



Government of Bengal
Department of Agriculture and Industries

**Report of the
Bengal Paddy and Rice
Enquiry Committee
Volume I**

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1940

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FROM M. CARBERY, Esq., D.S.O., M.C., M.A., B.Sc., I.A.S., *Director of Agriculture, Bengal, and Chairman, Bengal Paddy and Rice Enquiry Committee,*

TO THE SECRETARY TO THE GOVERNMENT OF BENGAL, AGRICULTURE AND INDUSTRIES DEPARTMENT.

Calcutta, the 20th September 1939.

SIR,

I have the honour to forward herewith the final report of the Committee appointed by Government to enquire into the prices of paddy and rice and to make recommendations to improve these. The report has been signed by a majority of the members and a few notes of dissent have been added also.

The Committee at their last meeting wished to place on record their high appreciation of the excellent draft report framed by the Secretary Mr. D. L. Mazumdar, I.C.S. They particularly appreciated the large amount of information to be found in the Tables, and while expressing their grateful thanks for the trouble he had taken, desired that his services should be brought to the notice of Government in due course. They also wished to thank the rest of the staff for the hard work which they had done on the Committee's behalf.

I have the honour to be,

SIR,

Your most obedient servant,

M. CARBERY,

*Chairman, Bengal Paddy and Rice
Enquiry Committee.*

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Note.

At the last meeting of the Bengal Paddy and Rice Enquiry Committee it was decided that the Secretary should append a note to this report indicating the circumstances in which it was written. The first draft of the report was prepared long before the outbreak of the war in Europe. It was written at a time, when even the distant signs of the present struggle had not yet appeared on the horizon. Consequently, the first draft was drawn up on facts and assumptions some of which may have already lost a good deal of their validity. At their final meeting, the Committee discussed this matter but concluded that it was neither possible nor desirable that the report should take account of the abnormal situation created by the war or that their recommendations should relate to any but normal peace-time problems. The report should be read in the light of this note.

D. L. MAZUMDAR.

CALCUTTA:

The 20th September, 1939.

CHAPTER I.

INTRODUCTORY.

1. By their Resolution No. 5012-Agri., dated the 27th July 1938, Government of Bengal, in the Department of Agriculture, appointed a Committee to enquire into the problem of paddy and rice, consisting of the following members:—

- (1) Director of Agriculture, Bengal, *Chairman*.
- (2) Mr. Khorshed Alam Chaudhury, M.L.C.
- (3) Mr. Humayun Reza Chowdhury, M.L.C.
- (4) Mr. Ahmed Hossain, M.L.A.
- (5) Khan Sahib Maulvi Syed Mohammad Afzal, M.L.A.
- (6) Maulvi Md. Abdur Rasheed, M.L.A.
- (7) Mr. Abul Hossain Ahmed, M.L.A.
- (8) Mr. Abdul Jabbar, M.L.A.
- (9) Mr. Jasimuddin Ahmed, M.L.A.
- (10) Khan Bahadur Abidur Reza Chowdhury, M.L.A.
- (11) Khan Bahadur Dr. Syed Md. Siddique, M.L.A.
- (12) Mr. Amrita Lal Mondal, M.L.A.
- (13) Mr. Lakshmi Narayan Biswas, M.L.A.
- (14) Mr. Birendra Kishore Roy Chowdhury, M.L.A.
- (15) Mr. Iswar Chandra Mal, M.L.A.
- (16) Mr. Kamal Krishna Roy, M.L.A.
- (17) Mr. Ashutosh Mullick, M.L.A.
- (18) Mr. J. W. R. Stevens, M.L.A.
- (19) Mr. George Morgan, C.I.E., M.L.A.
- (20) Senior Marketing Officer, Bengal, *Secretary*.

By a subsequent notification No. 5674-Agri., dated the 22nd August 1938, Mr. D. L. Mazumdar, I.C.S., who had been already appointed Secretary of the Jute Enquiry Committee, was appointed Secretary of this Committee as well in place of the Senior Marketing Officer, who ceased to be a member of the Committee. Later on, the personnel of the Committee was increased by the addition of some more members by several notifications on subsequent dates as follows:—

- (21) Maulvi Dewan Mustufa Ali, M.L.A., by notification No. 6772-Agri., dated the 12th October 1938.
- (22) Maulvi Ahmed Ali Mridha, M.L.A., by notification No. 10309-Agri., dated the 6th December 1938.
- (23) Maulvi Asimuddin Ahmed, M.L.A., by notification No. 10439-Agri., dated the 16th December 1938.
- (24) Maulvi Abdul Wahed, M.L.A., by notification No. 10439-Agri., dated the 16th December 1938.

The present numerical strength of the Committee is thus twenty-four.

2. The terms of reference of the Committee were as follows:—

“To investigate the problem of improving the price of paddy and rice as affecting the Province and to make recommendations in the matter.”

3. Although the Committee was constituted at the end of July 1938, no work could be taken in hand till the first week of September 1938. The members were far too pre-occupied with their legislative activities throughout the best part of August. Besides, the present Secretary was not formally appointed to his office till the end of August, while the Chairman did not arrive in Calcutta from his headquarters at Dacca till the close of this month. In the first week of September, the Secretary drafted a comprehensive questionnaire in consultation with the Chairman, and circulated copies of it among the members. The draft questionnaire was taken up for consideration at a meeting of the Committee held on the 20th September 1938, and finally approved in its present form on the same date. At another meeting held on the following day, the future programme of work of the Committee was drawn up. It was decided that copies of the questionnaire should be widely circulated in the mufassal districts, and that a Bengali questionnaire for the use of the witnesses, who were unable to follow its English version, should be prepared by the Secretary. This was done in due course, and several hundreds of the Bengali questionnaire were circulated in the mufassil. The Committee further decided to break up into two Sub-Committees and to tour the important paddy districts of the Province, with effect from November 1938.

4. For various reasons, the tours did not commence till the very end of November. They were concluded by the 1st week of March 1939. The number of places visited by the Sub-Committee and the sittings held by them at these mufassil centres are given in the following table:—

North and West Bengal Sub-Committee.			East Bengal Sub-Committee.		
Names of places.		No. of sittings.	Names of places.		No. of sittings.
Bankura	1	1	Barisal	1	1
Bogra	1	1	Comilla	1	1
Burdwan	1	1	Dacca	2	2
Dinajpur	1	1	Kishoreganj	1	1
Hilli	1	1	Mymensingh	2	2
Jessore	1	1	Sirajganj	1	1
Kolaghat	1	1			
Krishnagar	1	1			
Malda	2	2			
Midnapore	1	1			
Rangpur	1	1			
Suri (Birbhum)	1	1			
Total	12	13	6	8	

5. No meetings of the Committee could be held in February, March, April, May, June and July, as the sessions of the Legislature were on throughout this period. Accordingly the term of the Committee was extended up to the 30th September 1939. It met on 17th, 18th, 19th and 21st August 1939, for the examination of Calcutta witnesses, and again from 11th September to 12th September 1939, to discuss the evidence recorded by it and its two Sub-Committees, and to formulate its recommendations. It would thus appear that although the term of the Committee extended from the 29th July 1938 to the 30th September 1939, its actual work, including the tours and the sittings of the two Sub-Committees covered 53 working days.

6. Perhaps it would be convenient if we indicate at this stage the scope and nature of the arguments in the following chapters. As paddy is no monopoly of our Province, we have considered it desirable to study the conditions of its production and supply against the background of the international position in this respect. Accordingly, in Chapter II, we have endeavoured to assess the position of India as a whole as a rice-producing country, and have then tried to ascertain the relative importance of Bengal in the "paddy map" of India. In Chapter III, we have examined the facts relating to the trade in paddy from the same standpoint, including the domestic trade from district to district. Against the background of these two preliminary chapters, we have tried in Chapter IV of our report to formulate an adequate and comprehensive price-policy for paddy and rice. Having examined the salient features of a theoretically sound price-policy, we have tried to discover the causes of the present depression in paddy prices. In Chapter V, we have examined the factors bearing on the supply of and demand for paddy and rice, and have endeavoured to ascertain their influence on the existing course of prices. In Chapter VI, we have examined the other imperfections of the market, which apart from the statistical position, seem to us to depress the price paid to the growers of paddy. In both these chapters we have indicated the lines of action along which, we believe, an improvement in prices can be looked for. In Chapter VII, we have discussed the possibilities of direct manipulative action in raising the price of paddy and rice. In Chapter VIII, we have considered several other improvements which are likely, in our view, to increase the margin of profit to the paddy-growers, although they may not affect prices directly. We have refrained from elaborating this aspect of our recommendations, because they do not appear to us to be strictly germane to our limited terms of reference. In Chapter IX, we have examined the present state of the statistics of production of paddy and rice, and of the trade in these commodities, and have endeavoured to show the importance of reliable statistics in the formulation and enforcement of an adequate price-policy. Chapter X, contains only a brief summary of our findings and recommendations.

