and burst through the channels with great force and suddenness, submerging the bils and sweeping away the crops, as in Karimpur and Chapra in 1896. The affected tract was very vulnerable to inundations from the Ganges and more particularly, the Bhagirathi. Sometimes, again, the floods were abnormally low as in the Kalantar in 1896. This, together with scanty rainfall, caused the crops to wither and die.

In January 1897 the stock of foodgrains available in the district was calculated to be 29,85,425 maunds by the Collector, the reserve being estimated at 21,00,000 maunds and the aman and rabi outturn at 2,28,125 and 6,57,800 maunds, respectively. The total population of the district being 1,644,108 and assuming the average rate of consumption to be 1/2 seer of rice per person per day, the total requirement for the next 9 months was calculated to be 55,48,770 maunds. The deficit, according to this estimate, was 25,63,345 maunds exclusive of seeds. (36) Considering that the rabi estimate included other food crops besides rice, the total deficiency in the rice stock was likely to be even greater.

Imports could not be relied upon to supply the deficiency in foodgrains, as the silting up of the principal water routes in the famine tract was a ‘powerful factor’ in the decline of trade in this region. (37) During the nine months till September 1897, the exports and imports for Nadia were recorded to be 8,07,970 and 7,21,095 maunds, respectively. Though the imports of rice and paddy far outweighed the quantities exported, there was a great increase in the outflow of wheat, gram, pulses, sugar and linseed. In the Kalantar, however, the only imports consisted of supplies brought in from Rarh in Burdwan by cartmen and petty traders.

36. Ibid.
37. Ibid., p. 462, para 24.
In Murshidabad, the affected area in 1896 lay mainly in the east and south-east of the district unlike in 1874, when the aman producing Rarh tract to the west of the Bhagirathi felt the severest strain. The Rarh fared better this year, though it produced only a 9 anna crop due to scanty rains and was saved from greater loss by the showers in mid-September, while the average outturn of winter rice in the district was no more than 7 annas of the normal. The famine hit tract of the Bagri, covering the part of the Sadar subdivision lying to the east of the Bhagirathi, grew mainly aus rice followed by the cold weather crops. On the extreme south-east lay the Kalantar, contiguous with the Nadia Kalantar to its south, and growing solely aman rice dependent on the floods.

In 1895, the scanty rain and lowness of the rivers led to a partial failure of the autumn and winter crops. In 1896, again, the early cessation of the rains caused the aus to be only 8 annas of the average, while in parts of the famine zone it was a total failure. Low floods, on the other hand, completely damaged the aman crop in the Kalantar, though it was marginally better than in the adjacent tract in Nadia. To worsen the situation, the mango crop this year yielded no more than 2 annas of the average outturn, while the failure of the March bund led to the closure of many of the silk filatures in the affected area.

The export and import of foodgrains in the district over a period of 8 months in 1897 amounted to 3,72,535 and 63,643 maunds, respectively. The reserves were thus very low, due to successive crop failures in 1895 and 1896, as well as a large trade deficit in terms of imports.

(iii) Jessore:

Jessore, too, felt the impact of the famine, though not officially included in the list of the affected districts in 1896-97. Distress first appeared in January 1897 over a tract of about 106 sq. miles on the north east of the district in Magura subdivision. By July 1897 it had spread to the whole of Magura; a quarter of Bagerpara and four-fifths of the Kesabpur thana in the Sadar; Narail and Lohagara in Narail; and Jhenida and Sailkopa in the Jhenida subdivision. The problem was most acute in the north-east of Magura and western Kesabpur in the Sadar, growing aman rice and consisting largely of 'char' lands.

Inspite of scanty floods, the winter rice fared better in the lowlying 'bilis' rather than in the higher 'char' or riverside lands depending solely on the rains. The western part of Kesabpur thana bordered on the river Kabadak, and consisted mostly of high lands. In Magura too the winter rice practically failed except in limited 'bil' areas or swamps.
Even in the bils, the higher lands on the edges yielded a poor crop, as seen in parts of Mamudpur. Narail suffered less, as it differed from Magura on two vital points, viz. the greater proportion of 'bil' land; and the relative importance of boro rice, which was often followed by a continuous harvest of summer 'til', aus paddy and jute.

The intensity of the distress thus varied according to the crop proportions in various parts of the district. Aman or winter rice was the main staple, followed in order of precedence by aus rice, jute, indigo, oilseeds, pulses, millets and tobacco. Though the extraction of date-juice featured prominently in the economy of the Sadar, Bongaon and Jhenida subdivisions, it made hardly any contribution in Magura and Narail.

The level of reserves went down in Jessore, due to erratic rains and an extensive crop failure in the preceding season, followed by the deficiency in 1896. This is seen clearly in the summary of the main crop outturns in percentages for the Sadar and Magura subdivisions, which felt the severest strain:

<table>
<thead>
<tr>
<th>TABLE X</th>
</tr>
</thead>
<tbody>
<tr>
<td>SADR SUBDIVISION</td>
</tr>
<tr>
<td>1894-95</td>
</tr>
<tr>
<td>All crops</td>
</tr>
<tr>
<td>Aus paddy</td>
</tr>
<tr>
<td>Aman paddy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAGURA SUBDIVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1894-95</td>
</tr>
<tr>
<td>All crops</td>
</tr>
<tr>
<td>Aus paddy</td>
</tr>
<tr>
<td>Aman paddy</td>
</tr>
</tbody>
</table>

[Source: LRP Aug., 1898, pt. II, p. 537. FRFRO, Jessore, p. 3 para 3 J.]

Thus, the aus and aman cultivation, on which the people depended chiefly for food, suffered a major setback in 1895, followed by a more complete failure in 1896. Even jute, which had replaced paddy to a limited extent, yielded no more than an 8 anna crop. Though the produce of the date-palm provided some relief in the Sadar, it was of little consequence in Magura, as noted earlier.

In January 1897, the official estimate of rice stocks in the district was about 33,00,000 maunds, which was deficient by about 16,00,000 maunds for local consumption during the seven months from February to

263
August. The balance of trade in foodgrains during this period favoured the district by 200,000 maunds, i.e. only by 1/8 of the total deficit. (38)

(iv) Khulna

In Khulna, aman rice was the main staple, aus and boro paddy as well as jute being grown only on the highlands. Other crops such as kalai, khesari and mustard were grown in negligible quantities. Hence, a good harvest of winter rice was crucial to the economy of the district.

A distinctive feature of this region was a network of tidal rivers and channels intersecting it in every direction. The river water remained salty from December to June, when the volume of fresh rain water and drainage drove it beyond the limits of cultivation. Hence, the two essential preconditions for a satisfactory yield of the aman rice were - dams and embankments strong enough to shut out the salt water tides, and sufficient rainfall to sweeten the river water for irrigation purposes. Khulna was usually immune from famine, weather conditions generally favouring a prolific yield of aman rice.

Yet, an unusual combination of adverse circumstances in 1896 led to partial but acute distress. As noted earlier, the salt spring tides were in recent years penetrating further inland. The rivers also remained salty for a greater part of the year, as the silting up of the Bhairab and Bhagirathi cut off freshets to the tidal creeks and reduced the volume of the sweet water floods. Due to lack of proper maintenance the dams gave way before the tidal incursions, allowing the salt water to percolate into the land, to its lasting detriment. Moreover, the storm wave of 1st October, 1895, covered the fields with a saline efflorescence, which could not be washed out by the scanty rainfall of 1896. Nor were the rains sufficient to sweeten the river water. The result was an immediate shrinkage in the sown area, and the complete failure of the only local staple, viz. winter rice, over a tract of approximately 474 sq. miles, falling almost entirely in the Satkhira subdivision and in Paikgacha thana in the Sadar.

In 1893 and 1894 aman rice yielded a 14 and 16 anna outturn, respectively. Though the storm waves and erratic rains led to a 10 anna harvest in 1895, carry-over stocks from the two preceding seasons helped to tide over the crisis. However, the strain felt due to this deficient outturn early in 1896 deepened into distress as the monsoon showers failed, retarding transplantation and drying up the area sown. The rivers were brackish throughout, except for a short spell in August - September. In consequence, the winter rice came up to barely 2 annas of the average in the great rice - producing tract of Satkhira, verging

on the Sunderbans. The portion of Paikgacha thana to the left of the Kabadak was similarly affected, distress being severest in north and south Assasuni, and north Kaliganj.

The crop failure in 1896-97, combined with the shortfall in the previous season, led to an acute, localised deficit in stocks—6,00,000 maunds according to the Subdivisional Officer of Satkhira. Though precise figures for the trade in foodgrains are not available, especially for the considerable boat traffic of the district, the trade lines with Calcutta were open throughout.