CHAPTER II.

A DESCRIPTIVE ANALYSIS—PRODUCTION OF PADDY AND RICE.

7. We propose to begin our report by a brief survey of the present position in regard to the cultivation of paddy in the world, and, particularly, in the other Provinces of India. Such an approach is necessary not merely to set the problem that faces us, in its proper perspective, but also because the changes in the conditions of supply and demand in the principal paddy-growing areas of the world must, sooner or later, inevitably react on the pricing processes in the domestic market. Unlike jute, paddy is no monopoly of this Province, and therefore possesses no privileged position. In so far as paddy enters into the channels of inter-Provincial or international trade, it can do so only in competition with the other alternative sources of supply. It will, therefore, be desirable to preface our investigation with a preliminary survey of the productive capacities of the other paddy-growing areas in India and abroad.

8. As every student of economic geography knows, paddy is grown, on a large scale, in almost all the important tropical countries of the world. The following statement will show the acreage under paddy since 1930-31:—

(Million acres.)

	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38 (Provincial).
India ..	85.55	87.11	85.70	85.83	85.28	86.25	87.27	74.83
Burma ..								
Empire area ..	88.26	89.93	88.61	88.74	88.10	89.11	90.12	90.21
Foreign area ..	55.82	53.93	56.04	56.24	56.03	57.45	56.99	56.90
World area (excluding China, etc.).	144.08	143.86	144.65	144.98	144.13	146.56	147.11	147.44
China ..	..	42.45	42.82	45.93	45.46	45.96	44.16	..

9. It will appear from this table that while the area under paddy in the foreign countries slightly increased since 1931, the acreage in India and Burma underwent a slight but steady diminution from this year up to 1934-35. From this year onwards, however, the trend was reversed, and a noticeable increase was registered in the following years. But this increase in acreage did not lead to any increase in the total volume of production. 1935-36 was the year of a particularly short crop, the yield being the lowest on record during the last ten years. 1936-37 however saw a record yield of 34.32 million tons, but

the yield relapsed into the average figure of 32 millions in the following year. The foreign countries, meanwhile maintained a slow but continuous increase in yield as the following table will show:—

Production of rice in the principal producing countries (million tons, cleaned rice).

	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38 (Provincial).
India ..	33.24	34.09	32.17	31.90	31.25	29.16	34.32	27.59
Burma ..								4.55
Empire production	34.05	34.95	33.05	32.81	32.14	30.09	35.20	33.02
Japan ..	8.56	7.07	7.73	9.07	6.64	7.36	8.85	8.71
Indo-China ..	3.92	3.68	3.80	3.82	3.47	4.10	4.11	3.85
Siam ..	3.17	2.67	3.36	3.29	3.02	3.10	2.13	3.11
Foreign production	27.43	24.86	26.89	28.31	25.27	27.19	28.10	29.68
World production (excluding China, etc.).	61.48	59.81	59.94	61.12	57.41	57.28	63.30	62.70
China ..	..	28.27	32.43	31.68	25.68	31.52	32.63	..

10. The main conclusions which emerge from the study of the above statistics of production are as follows:—

- (i) Both the acreage under paddy and its yield have increased, in the paddy-growing countries of the world as a whole, during the last ten years. The rate of increase is, however, extremely small.
- (ii) India and Burma together have shared in this increase.
- (iii) Burma and India alone account for about half the total world acreage under paddy, and about one-third of the total world yield of the crop.
- (iv) The total yield of India and Burma together approximate to that of China. Since the separation of the statistical accounts between the two former countries, China has become the largest paddy-growing country in the world.
- (v) Although the production of paddy has slightly increased in the world as a whole, the increase is disproportionately small in comparison with the increase in rice-eating population during the last ten years. The following table will show the

relative changes in the output of different types of agricultural products* :—

[Base 1925-29 = 100.]

	1933.	1934.	1935.	1936.	1937.
General Index ..	101	103	105	110	116
Agricultural products ..	104	104	104	107	111
Non-agricultural products ..	86	98	107	121	136
Food stuffs ..	105	105	105	107	109
Raw materials ..	90	97	106	118	138

The world statistical position as regards paddy (rice) therefore appears to be particularly strong at present.

11. We shall now pass on to the statistics of production in the different provinces of India and in Burma, so that we may be in a position to appraise the place which Bengal occupies among the other rice-producing areas nearer home.

12. The following table will show the total area under paddy and its yield in British India and Burma and the percentage which the paddy acreage constitutes of the total net cropped area in these two provinces :—

Year.	Total net cropped area in India and Burma (million acres).	Area under rice (million acres).	Yield (million tons).	Percentage of column 3 to column 2.
1	2	3	4	5
1931-32	228·84	81·29	31·65	35·5
1932-33	228·07	79·97	29·96	35·0
1933-34	232·25	80·42	29·69	34·6
1934-35	226·98	79·52	29·02	35·0
1935-36	227·87	79·04	27·00	35·1
1936-37	231·93	79·90	31·76	34·4

Roughly, a little over one-third of the total net cropped area in British India and Burma is under paddy. Excluding Burma figures, which

*Review of the Trade of India (1937-38).

are in the neighbourhood of 12 million acres and which weigh the percentage unduly in favour of paddy, the total paddy area in British India would be almost equal to one-third of the total net cropped area. The yield figures for India proper, i.e., excluding Burma, are as follows* :—

Year.				Tons (millions).	Index (Base 1928-29 =100).
1928-29	..	..	..	27.25	100
1929-30	..	..	..	26.14	96
1930-31	..	..	..	27.05	99
1931-32	..	..	..	28.79	106
1932-33	..	..	..	26.20	96
1933-34	..	..	..	23.73	94
1934-35	..	..	..	25.71	94
1935-36	..	..	..	23.21	85
1936-37	..	..	..	27.83	102
1937-38	..	..	..	26.60	98

This table reinforces the conclusion which we reached tentatively in paragraph 10, viz., that the production of paddy in India as a whole like the production in the world has not kept pace with the growth of population.

13. We shall now proceed to examine the shares of the principal paddy-growing provinces in the total acreage under paddy in India as a whole. The following tables will show the percentages which areas under paddy in the different provinces constitute of the total acreage under this crop in British India:—

*Review of the Trade of India (1937-38), page 23.

Percentage of total area sown to rice in respect of British India.

(In million acres.)

Year.	Madras.			United Provinces.			Central Provinces.			Bombay.			Bengal.		
	Total area sown to rice in British India.	Total area sown to rice in Madras.	Percent-age.	Total area sown to rice in British India.	Total area sown to rice in United Provinces.	Percent-age.	Total area sown to rice in British India.	Total area sown to rice in Central Provinces.	Percent-age.	Total area sown to rice in British India.	Total area sown to rice in Bombay.	Percent-age.	Total area sown to rice in British India.	Total area sown to rice in Bengal.	Percent-age.
1931-32	81.29	11.54	14.2	81.29	6.7	8.2	81.29	5.53	6.8	81.29	3.16	3.8	81.29	22.13	27.2
1932-33	79.97	11.53	14.4	79.97	6.26	7.8	79.97	5.6	7.0	79.97	3.14	3.9	79.97	21.77	27.2
1933-34	80.42	11.70	14.5	80.42	6.10	7.5	80.42	5.64	7.1	80.42	3.14	3.9	80.42	21.67	26.9
1934-35	79.52	11.1	13.9	79.52	6.56	8.2	79.52	5.63	7.0	79.52	3.18	3.9	79.52	20.74	26.8
1935-36	79.04	9.8	12.4	79.04	6.63	8.4	79.04	5.59	7.0	79.04	1.97	2.5	79.04	21.09	26.5
1936-37	79.90	9.9	12.5	79.90	6.64	8.3	79.90	5.68	7.1	79.90	1.83	2.3	79.90	21.99	27.5

These figures bring out the preponderance of Bengal as a paddy-growing province of British India. The following further statements, showing the percentages which the areas under paddy constitute of the total net cropped areas, in the principal paddy-growing provinces of India, show the relative importance of paddy cultivation in the agricultural economy of Bengal:—

Madras.

Year.		Total net cropped area (million acres).	Area under rice (million acres).	Percent- age of column 3 to column 2.
1		2	3	4
1931-32	..	33.5	11.54	34.4
1932-33	..	34.19	11.53	33.8
1933-34	..	33.88	11.70	34.5
1934-35	..	32.80	11.03	33.7
1935-36	..	30.97	9.78	31.6
1936-37	..	31.70	9.89	32.0
1937-38	..	32.03	10.14	31.6

Bombay.

Year.		Total net cropped area (million acres).	Area under rice (million acres).	Percent- age of column 3 to column 2.
1		2	3	4
1931-32	..	32.24	3.16	9.8
1932-33	..	33.06	3.14	9.5
1933-34	..	33.25	3.14	9.4
1934-35	..	32.80	3.18	9.7
1935-36	..	28.54	1.97	6.9
1936-37	..	28.15	1.83	6.5
1937-38	..	28.71	1.86	6.5

N.B.—The figures from 1935-36 to 1937-38 in the case of Bombay exclude those of Sind.

Central Provinces.

Year.		Total net cropped area (million acres).	Total area under rice (million acres).	Percent- age of column 3 to column 2.
1		2	3	4
1931-32	..	25.26	5.52	21.1
1932-33	..	24.56	5.60	22.8
1933-34	..	24.99	5.63	22.5
1934-35	..	24.67	5.63	22.8
1935-36	..	24.30	5.58	23.0
1936-37	..	24.59	5.68	23.1
1937-38	..	24.43	5.70	23.3

United Provinces.

Year.		Total net cropped area (million acres).	Total area under rice (million acres).	Percent- age of column 3 to column 2.
1		2	3	4
1931-32	..	35.75	6.68	18.6
1932-33	..	35.68	6.26	17.5
1933-34	..	36.01	6.10	16.9
1934-35	..	35.67	6.56	18.3
1935-36	..	35.90	6.62	18.4
1936-37	..	36.16	6.64	18.3
1937-38	..	35.54	7.00	19.7

Burma.

Year.		Total net cropped area (million acres).	Total area under rice (million acres).	Percent- age of column 3 to column 2.
1		2	3	4
1931-32	..	17.47	12.54	71.8
1932-33	..	18.00	12.73	70.7
1933-34	..	18.24	12.92	71.3
1934-35	..	18.16	12.69	69.6
1935-36	..	18.16	12.50	68.8
1936-37	..	18.16	12.63	69.5
1937-38	..	17.67	12.48	70.6

N. B.—The figures for 1937-38 exclude those of Putao, Chinhill and Shan States.

Bengal.

Year.		Total net cropped area (i.e., the total cropped area minus areas cropped more than once). (Acres.)	Areas under paddy. (Acres.)	Percentage of area under paddy to total net cropped area. (Acres.)
1931-32	..	23,567,900	22,128,800	93.8
1932-33	..	23,349,200	21,771,400	93.2
1933-34	..	24,002,200	21,672,500	90.2
1934-35	..	23,357,000	20,739,700	88.8
1935-36	..	23,569,000	21,092,000	89.4
1936-37	..	24,466,300	21,992,500	89.8
1937-38	..	24,728,100	22,200,500	89.9

The following statement showing the yield figures will further illustrate the preponderant position of Bengal among the paddy-growing provinces of British India:—

Year.			Yield of rice in Bengal (000 tons).	Yield of rice in British India (000 tons).
1929-30	..	..	8,202	26,140
1930-31	..	..	9,206	27,050
1931-32	..	..	9,493	28,790
1932-33	..	..	9,364	26,200
1933-34	..	..	8,680	23,730
1934-35	..	..	8,273	25,710
1935-36	..	..	7,208	23,210
1936-37	..	..	10,668	27,830

14. The following broad conclusions emerge from a perusal of the above tables:—

- (1) Of the total acreage under paddy of approximately 80 millions of acres, about 12 millions belong to Burma. So, the total area under paddy in India proper is in the neighbourhood of 68 millions.
- (2) Bengal heads the list of paddy-growing provinces in respect of acreage and yield. The acreage approximates to 30 per cent. of the total area under paddy in India proper, and the yield to nearly 37 per cent.
- (3) Madras is the next biggest producer of paddy in India proper—but her acreage forms only 14 per cent. of the total paddy area in India. The other provinces in order of importance are Central Provinces, United Provinces, Assam, Orissa, Bihar and Bombay.
- (4) Among the neighbours of Bengal, Burma is by far the most important paddy-growing area—over 70 per cent. of her net cropped area being under paddy.
- (5) The importance of paddy cultivation in the agricultural economy of Bengal will be statistically demonstrated by the facts disclosed by the percentage figures in column 4 of each of the above tables. While the proportion of the paddy area to the total net cropped area approximate to only about 33 per cent. in the next biggest rice-producing province of British India, and to only about 70 per cent. in Burma, the “rice granary” of the world, the corresponding ratio in Bengal is only a little less than over 90 per cent.

15. We shall now refer to one or two other aspects of rice cultivation in Bengal. Although paddy is by far the most important food crop grown in Bengal and accounts for the bulk of agricultural production in this province, its economic predominance in its social life has been masked by the peculiar position of jute as the cash crop of Bengal. The reasons for the preponderant influence which jute

exerts on the economic life of rural Bengal are well-known and need not be recounted here. But it will be interesting to append to this discussion a comparable statement showing the acreage under jute:—

Year.		Total net cropped area (million acres).	Area under jute (million acres).	Percentage of area under jute to total net cropped area.
1		2	3	4
1931-32	..	23.56	1.59	6.7
1932-33	..	23.34	1.60	6.9
1933-34	..	24.00	2.14	8.9
1934-35	..	23.35	2.16	9.2
1935-36	..	23.56	1.89	8.0
1936-37	..	24.46	2.22	9.07
1937-38	..	24.73	2.16	8.7

It will be seen from the above table, how trivial is the acreage under jute compared with the area under paddy. The fact that paddy, in spite of its large and extensive acreage, exerts no similar influence to jute on the agricultural life of the province points to some fundamental differences in the *role* that it plays in the economy of the province. To these we shall now turn in the next paragraph.

16. From our point of view, the most important fact about paddy is that it is primarily a consumption crop in Bengal. This is not to say that it is neither bought nor sold as a cash crop. We are aware of the important part it plays as a cash crop in a few districts of North and Central Bengal, and in almost all the districts of Western Bengal, where paddy is the only important crop that the agriculturists are in the habit of growing. Unlike jute, however, the purchases and sales of paddy form a very small percentage of the harvest of the average cultivator. The saleable surplus of the average cultivator is almost negligible, so that the net addition of cash that it brings to his coffers is disproportionately small in comparison with the cash value of his total produce. Consequently, the dealings in the marketable surplus of paddy exert hardly as much influence on the monetary transactions of the cultivator as those in jute. Secondly, the exchanges in the marketable surplus of paddy takes place mostly within the province, so that, generally speaking, they register mere transfers of purchasing power from one part of Bengal to another. This is typified by the fact that trade in paddy is overwhelmingly inter-district, whereas that in jute is almost wholly international. The predominant influence of jute arises from the fact that its sales do not merely effect an internal transfer of purchasing power but also augment the total volume of purchasing power available to the cultivators of Bengal. As we shall have occasion to examine the trade in paddy and rice in greater detail in a subsequent paragraph, no further comments on this aspect of the question are necessary at this stage. It may have been inferred from what we have already observed that the paddy cultivation in this province belongs to an order of agricultural economy which is still predominantly of the subsistence variety and that the difference between paddy and jute arises, fundamentally, from this fact.

17. From the above outstanding fact, one would infer that paddy cultivation, unlike that of jute, would not remain concentrated in a relatively few districts of Bengal, but would extend all over it. The relevant figures support this inference. The following table* will show the proportion of the acreage under paddy to the total net cropped area in a few representative districts:—

Name of district.					Percentage of area under rice to total net cropped area.
Central Bengal—					
Nadia	..	..	..	..	92.4
Murshidabad	..	..	..	..	82.3
Jessore	..	..	..	..	85.7
West Bengal—					
Birbhum	..	..	..	..	97.3
Bankura	..	..	..	..	94.4
Midnapore	..	..	..	..	94.8
Hooghly	..	..	..	..	95.1
North Bengal—					
Dinajpur	..	..	..	..	80.5
Rungpur	..	..	..	..	60.9
Bogra	..	..	..	..	96.3
Rajshahi	..	..	..	..	87.3
East Bengal—					
Dacca	..	..	..	..	74.6
Faridpur	..	..	..	..	84.5
Tippera	..	..	..	..	97.1
Chittagong	..	..	..	..	97.1

From the perusal of the figures of all the districts, it appears that Darjeeling, Rangpur and Hill Chittagong are the only districts in the province, where the acreage under paddy constitutes less than 70 per cent. of the total net cropped area.