<p>| TABLE XI |</p>
<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>TOTAL STOCKS</th>
<th>TOTAL OUTTURN</th>
<th>GRAND TOTAL</th>
<th>PROBABLY REQUIRED</th>
<th>PERCENTAGE OF SURPLUS OR DEFICIT (marked S or D accordingly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nadia</td>
<td>21,00,000</td>
<td>8,85,425</td>
<td>29,85,425</td>
<td>55,48,770</td>
<td>46.19 D</td>
</tr>
<tr>
<td>Murshidabad</td>
<td>24,05,810</td>
<td>9,76,427</td>
<td>33,82,237</td>
<td>40,32,000</td>
<td>16.11 D</td>
</tr>
<tr>
<td>Khulna</td>
<td>6,28,034</td>
<td>57,75,000</td>
<td>64,03,034</td>
<td>45,00,000</td>
<td>42.28 S</td>
</tr>
<tr>
<td>Jessore</td>
<td>17,79,013</td>
<td>15,41,475</td>
<td>33,20,488</td>
<td>49,58,172</td>
<td>33.02 D</td>
</tr>
</tbody>
</table>


The net balance of imports or exports in each of these districts were as follows:

<table>
<thead>
<tr>
<th>DISTRICTS</th>
<th>EXCESS OF IMPORTS OR EXPORTS (MARKED I OR E ACCORDINGLY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nadia</td>
<td>86,865 E</td>
</tr>
<tr>
<td>Murshidabad</td>
<td>2,49,281 E</td>
</tr>
<tr>
<td>Jessore</td>
<td>1,95,261 I</td>
</tr>
<tr>
<td>Khulna</td>
<td>15,275 E</td>
</tr>
</tbody>
</table>

[Source: Ibid., para 7]

Though the statistics were far from precise, especially in relation to the road and river traffic in foodgrains, the trend clearly shows a persistent outflow from the three districts officially included in the famine zone. While the problem touches on a wide range of issues relating to local trade and exchange failure which have been dealt with elsewhere, its relevance here lies in the fact that the shortfall in agricultural production was rarely, if ever, made good by the importation of staples.

**Burdwan Division**

Moving westward to the Burdwan Division, the focus is inevitably on the drought-prone districts of Birbhum and Bankura, the latter falling within the famine zone this year. It was essentially a rice famine, winter rice occupying 87.46% of the cultivated area in Bankura.

**Bankura**

The outturn of aman rice was only 4 annas in the western part of Gangajalghati thana and its outposts (Saltora and Mejhia), north Sonamukhi, Raipur and Simlapal. It came to 5 annas in the Chatna outpost and 6 annas in Taldangra and Barjora. The great rice-producing thanas of Indas and Kotalpur in the Vishnupur subdivision had an aman crop of 10 annas each. The bhadoi gave a full crop of 16 annas, while the rabi yielded a 7 anna crop. The bhadoi and rabi, however, had little importance in Bankura, the former occupying only 8.4% and the latter 7.2% of the total area under foodcrops.

The extensive crop failure in 1896 was preceded by a year of shortfall, the district averages for the aman, bhadoi and rabi harvests in 1895 – 96 being 9 1/2, 10 and 12 1/2 annas, respectively.

266
Grain continued to flow out of the district, despite low reserves due to successive crop failures. In fact, there was an abnormally heavy drain to other districts as early as in September 1896, even from famine tracts like Sonamukhi and Gangajalghati. As a result prices soared high in Bankura where they were normally low, the region being cut off from the railway routes by the river Damodar. Before the end of October 1896 common rice was selling for 10/11 seers to the rupee in Bankura as against 16 1/4 seers in September 1896, 17 3/4 seers in October 1895, and 18 3/4 seers in 1894. Imports were nominal, police returns from January to September 1897 showing only 35,454 maunds of pulse imported as against 4,20,554 maunds of rice exports.

Orissa Division: Puri:

Further to the south-west, in the Orissa Division, the worst affected area lay in Puri. It consisted of a tract in the Sadar subdivision running along the northern, eastern and southern shores of the Chilka, and certain scattered areas in different parts of the Khurda subdivision. They included the parganas of Malud, Farikud and Bajrakote on the southern or sea - face of the lake, which along with Manikpatna and Satpara were generally known as the "salt parganas." The soil was mostly sandy, the principal crop of rice being dependent solely on the rains. Communication was difficult even in normal times, while during the rains the tracts became veritable islands. The Chilka region was notorious for salt floods and crop failure, while the affected area in the Khurda subdivision was most liable to drought.