18. As we have already indicated, most of the paddy that is grown in the province is consumed internally. The great bulk of it is husked into rice in the villages by means of *dhenkis* (husking machines). The great majority of the rural population feed on *dhenki-husked rice*. But in urban areas, industrial belts, and in the plantations and coalfields it is milled rice that is generally consumed. Rice-milling industry is scattered all over the province, and the number of rice mills is by no means small. The majority of the mills are, however, concentrated in those districts, which normally possess a large exportable

*Compiled from the Season and Crop Report of the Presidency of Bengal (1936-37).

surplus of paddy. An enquiry into this subject by the Senior Marketing Officer, Government of Bengal, a few years ago disclosed that the mills were located as follows:—

District.					No. of "Big" Rice mills (in 1934-35).
24-Parganas	..	..	..	..	142
Howrah	..	..	..	..	12
Murshidabad	..	..	..	..	1
Burdwan	..	..	..	..	56
Birbhum	..	..	..	..	53
Bankura	..	..	..	..	16
Midnapore	..	..	..	..	42
Hooghly	..	..	..	..	32
Mymensingh	..	..	..	..	1
Bakarganj	..	..	..	..	4
Rajshahi	..	..	..	..	2
Dinajpur	..	..	..	..	30
Malda	..	..	..	..	2
Jalpaiguri	..	..	..	..	1
Darjeeling	..	..	..	..	5
Bogra	..	..	..	..	2
Rungpur	..	..	..	..	2
Total				..	402

These figures take no account of numerous "smaller" mills, which are distributed all over the province, and conform to the definition of "factories" under the Indian Factories Act. It will be seen from the above list that 24-Parganas, Howrah, the Western Bengal districts of Birbhum, Bankura, Burdwan, Midnapore and Hooghly, and the great paddy-growing district of North Bengal, namely, Dinajpur account for nearly 90 per cent. of the bigger mills in Bengal. It will be interesting to remember this distribution of the milling industry when we come to examine the problems of prices. The markets served by these four principal centres of the milling industry are by no means clearly demarcated.* Nevertheless, it is their geographical position which primarily sets the direction of their trade, although other factors, like railway freights, are becoming more and more important during the period of low prices.

*Vide Appendix 12 of "The Report on the Marketing of Rice in Bengal" by the Senior Marketing Officer, Bengal.

CHAPTER III.

A DESCRIPTIVE ANALYSIS—THE TRADE IN PADDY AND RICE.

19. In this chapter we propose to examine the trade in paddy and rice, both external and internal. As in the previous chapter, it would be convenient to examine the trade position of India as a whole before we proceed to consider the position of Bengal.

20. Prior to her separation from Burma, India figured as one of the largest exporters of rice in the world's market—the huge exports from Burma being reckoned as part of India's exports. This position has since been reversed. India *proper* is now revealed, as she always has been, as a large importing country. The following table will show the imports during the last few years:—

Imports of rice into the principal importing countries*.

(Thousand tons.)

Names of countries.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
Japan	1,635	1,916	1,725	1,859	1,712
China	1,248	719	1,070	305	340
France	560	633	417	813	704
United Kingdom ..	105	128	108	111	116
Ceylon	447	485	549	528	519
†India	1,877	2,594	1,391	1,419	1,198

21. It would appear from the above table that prior to 1935-36, India *proper* was the largest importer of rice in the world, and since this year she has become the second largest importer. Burma accounted for the bulk of India's imports, as the following figures will show:—

Year.	Imports of rice from Burma.	Percentage of imports to total production in India.
	Tons.	
1933-34	1,628,000	6·7
1934-35	1,978,000	7·65
1935-36	1,573,000	6·77
1936-37	1,534,000	5·5
1937-38	1,267,000	4·76

The percentages in column 3 of the above table constitute a measure of India's dependence on Burma for her food-supply.

*Compiled from "Grain Crops"—a Summary of Production and Trade published by the Imperial Economic Committee (1938-39).

†The figures for India have been collected from the Review of Trade of India (1937-38), *vide* page 129. The figures of the Burmese imports given in paragraph 21 are also from the same source, *vide* page 23. The slight discrepancy between the two sets of figures from 1935-36 onwards seems to be one of those "freaks" of official statistics with which readers of official publications are more or less familiar. Our Secretary has tried in vain to reconcile these discrepancies.

22. In the Export trade, India's position has undergone a corresponding change with the separation of Burma. From being one of the largest exporters of paddy and rice, she has now sunk to a comparatively minor position in the export list.

Exports of rice from the principal exporting countries.

(Thousand tons.)

	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.
Burma	3,066	3,422	3,079	2,877	2,885
*India	235	241	231	220	274
Indo-China	1,162	1,355	1,511	1,542	1,337
Siam	1,501	1,816	1,361	1,390	..
Korea	1,016	1,262	1,147	1,138	1,005
Formosa	492	658	556	673	681

23. The destination of Indian exports can be seen from the following table:—

Direction of Export Trade†.

(Thousand tons.)

	1935-36.	1936-37.	1937-38.
United Kingdom	5	8	6
Rest of Europe	4	10	6
Ceylon	72	84	91
Rest of Asia	59	69	62
South Africa	19	23	23
East Africa	8	6	6
Other countries	22	35	33
Total	189	235	227

The total volume of exports thus constituted, on an average, barely one per cent. of the total production in British India. The statistics of

*The figures for India include land-frontier exports, and have been compiled from "Grain Crops," *cit.* They compare as follows with the following table given in the Review of Trade for India (1937-38), which presumably takes account of only sea-borne trade:—

	Tons.
1933-34	216,000
1934-35	204,000
1935-36	189,000
1936-37	235,000
1937-38	227,000

†Vide Review of the Trade of India for 1937-38, page 130.

imports and exports exemplify once more the comparative unimportance of our foreign trade in paddy and rice.

24. We shall now proceed to examine the trade position of Bengal. But before we do so, a caveat is necessary. In the official trade returns, from which the statistics of imports and exports have been collected, the countries of final consumption, in the case of imports, and countries of origin, in the case of exports are not shown. So, the imports received into a province do not necessarily indicate that they are all meant for consumption within it; similarly the exports sent out from a province do not necessarily imply that they have all originated there. A large volume of *entrepot* trade is carried on in all maritime countries. Bengal is no exception to this rule, although the nature of the trade in paddy and rice in Bengal greatly limits the scope of such trade. It will be important to bear this warning in mind, when we proceed to consider the economic implications of these trade statistics.

There is another point in regard to these trade statistics about which we desire to put the average reader of our report on guard. In the following paragraphs, figures for imports and exports of paddy and rice, purporting to be correct to the nearest ton, have been compiled from various published and unpublished official returns. It will, however, be noticed that the tables contain no reference to the large volume of trade by road and country-boats that must be going on between Bengal and her sister provinces every year. The omission is due simply to the fact that there is no agency for the collection of statistics relating to these particular forms of trade. To this extent, the statistics of imports and exports are necessarily vitiated. Nevertheless we hope that the figures that we have assembled from various sources will give a substantially accurate quantitative impression of the volume and direction of our "foreign" trade in paddy and rice.

25. The following tables will show the imports of rice and paddy into Bengal not only from Burma and other foreign countries, including those across the land-frontier of India, but also from the other provinces of India:—

Imports of Rice into Bengal.

(Tons.)

Year.	Foreign countries (sea-borne).	Burma (coast-wise).	Orissa (coast-wise).	Other Indian coastal provinces (coast-wise).	Other Indian* inland provinces by rail or river.	Across the frontier (over-land).	Total.
1931-32	..	311,202	4,009	4	Not known.	Not known.	..
1932-33	16	127,502	4,288	93	Ditto	Ditto	..
1933-34	731	472,030	2,732	67	43,784	164	519,508
1934-35	10,084	840,756	1,469	27	49,768	248	902,352
1935-36	195	257,017	1,756	2	75,090	197	334,257
1936-37	23	410,724	1,891	7 cwt.	81,229	54	493,921
1937-38	38	145,185	2,200	7	65,521	23	212,974

*Owing to the discontinuance of the rail and river-borne trade statistics from 1922-23 to 1932-33, the relevant figures prior to 1933-34 are not available.