Of the different varieties of rice, viz. dalua (summer rice), biali (autumn rice) and saradh (winter rice), the third predominated throughout the district. Besides the main rice crop (bara) reaped in December-January, saradh rice had two earlier varieties, viz. laghu and majhila, maturing in September-October and November-December respectively, and requiring correspondingly less water. The heavier saradh rice was grown chiefly in the southern portion of the Sadar subdivision which, being on a lower level, was more subject to inundations, while the higher lands in the north were suited to the cultivation of the biali and laghu. The most striking preponderance of the saradh was in parganas Chabiskud and Serai on the east and north-east of the lake, which were subjected to severe river floods and also deluged by the brackish waters of the Chilka when the southerly winds blew. Hence, it was dependent essentially on the rains. In Khurda subdivision the saradh, occupying 85% of the cultivated area, extended even to the uplands more suitable for the biali rice, which was less dependent on the later rains. (40)

The rains were very heavy till mid-August in 1896, after which they stopped suddenly and were most inadequate. Serious floods were thus followed by drought, while an insect blight spread over large parts of


267
the district. These combined causes reduced the all-important saradh crop to less than half the average. The percentage of shortfall in agricultural production may be noted in comparison with those of the two preceding years:

| TABLE XIII |
|------------------|------------------|------------------|
| **CROP**        | **1894 - 95**    | **1895 - 96**    | **1896 - 97**    |
| Biali           | 75.00            | 81.25            | 50.00            |
| Saradh          | 87.50            | 93.75            | 43.75            |
| Pulses          | 81.25            | 75.00            | 50.00            |
| Cotton          | 75.00            | 81.25            | 68.75            |
| Oilseeds        | 68.75            | 81.25            | 43.75            |
| Laghu           | 87.50            | 93.75            | 50.00            |
| Sugarcane       | 75.00            | 81.25            | 50.00            |
| Mandia          | 62.50            | 75.00            | 31.25            |
| Dalua           | 81.25            | 75.00            | 75.00            |

[Source: DCAR Orissa 1896 - 97 Sec. III, para 43.]

While the outturns of bhadoi and winter rice were estimated at 50% for the Sadar subdivision, the saradh crop in Khurda was about 62.5%. These estimates, however, were for the subdivisions as a whole, distress being mostly localised due to the inaccessibility of the tracts affected. (41) Owing to the splendid outturn of 1895 - 96, stocks from the previous season helped the people to a considerable extent in the early phases of the crisis. However, acute distress resulted in the lean period, the crime returns showing that a large section of the poor in the district went without a full meal a day, for several months in 1897. (42)

According to the calculations made by the Commissioner on 5th January 1897, the probable stock of rice from the past year could not be more than 12 lakhs of maunds, allowing for the consumption rate of 2/3 of a seer per head per day. This would leave a real deficit of 3 lakh maunds, to be made good by importation.

Statistics of foodgrain traffic by sea and rail, imperfect as they are, indicate a 2/3 reduction in the total volume of exports on comparison with 1895 - 96, i.e. approximately 1,08,000 maunds as against 3,62,647 maunds the previous year. Imports were minimal. In the Chilka tract there was no local trade, people growing paddy for their own use.

---

41. DCAR Orissa. 1896 - 97, Sec. III, para 43.

268
consumption. A few wealthy raiyats in Chabiskud sold their stocks to the Ganjam and Bombay merchants, attracted by the high prices offered. Deducting the amounts imported from the total volume of grain trade, the net export of foodgrains from the Division was 40,86,096 maunds in 1896 - 97, as against 38,87,769 maunds in 1895 - 96. (43)

III

Main trends:

The district - to - district survey, as above, brings to the surface certain salient points on the implications of the agricultural crisis this year.

It is evident that the famine of 1896 - 97 in Bengal was essentially a rice - famine caused by the failure of the great winter rice crop. The tracts which suffered most were inevitably the marginal lands and other mono-crop regions with an exclusive concentration of rice, such as Siwan - Gopalganj in Saran, Ramnagar - Araraj - Madhuban in Champaran, Muzaffarpur - Sitamarhi in Muzaffarpur, Madhubani in Darbhanga, and parts of the Bhabhua sub-division in Shahabad. A similar plight is seen in Supaul - Madhipura in Bhagalpur, the uplands of Jantara and Godda in the Santhal Parganas, Barabhum in Manbhum, and Kota - Pundag in Palamau. In north - west Nadia, approximately 14/16ths of the entire crop area was occupied by winter rice in the Kalantar; the large, low - lying tracts in Gangni, Chapra, Nowpara, Karimgur, etc. were similar in nature to the Kalantar, and were almost exclusively sown with aman. The deficit amounted to 86% of the average in the Kalantar, while Karimgur suffered crop failures five times in the last 20 years. Magura in Jessore was in a worse plight than Narail for unlike in Magura, which depended almost solely on the aman, boro rice predominated over a large part of Narail. Satkhira in western Khulna which exclusively grew winter rice (98% of the total crop area), had hardly a 2 anna outturn of the crop and suffered from crop failure for 3 of the last 5 years. The Chilka tract, exclusively dependent on the saradh rice, lost 15 annas of the crop in the winter of 1896.