Imports of Paddy (rice in the husk) into Bengal. (Tons.)

Year.	Foreign countries (sea-borne).	Burma (coast-wise).	Orissa (coast-wise).	Other Indian coastal provinces (coast-wise).	Other Indian inland provinces by rail or river.	Across the frontier (over-land).	Total.
1931-32	..	42,683	3,937	..	Not known.	Not known.	..
1932-33	..	1,003	3,746	..	Ditto	Ditto	..
1933-34	..	25,246	4,420	..	14,271	257	44,194
1934-35	11,843	66,476	6,505	..	28,383	323	113,530
1935-36	10,019	40,521	29,318	..	67,769	343	147,970
1936-37	6,662	26,086	26,780	..	55,545	78	115,151
1937-38	..	4,386	14,229	..	29,009	3	47,627

It will be seen from the above tables that normally, apart from Burma, the imports of paddy and rice from other foreign countries are negligible. Between 1934-35 and 1936-37, it was largely on account of the natural calamities, such as the great earthquake in Bihar, and crop failures in Bengal in 1934-35 and 1935-36, that considerable volumes of imports of paddy and rice from foreign sources were received into the province. With the restoration of normal conditions, these foreign imports have disappeared. For the same reasons, imports of both paddy and rice from Burma increased during this period. These have since come down to their normal proportions. We may safely generalize that in normal years, the imports of rice come mostly from Burma and the inland provinces of British India, whereas the bulk of the imports of paddy comes from the inland provinces and Orissa. Among these inland provinces, the shares of Assam and Bihar are by far the largest. We may thus conclude that except for the rice imports from Burma, most of Bengal's import trade is with her neighbouring provinces, Assam, Bihar and Orissa.

26. We shall now turn to the exports of paddy and rice from Bengal.

Exports of Rice from Bengal. (Tons.)

Year.	Foreign countries (sea-borne).	Burma (coast-wise).	Madras (coast-wise).	Other Indian provinces (coast-wise).	Other* inland provinces (by rail or river).	Frontier trade (over-land).	Total.
1931-32	129,178	1,993	7,952	7,176	Not known.	Not known.	..
1932-33	120,195	2,685	43,079	8,129	Ditto	Ditto	..
1933-34	107,657	1,455	1,348	8,789	487,679	13,445	620,373
1934-35	94,151	1,194	3,074	8,194	488,958	12,713	608,292
1935-36	80,140	1,037	510	8,381	226,981	9,765	326,814
1936-37	110,140	997	838	8,719	327,524	8,391	456,609
1937-38	104,867	1,018	11,189	10,836	334,978	9,046	471,934

*Owing to the discontinuance of the rail and river-borne trade statistics from 1922-23 to 1932-33, the relevant figures prior to 1933-34 are not available.

Exports of rice in the husk (paddy).

(Tons.)

Year.	Foreign countries (sea-borne).	Burma (coast-wise).	Madras (coast-wise).	Other Indian provinces (coast-wise).	Other inland provinces (by rail or river).	Frontier trade (over-land).	Total.
1931-32	..	..	..	..	..	..	..
1932-33	..	348	9	..	..	..	..
1933-34	3	99	..	..	13,731	..	13,833
1934-35	197	1	..	..	8,534	..	8,732
1935-36	..	..	..	..	9,685	..	9,685
1936-37	68	100	120	..	12,780	..	13,068
1937-38	..	..	778	..	10,309	..	11,087

*Owing to the discontinuance of the rail and river-borne trade statistics from 1922-23 to 1932-33, the relevant figures prior to 1933-34 are not available.

It will appear from these tables that Bengal's exports of *paddy* are almost negligible. The few thousand tons that are exported to the "inland provinces", are mostly consumed by Bihar and United Provinces. The exports of rice are however on a substantial scale. The foreign demand during the last quinquennium averaged about 100,000 tons, and was slightly less than the average of the previous quinquennium. The decline was the result of severe competition from other exporting countries, like Burma and Indo-China. The major portion of the exports, was, however, sent to the inland provinces of India. Bihar and United Provinces received the largest share of these exports, while Assam occupied a distant third place. It may be interesting to note, parenthetically, that the exports of rice to Assam far exceed the imports of paddy from her into Bengal. The following typical figures for two years will show the direction of these rail and river-borne exports to our principal customers, viz., Bihar and United Provinces:—

Year.	Paddy.		Rice.	
	Bihar and Orissa.	United Provinces.	Bihar and Orissa.	United Provinces.
1933-34	7,819	5,530	204,510	228,995
1934-35	6,003	2,306	201,069	182,811

27. We shall now proceed to collate these "import" and "export" figures, so as to obtain a proper perspective of the "foreign trade" position of the province in regard to paddy and rice.

Trade Account with other Indian Provinces*.

(Tons.)

Year.	Imports.			Exports.		
	Rice.	Paddy (converted into equi- valent rice weights).	Total.	Rice.	Paddy. (converted into equi- valent rice weights).	Total.
1933-34 ..	46,583	11,682	58,265	497,816	8,582	506,398
1934-35 ..	51,264	21,805	73,069	500,226	5,334	505,560
1935-36 ..	76,848	60,054	137,902	235,872	6,053	241,925
1936-37 ..	83,120	51,453	134,573	337,081	8,063	345,144
1937-38 ..	67,728	27,024	94,752	357,003	6,929	363,932

*As complete figures for rail and river-borne trade with the other provinces are not available for 1931-32 and 1932-33, the statistics for these years are not considered.

It will appear from this table that throughout this period, the province had a surplus export balance in her trading account with the other provinces of India. As the following figures will show, the size of this balance has fallen in recent years. Nevertheless, it remains considerably large, and added to the net exports of paddy and rice to countries outside India, assumes substantial proportions:—

Export balance of the "foreign trade" in paddy and rice in Bengal.

(Tons.)

Year.	Export balance in the trading account with other Indian provinces.		Export balance in the trading account with foreign countries.		Total export balance.
	1		2		3
1933-34	448,133		106,928		555,061
1934-35	432,491		76,789		509,480
1935-36	105,023		73,683		178,706
1936-37	210,571		105,997		316,568
1937-38	269,183		104,829		374,012

N.B.—All paddy figures have been converted into their equivalent weights of rice.

If we deduct from the figures in column 3, the net imports of paddy and rice from Burma, we get figures for the net export balance of the province in her trading account with all other countries:—

(Tons.)

Year.	Total export balance.	Net imports from Burma.	Total net export balance.
1933-34	555,061	486,293	+68,768
1934-35	509,480	881,110	-371,630
1935-36	178,706	281,306	-102,600
1936-37	316,568	426,969	-110,401
1937-38	374,012	147,908	+226,104

N.B.—All paddy figures have been converted into their equivalent weights of rice.

28. From the above summary of trade returns, we arrive at the following general conclusions:—

- (i) The total exports of paddy and rice from Bengal to foreign countries as well as other Indian provinces during the last few years were as follows:—

	Tons.
1933-34	629,019
1934-35	613,750
1935-36	332,867
1936-37	464,777
1937-38	478,863

They constituted no more than 4·5 per cent. to 7·5 per cent. of her annual production.

- (ii) Her exports to countries outside India (excluding Burma) during this period amounted to as much as 35 per cent. to 50 per cent. of the total export trade in rice of India proper. She is, therefore, the largest exporter of these commodities among the provinces of India. The following table will show the percentage variations in successive years:—

Year.	Total exports of India (000 tons).	Exports from Bengal to foreign countries (000 tons).	Percentage of column 3 to column 2.
1	2	3	4
1933-34	235	108	45·95
1934-35	241	94	39
1935-36	231	80	34·6
1936-37	220	110	50
1937-38	274	105	38·3

(iii) Her imports of paddy and rice from Burma during this period amounted to varying proportions of her total annual production, as the following figures will show:—

Year.				Annual production of rice in Bengal. (Lakhs of tons.)	Imports of rice and paddy from Burma. (000 tons.)	Percentage of column 3 to column 2.
1				2	3	4
1933-34	..	..	..	86.80	487	5.6
1934-35	..	..	..	82.73	883	10.7
1935-36	..	..	..	72.08	283	3.9
1936-37	..	..	..	98.05	425	4.3
1937-38	..	..	..	90.34	148	1.6

(iv) The imports of rice into Bengal from Burma constituted varying percentages of the total imports of rice from Burma to India as a whole during this period. The following table will show the percentage variations in different years:—

Year.				Total imports of rice from Burma into India. (Lakhs of tons.)	Imports of rice from Burma into Bengal. (000 tons).	Percentage of column 3 to column 2.
1				2	3	4
1933-34	..	..	..	18.77	472	25.1
1934-35	..	..	..	25.94	841	32.4
1935-36	..	..	..	13.91	257	18.5
1936-37	..	..	..	14.19	411	29
1937-38	..	..	..	11.98	145	12

The above facts indicate the comparative unimportance of our foreign trade in paddy and rice. As we pointed out before, unlike jute, the part played by paddy and rice in the domestic trade of the province was far more important than its role in her foreign trade. To the general features of this domestic trade, we shall now turn in the following paragraph.

29. One serious handicap to a detailed discussion of the domestic trade in Bengal is the absence of statistics of movements of paddy and rice from one district to another. Our statistical deficiency in this respect is so complete that, in course of our tours in several districts,

we were unable to obtain any reliable information, either from district officials or from representative non-official sources, as to the primary fact whether these districts were on balance importing or exporting areas. In many cases the estimates we received from different sources were mutually contradictory. In a subsequent chapter we have considered the possibility of removing this gap in our statistical equipment. In the absence of more dependable statistics we have been forced to base our findings on such materials as we could gather on this subject, in course of our mofussil tours. We claim no statistical accuracy for the following classification, for it is based almost entirely on the individual estimates of different classes of people in the mufassal. Nevertheless we hope that it will broadly serve its purpose of indicating the principal directions in which our domestic trade in paddy and rice flows at present.

Surplus districts.	Self-supporting districts.	Deficit districts.
(A)	(B)	(C)
Chittagong.		Noakhali.
Bakarganj.		Tippera.
Dinajpur.		Faridpur.
Malda.		Dacca.
24 Parganas (excluding Calcutta).	Rungpore.	Mymensingh.
Birbhum.	Bogra.	Jalpaiguri.
Midnapore.	Murshidabad.	Pabna.
Burdwan.	Jessore.	Rajshahi.
	Bankura.	Nadia.
		Khulna.
		Howrah.
		Hooghly.

30. We do not think it is necessary for us to guard against the facile assumption that the actual movements of paddy and rice are all from the deficit to the surplus districts. A variety of circumstances, the chief of which are the costs and facilities of inter-district transport, account for a large amount of cross-movements, into the details of which we need not enter. In Appendix III, we have endeavoured to show the main currents and cross-currents of the domestic trade in paddy and rice, in a map of Bengal specially prepared for this purpose. At this stage, we merely desire to draw attention to the importance of these internal movements on the establishment of price-parities in the regionally distinct paddy and rice markets of the province.

CHAPTER IV.

THE FORMULATION OF A PRICE-POLICY.

31. The descriptive survey of the two preceding chapters was intended to be a prelude to the examination of price-policies, to which we now turn in this chapter. In course of our investigations into this problem, we have been impressed by the preliminary need for the definite formulation of an adequate price-policy for the subject matter of our enquiry—the principal food crop of this province. Different opinions were expressed on this subject by the representatives of the different interests we examined in the mufassal, but we were unable to discern in any of them a precise appreciation of the issues involved in the acceptance of different price-policies. Too often the opinion that we received in the mufassal was of the following amorphous kind—"The present price for paddy and rice is too low, but a higher price might be injurious to the poorer section of the cultivators, who do not grow sufficient food to last them throughout the year. The best thing to do would be to raise the price of jute; in that case the price of paddy would automatically rise." It is the object of this paragraph to examine the main strands of thought underlying the above passage, and to separate and clarify the issues involved in the adoption of alternative price-policies. But before we proceed to do so, it would be useful to examine the movements of prices during the last thirty years.

32. The following table shows the average annual price of common rice in Bengal per maund of 82·28 lbs.*

Year.	Price.	Year.	Price.
	Rs. a.		Rs. a.
1901	3 11	1921-22	6 0
1902	3 6	1922-23	5 8
1903	3 1	1923-34	5 8
1904	2 15	1924-25	6 7
1905	3 4	1925-26	7 0
1906	4 12	1926-27	7 3
1907	5 7	1927-28	7 8
1908	5 8	1928-29	6 10
1909	4 10	1929-30	6 0
1910	3 10	1930-31	6 0
1911	3 12	1931-32	4 1
1912	4 3	1932-33	3 5
1913	5 5	1933-34	2 10
1914	5 10	1934-35	3 0
1915	5 13	1935-36	3 4
1916	5 7	1936-37	3 8
1917	4 11	1937-38	3 10
1918	4 3		
1919	7 6		
1920	7 4		

33. It will appear from this table that broadly speaking, three distinct trends in the price movements are visible during this period.

*The figures from 1901 to 1920 have been collected from a detailed chart compiled by S. A. Latif in his *Economic Aspects of the Rice Export Trade of India*, page 45. The figures from 1921-22 to 1937-38 are the harvest prices of winter rice (cleaned) compiled from the *Statistical Abstracts for India*.

The first decade of the century registered a very slow but steady rise in the price—a rise which was maintained, at a fairly even pace, right up to the middle of the Great War. This is not to say that there were no ups and downs in individual years—the detailed price history of this period, however, shows that these mostly cancelled each other and only a slight upward trend was maintained. From this point price began to increase rapidly, reaching the high figure of Rs. 7-4 in 1920, the peak year of the post-war boom. The price-level fell slightly again after 1920, but the rapid upward trend was fully maintained right up to the beginning of the great depression. It will be interesting to note that the average price during this period was higher than the average of the first period by over 50 per cent. The third phase is covered by the post-depression years. The bottom of the depression appears to have been reached in 1932-33, when the average harvest price of winter rice (cleaned) fell to Rs. 2-12 per standard maund compared with the predepression figure of Rs. 6-10 in 1928-29. There was a steady recovery in prices from 1933-34 up to 1936-37. The onset of the trade recession about the middle of 1937 depressed prices again a little in 1937-38, but the close of the following year again saw an upward trend which has been well maintained up till now.

34. The following index numbers of wholesale prices will show the price changes since 1929-30 of rice compared with those of other agricultural commodities and of "all commodities."

(Base 1914=100)

Year.	Ballam rice No. 1.	Table rice.	Cereals.	Pulses.	Raw jute.	Raw cotton.	All com- modities.
1928	141	136	133	157	100	167	145
1929	114	125	125	152	95	146	141
1930	105	111	120	119	63	91	116
1931	71	92	76	89	49	83	96
1932	58	69	68	92	45	92	91
1933	57	74	66	84	41	80	87
1934	63	63	69	84	39	73	89
1935	62	77	75	85	50	78	91
1936	71	91	79	77	50	89	91
1937	67	71	77	89	56	89	92
1938	69	69	72	88	48	67	95

It will be seen from this table that throughout this period the price of *Ballam* No. 1, which may be taken to represent the commoner variety of rice, was consistently below the prices of other food-grains, and also of all other agricultural commodities except raw jute. By the end of 1938, the price of *Ballam* had fallen 26 points below the price-level of "all commodities", which was equivalent to a relative fall of nearly 16 per cent. As we shall endeavour to show presently, it is this disproportionate fall that constitutes the crux of problem of paddy and rice prices.

35. Into the causes of this fall in price, we need not enter at length in this context. They are more or less familiar to all students of current economic history, and no useful purpose will be served by our going over the same ground again. We would only point out that the disparity between the price-falls of rice and of "all commodities", to which we have already adverted, indicate the existence of some special factors, which have kept the prices lower than those of "all commodities". It is true that a characteristic feature of the last depression was that prices of agricultural staples lagged far behind those of fully or partly manufactured commodities. A part of this disparity between rice prices and the prices of "all commodities" may be due to this cause, but the rest is undoubtedly due to factors which specially affect the conditions of demand and supply of this food crop. This is conclusively proved by the relative disparity between the prices of rice and those of other food-grains and agricultural crops as shown in the table inserted in the previous paragraph. To a detailed discussion of these special factors, we shall proceed in the following chapter.