As the failure of the winter rice became apparent, the anxiety of the peasant to produce food crops of any kind led in many cases to a temporary change in the traditional crop pattern. For example in the affected areas in Murshidabad the land sown with boro dhan and aus in 1897 was considerably in excess of the average. (44) In Satkira, jute, along with the aus crop which normally had little importance here, were grown in larger quantities than usual, thus providing the raiyat with some credit. (45) In Rajshahi the boro was sown over an unusually large area, i.e. 77,000 acres as against 15,000 acres

43. DCAR Orissa, 1896 - 97.
44. Fam. Sel, X, p 315.
45. Ibid., X, p. 335; XI, p 330.

269
normally, as both the aus and aman had been below average in 1896. (46) In the exclusively rice-growing tract in Sitamarhi, in Muzaffarpur, yams were cultivated to a much greater extent than usual, and efforts were made to encourage rabi cultivation by means of wells. (47) In Cuttack, a larger area than usual was sown with the 'biali' crop in 1897. (48)

The problem was less acute in regions with a more equitable distribution of crops. The most typical example is provided by Baran, where all the crops were of more or less equal value - whatever happened, 1/3 of its foodcrop was nearly always safe. The pattern of distribution of the different crops over the year was also an important factor to be considered in lean seasons. For instance, if the late monsoon showers and the winter rains failed in Shahabad as in 1896, they would affect both the Kharif crop and the rabi sowings. The district, in such years, had no relief till the reaping of the next year's kharif, the bhadoi being of little consequence here. In Champaran, again, the rabi was of relatively little value, and this consideration lent additional gravity to the situation: with the failure of the monsoon rains two crops of the year had passed, one with 1/2 and the other with only a 1/4 of the average outturn. There being no substantial crop to fall back on in spring, the district would thus have to survive on its reserves till the next autumn harvest in August. The bhadoi crop being late by 2 to 3 weeks in the affected tract of Ramnagar in Champaran, the crisis there continued well into September.

In the districts of Chotanagpur, the rabi was of little consequence except in Palamau, the mahua reaped in March - April providing 2 to 3 months' food supply, supplemented by the mango crop in May - June. The failure of both in 1897 left the people to fend for themselves till the reaping of the next bhadoi harvest. Again, the bhadoi in Palamau and Lohardaga would provide enough food for 4 months, till the aghani harvest in December; in Manbhum, however, the bhadoi rice was a very late crop reaped in November, so that the conditions adverse to winter rice would similarly affect the bhadoi as well. The crisis was thus prolonged for a year in Manbhum, little dependence being placed on the rabi.

The outturn sometimes varied widely in adjacent tracts approximating closely to each other, as in the Nadia and Murshidabad Kalantars, or in the Satkhira Sunderbans and Khulna Sadar. The crops were worse in Nadia than in the Murshidabad Kalantar due mainly to unequal distribution of the flood waters of the Bhagirathi. Again, the rice crop was a total failure due to salt water infiltration in the Satkhira Sunderbans, while the Sadar and Basirhat reaped moderately good crops owing to greater protection from saline floods, and irrigation facilities from fresh water rivers like the Sipsa and Bhadra.

46. Ibid., III, p 260.
47. Ibid., II, P 4
48. Ibid., X, p 611.
Some parts of the famine zone, particularly the extensive tribal tracts in Chotanagpur and Bhagalpur, had a distinct advantage in that they had an abundance of jungle products to supplement the meagre foodgrain supply. In Palamau, Lohardaga and Manbhum 'mahua' was being very generally eaten in place of rice in 1896-97, as shown by the fact that it sold at 20 to 40 seers a rupee instead of about 2 maunds as in ordinary years. (49) This year, however, the mahua and mango crops failed largely, the sal fruit and edible roots also being scarce. It was this combination of untoward circumstances which had created a degree of scarcity not known before. (50)

The existence of cash crops sometimes brought partial relief to the affected areas. Regions which lacked cash crops, such as north-west Nadia, were definitely in a worse position than areas where the raiyats could tide over the crisis as with jute and sugarcane in other parts of Nadia, and with jute and jaggery in Jessore - Khulna.