36. Having examined the price trends during the last few years, we now proceed to examine the price-policy that would be appropriate to a food-crop like rice. We need hardly stress the fact that, in this respect, rice stands on an entirely different footing from jute. In the latter case, the formulation of a price-policy does not present any conundrums: the difficulties arise only in the application of the policy. In the case of rice, however, we are far from sure as to our objectives. We do not know whether the aim of our policy should be to attain as high a price-level as can be economically reached. Nor can we assert with confidence that the policy that we choose should hold good in bad as well as good times, e.g., even if we decide upon a high price for rice as the right policy in normal time we cannot, with equal assurance, claim that it will be the right policy in times of scarcity or distress. These difficulties in the formulation of a price-policy for rice arise from the fact that, unlike jute, rice is both a cash and a consumption crop. It is the principal cash crop of the whole of Western Bengal, and of those areas of Northern, Central and Eastern Bengal which are predominantly paddy-growing. And, as is well known, it is the principal food of the vast majority of the population of Bengal. It is this dual character of this crop that is at the root of the difficulties in the formulation of an adequate and comprehensive price-policy for rice. The best method of approach seems to us to examine separately the effects of varying price-policies on the different interests involved, and then to select that policy, which offers the maximum of advantage to all these interests. For the reasons which we have already mentioned, it will be also necessary to distinguish between normal and abnormal conditions.

37. First, we shall examine the effects of a higher price for rice on the growers of the crop, using this phrase in its broadest possible connotation. The effects on two categories of growers, viz., (i) those that grow just enough for their annual consumption and do not sell or buy any paddy, and (ii) those that have a surplus of the crop over their annual consumption are absolutely unambiguous. In the former case, price is a matter of indifference; and in the latter case, the higher is the price the greater is the benefit accruing to the growers. At one

stage of our enquiry, we tried to estimate, quantitatively, the percentage which these two categories of growers constituted of the total number of paddy-growers in Bengal. This could be done only by an elaborate indirect method. Unfortunately, we discovered, much to our disappointment, that no comprehensive and reliable statistics of the distribution of cultivated land under paddy, similar to those relating to the holdings of landed property in some other European countries, existed in this Province*. Any dependable quantitative estimate was, therefore, summarily ruled out of consideration. Nevertheless, from the testimony of the large number of mufassal witnesses who appeared before us, as well as from the results of some special enquiries carried out into this subject in this province, we conclude that the percentage of paddy-growers belonging to these two categories is extremely small. The great majority of the paddy-growers have neither a saleable surplus nor sufficient food to last them throughout the year. It is this third class that forms the bulk of the agriculturists of this province.

38. (iii) The effects of higher prices on these classes of people are more difficult to trace. Although they do not grow sufficient food for their annual consumption, they are obliged to sell part of their produce from time to time, during the first few months after the harvest to meet their pressing monetary obligations. The rest of their produce they use for their own consumption and seed-requirements. The output of paddy by the growers of this category may, therefore, be divided for the purposes of our present argument into two moieties—(1) the portion that must be and is sold for cash, and (2) the portion that is consumed by the growers themselves. It is only on the former portion that the growers gain by a rise in price. In so far as the monetary obligations of the growers are of a definitely limited character, e.g., liquidation of cash obligations like rent, service of their debt, and cash payment for other necessities of life, a rise in the price of paddy will increase their consumable surplus. Whether this increased surplus is actually consumed or goes to reduce the volumes of purchases that the growers of this class must necessarily make towards the end of the crop-year, the rise in the price of paddy will benefit them to the extent of their saleable surplus. Against this advantage must however be set the higher price that they will be

*We are constrained to note that the data on this very important subject still remain pitifully inadequate. The study of this question of the distribution of landed property is bound to become increasingly important in the near future. In order that this study may be conducted in an atmosphere, vitiated by passion or prejudice, we consider that the subject should be carefully investigated on the basis of a sufficient number of random sample surveys, undertaken in regions of homogeneously dense population. Such figures as exist at present are illustrative rather than representative. For example from the Settlement Report of Pabna, we find that the percentage of the population belonging to 12 mouzas possessing lands of not more than 3 acres—which may be taken as the average *subsistence* holding in the alluvial and more fertile parts of Bengal—was as follows :—

	Per cent.
(i) Families holding land under one acre ..	39
(ii) Families holding land between one and two acres ..	19.8
(iii) Families holding land between 2 and 3 acres ..	12

But obviously this classification is not representative of the whole of the district—much less of the province as a whole.

called upon to pay for their purchases of paddy towards the end of the crop-year. Whether the gains on the saleable surplus will balance the losses on the purchases will depend upon the following factors:—

- (i) the total quantity of paddy produced by each individual grower,
- (ii) the volume of his monetary obligation, and
- (iii) the extent of the rise in price.

Broadly speaking, it might be stated that, if over the crop-year as a whole, the growers belonging to this category have to buy less than they have to sell they will profit by a rise in the price; otherwise they will lose.

39. From the evidence that we received in the mofussil it appeared that the great majority of the paddy-growers exhausted their supply of the food-crop by the end of *Baisakh* and had to depend on purchases or borrowings for the rest of the year. If this is so, a rise in the price of paddy, far from being a blessing, may well become a positive evil to them. This conclusion will, however, be substantially modified by the fact that cash purchases of paddy by the growers of this crop in order to meet the deficit of their annual requirements have become increasingly uncommon. Paddy loans rather than cash purchases are the method by which they adjust the gap between their actual consumption and their consumable surplus. Except in a few jute-growing areas, we were told that this was now the common practice in the country-side. It is a well-known feature of all loans in kind that their terms respond very little to changes in the price of the commodity in which loans are made or recovered. Consequently, the price of paddy does not directly influence the terms on which paddy loans are contracted. The evidence that we recorded in all parts of the province confirmed this finding. We are therefore inclined to think that the benefit which the paddy-growers may obtain on their sales of paddy, from a rise in its price, may not be substantially offset by their having to make purchases at this higher rate. We may conclude that in so far as the paddy-growers belonging to this category meet the deficit of their annual requirements by loans of paddy instead of cash purchases of the crop, an increase in its price will, on balance, be advantageous to them.

40. We shall now proceed to examine the effects of a rise in the price of paddy on the other interests concerned. These may be roughly grouped under the following heads:—

- (i) Landless labourers, other than *bargadars* or *adhiars*,
- (ii) other wage-earners in the villages,
- (iii) factory workers,
- (iv) artisans,
- (v) professional men, and
- (vi) earners of fixed income.

This grouping does not correspond to the categories mentioned in the statement of occupational distribution of population contained in the Census reports. Nevertheless, a cursory examination of the relevant

statements* in the Census Report for Bengal and Sikkim will show the quantitative importance of these classes of population. Roughly speaking, the population under these groups are covered by sub-clauses II to XII of the Census Report, and account for as much as 30 per cent. of the total population of the province. It has not been possible for us to ascertain the percentage of rice-eating population under the above heads, but we may proceed on the assumption that the percentage is the same in this group as in the total population of Bengal. The classes of people included in these groups are mostly buyers of rice, and are adversely affected by any rise in its price. In this respect their interests are in the opposite direction to those of the paddy-growers.

41. It was contended by some witnesses, who appeared before us that a rise in the price of rice need not adversely affect even these groups of people who had to buy their requirements of the cereal. In particular, it was argued that the rise in the price of paddy would lead to a rise in the wage rates of the first three groups of workers, and that the artisans would also put up the prices of their wares. It was admitted that the professional men might suffer in the short period; but, it was contended that in the long run, their earnings were also bound to increase. The general improvement in the economic position of agriculturists, which a rise in the price of paddy would induce, so the argument ran, could not but lead to an increased demand for professional services. Accordingly, it was contended that it was only the people, with fixed incomes, that would lose by a policy of higher prices for rice.

42. This argument sounds plausible but is not altogether valid. Apart from the people with fixed incomes—a large class consisting mostly of low-paid lower middle class people—no quick adjustment of earnings to the increased cost of living can be expected in the case of the people falling under the other groups. As is well-known, there is always a time-lag between higher prices, and consequent higher earnings. In the case of industrial workers, except where wages are regulated with reference to an approved cost-of-living index, this time-lag may be the source of much industrial bitterness and wrangling. And even if industrial wages were regulated by a cost-of-living index, there is no guarantee that the actual rise would be proportionate to the increase in rice prices. We point this out only to show that the process of adjustment would be far from smooth or automatic, as some of the champions of a higher price seemed to think, and in many cases would not be completed till a number of years had elapsed.