In north-west Nadia jute was grown in very small areas only for local consumption. Sugarcane had no importance, except in parts of Daulatpur and Meherpur. Mulberry cultivation centred round an European silk-reeling factory at Plasssey and was confined to a few villages in north Kaliganj. Besides, the Aghani and March bunds were very poor, and the Maghi bund was not taken in Nadia.

Though parts of Jessore were single-crop regions approximating closely to the Nadia Kalantar, it had one distinct advantage over north-west Nadia in that the affected areas here had several important cash crops like jute, date-palms and tobacco, which compensated the raiyats to some extent for the failure of the rice crop.

In Magura jute fetched a good price this year, while the existence of date trees on high-lying villages where the crop failure was most extensive, kept the raiyats going till the end of the tapping season in mid-March. (51) But for the jute and date trees, the greater part of Bongaon too would have been in much the same position as north-west Nadia. Here jute took up 1/9 of the estimated area under aus rice, and yielded a good crop fetching high prices in 1896. The yield of juice and jaggery, however, was somewhat deficient this year, and prices were lower by 8 to 12 annas per maund. (52) Yet Sarsa thana, containing the

49. Ibid., VII, p 427.
50. Ibid., XI, p 393.
52. Ibid., V, p 226. Note by B.C. Basu, on the Outturn of Crops and the Present Condition of the People in the Bongaon subdivision of Jessore, para 8.
most important date growing area in the subdivision, was better off than other parts. Generally speaking, the rest of the subdivision was more vulnerable to famines than the east, due mainly to the comparative sparseness of date trees there. Tobacco, which gave a good crop this year, was as important in mitigating the distress in a portion of south-west Bongaon, as date trees were in the east. In Satkhira, Khulna, crops other than aman rice did not occupy more than 2% of the total cultivated area. Date trees, however, grew in small numbers and provided an alternative source of income for the raiyats, though perhaps not to the extent as in Jessore.

In Bihar too, the well-irrigated cash crop lands, though very limited in size, compensated the raiyats to some extent. The rahar, sugarcane and opium were expected to give a reasonable yield this year, while the indigo payments brought some cash relief to the districts of north Bihar.

Where the cash crops also failed, the situation was disastrous. In Bongaon, for instance, the rice crop hardly came up to 2 annas, while the failure of the later rabi crops such as gram and linseed which, all taken together, formed the most important item of income to the raiyats, greatly depressed them. The affected areas in Murshidabad too grew some cash crops like jute, indigo, mango and mulberry. But in 1896 - 97 the mango crop was below 2 annas of the average, while the complete failure of the March bund caused the vast majority of the silk filatures to be closed till July, greatly increasing unemployment.

Contrary to the general view that the cash crop sector was fast swallowing up the area under foodgrains and hence contributing to the famine situation, the effects of 1896 - 97 tend to show that the cash crops still covered only a very small part of the total cultivated area, and that they alleviated the distress during famines, by providing an alternative source of income to the raiyats.

Thus, the failure of the winter rice crop was evidently a common factor throughout the famine zone in 1896 - 97; in certain areas the crisis was aggravated by the failure of the bhadoi or rabi crops as in parts of north Bihar, of jungle products like mahua as in Chotanagpur, and of cash crops as in Nadia, Murshidabad and Jessore. The estimated output of winter rice was 46.87% in the whole of Bengal in 1896-97, that of bhadoi 65.62%, and of rabi 64.56% of an average crop. The crop failure

53. Ibid, VI, p 230 - 231. From E.V. Levinge Esq., Collector of Murshidabad, to the Commissioner of the Presidency Division. No. 2204 G., dated Berhampore, 17th March 1897, para 2, (a) and (b).
amounted to much more than 50% in the affected areas of Puri, Bankura, and the Presidency, Chotanagpur and Patna Divisions, except the Patna and Gaya districts. The yield of winter rice in the famine zone varied between 56% as in Puri, and 6.25% in the worst-hit tracts of Nadia. On the whole, though the statistics relating to the crop outturn, reserves and traffic in foodgrains for the famine-hit districts of Bengal in 1896 - 97 are admittedly vague and imprecise, they are sufficient to warrant the conclusion that the decline in food availability was both real and determinate.