43. These considerations emphasise the need for caution and moderation. While we agree that a rise in the price of paddy will probably benefit the majority of the paddy-growers of this province, we must also register our warning against the dangers of a too rapid and excessive rise. Although the other interests are numerically in a minority, they form a large percentage of our total population and constitute the whole of the man-power behind the other forms of economic activity in our province. In the interest of the ordered development of all the various aspects of our economic life we must so adjust the price-policy in regard to our principal food-crop as to bring it into harmony with the diverse claims of our population. There is another

**Vide* Census Report for Bengal and Sikkim, Volume 5, Part I, Statement VIII—3 and Statement VIII—4, pages 261-63.

consideration which reinforces this plea for such an equitable price-policy. In an earlier paragraph, we indicated that, in the case of a food crop like rice, our price-policy should take due note of times of scarcity and distress. A policy designed to raise the price of rice to a very high level might succeed with jerks and jolts, in normal times, but was bound to collapse in a period of abnormal distress or scarcity. In Bengal, where our national economy seems to be perilously poised between the rival danger of floods and droughts, the importance of this argument cannot be overemphasised. Our price-policy should, therefore, be so designed as to ensure a reasonable return to the growers of paddy, without making the consequential adjustments with the interests of non-growers too difficult or complicated to effect, and should be so executed as to adapt it to the requirements of abnormal years. In practice, this policy would be substantially achieved if we can ensure an adequate supply of the food crop at a price slightly above the rate which now prevails. (At present the provincial average may be said to vary between Rs. 1-12 and Rs. 2 per *pucca* maund.) In our judgment, this price-level will be substantially reached if the price of rice can be raised to the price-parity of other agricultural commodities. In an earlier paragraph we endeavoured to show that the price index for rice was not only several points below the parity-index for "all commodities" whatever might be the base year we chose, but also considerably below the price-parities of other agricultural commodities, with the exception of raw jute.

44. We believe the formulation of a policy on the above lines will be a sufficient guide to the adoption of necessary measures to implement it. We do not therefore consider it necessary to indicate more precisely the level of prices which, in our opinion, it should be the objective of state policy to achieve. Besides there is a real risk that any figure that we might mention in this connection would not be representative of the province as a whole, and might err on the side of excess or defect. For, while we are agreed that a price slightly higher than the prevailing rate would be conducive to the interests of paddy-growers as a whole, and, therefore, of the majority of the population of this province, we are unable, in the present state of our knowledge, to estimate more accurately the price-level that would answer to the policy that we have advocated. The gap in our knowledge is due to the absence of reliable data as to the costs of cultivation of paddy. In course of our tours in the mofussil, we collected a lot of materials bearing on this subject. Witness after witness gave us their estimates of the cost of cultivation. We cite below some typical figures:—

District.	Average cost of cultivation.	Average yield per bigha.
Bogra	.. Re. 1 to Re. 1-4 per maund (60 tolas). (The cost was lower in the Eastern or <i>pali</i> area than in the Western or <i>khlar</i> area.)	4 maunds to 8 maunds.
Hilli	.. Rs. 6-8 per bigha	.. 4½ maunds.
Dinajpur	.. Rs. 7 to Rs. 8 per bigha	.. 6 maunds.
Rungpore	.. Rs. 9 per bigha	.. 6 maunds.
Barisal	.. Rs. 8-8 per bigha	.. { 5 maunds of aman. 3 maunds of aus.

District.	Average cost of cultivation.	Average yield per bigha.
Dacca	.. Rs. 8 per bigha	.. 6 to 6½ maunds.
Sirajganj	.. Rs. 8-8 per bigha	.. 5 to 6 maunds.
Mymensingh	.. Rs. 8 per bigha	.. { 3 to 4 maunds of aus. 6 to 7 maunds of aman.
Kishoreganj	.. Rs. 5 to Rs. 6 per bigha	.. { 4 maunds of aus. 8 maunds of aman.
Comilla	.. Rs. 8 to Rs. 9 per bigha	.. 5 to 7 maunds.
Jessore	.. Re. 1-8 per maund	.. 6 maunds.
Nadia	.. Rs. 9 to Rs. 10 per bigha	.. 5 to 6 maunds.
Bankura	.. Rs. 8 to Rs. 9 per bigha	.. 6 to 8 maunds.
Midnapore	.. Rs. 8 per bigha	.. 6 to 7 maunds.
Burdwan	.. Rs. 11 per bigha	.. 6 maunds.
Birbhum	.. Rs. 7 to Rs. 8 per bigha	.. 8 maunds.

We need hardly explain that these figures are based on estimates by different classes of people, including officials who appeared before us. We had no opportunity of testing the figures, and we claim no scientific validity for them whatsoever. We cite them merely to show how costs vary not only from district to district but also within a district itself. It will also be noticed that costs vary also with the nature of the paddy grown, and with the system of cropping practised in particular areas. Even when other things are equal, computational difficulties may well lead to *bona fide* differences in estimates of costs, unless one uniform basis of calculation is adopted. These difficulties will show why we have been unable to lay down a particular level of price as the normal, which it should be the objective of State policy to attain. Nevertheless, we desire to place on record the opinion on this subject of a large number of competent witnesses in the mofussil, who appeared before us. They stated that if the price of common paddy could be increased to about Rs. 2-8 per standard maund most of the ills from which the paddy-growers of Bengal suffer at present would disappear. For reasons already recorded, we are unable to prescribe any particular rate for the Province as a whole. But it is our hope that the measures which we have proposed in the following chapters would go far to secure a substantial rise in the price of paddy.

CHAPTER V.

FACTORS AFFECTING THE PRICE OF PADDY AND RICE.

(1)

45. Having laid down the objectives of our price-policy, we propose, in this chapter, to examine the principal factors which have kept the price of paddy and rice below the price-parities of "all commodities". For, it is round this deviation of paddy prices from the price-parities of "all commodities" that the problems of our present enquiry centre. In so far as paddy prices have merely followed the course of the general price-level, no special problems with regard to paddy and rice arise. It is only the disparity between the prices of paddy and those of "all commodities" that constitutes the special problem committed to us for investigation. The relative disproportionate fall in the price of rice can be due either (i) to a deterioration in the statistical position with regard to supply and demand, or (ii) to the special imperfections of the paddy market, which arise not only from frictional causes such as impede the operation of competitive processes, but also from the unequal bargaining strength of paddy-growers on the one hand, and the buyers of paddy on the other. In this chapter, we shall examine the statistical position with regard to demand and supply.

46. It follows from the general principles underlying the pricing processes in a competitive system, that the fall in the price of paddy could be due to one or other of the following reasons:—

- (i) a decrease in demand, domestic or foreign; in other words a decrease in domestic consumption or in exports;
- (ii) an increase in supply, domestic or foreign; in other words, an increase in domestic production or in imports.

47. As regards domestic consumption, the only formula that can be legitimately used to measure it is as follows:—

$$P + (I - E).$$

where P = the total volume of (domestic) Production.

I = the total volume of imports, i.e., from other provinces as well as foreign countries.

E = the total volume of exports, i.e., exports to other countries as well as to foreign countries.

According to this formula, the variations in the domestic consumption can thus be measured by changes in the volume of total production,

and the net difference (+ or -) between total imports and total exports, available for consumption within a particular year. In paragraph 13, we have recorded the annual production of rice in Bengal over the last decade. We regret, however, that the relevant trade statistics are not available in a complete form prior to 1933-34. We were informed by the Department of Commercial Intelligence and Statistics that rail—and river-borne trade statistics between 1920-21 and 1932-33 had been discontinued. So, it was not possible for us to estimate the consumption figures prior to 1933-34. (i) The net export figures since 1933-34 have been calculated in paragraph 27 of our report. Taking the production and net export figures together, we find that since 1933-34, the available statistics show a slight increase rather than a fall in the domestic consumption, except in the year 1935-36, which was a year of acute distress and large-scale failure of crops all over Central and Western Bengal. We, therefore, conclude that the total volume of domestic consumption has not fallen in recent years, and so cannot be cited as a factor that has contributed to the fall in the price of rice.

48. In this connection, we may conveniently dispose of a spurious form of argument bearing on this subject. It is sometimes contended that the demand for rice is very much in excess of the annual production of the crop, and warrants a much higher price than what prevails at present. The Bengal National Chamber of Commerce in a memorandum addressed to the Government of Bengal took up this line of argument, and after an elaborate calculation arrived at the conclusion that the total requirements of rice in Bengal were in the neighbourhood of 10·4 million tons, and was nearly 1·6 million tons in excess of the average annual production during the quinquennium 1932-33 to 1936-37. We have carefully gone through the calculations of the Bengal National Chamber, and the arguments based on them. Important as are the considerations urged by the Chamber, we are unable to see their relevance to the analysis of the present chapter. The calculations are based entirely on hypothetical consumption standards which may or may not prevail in real life. What we are concerned with, in this context, is not the food requirements of this Province, but the effective demand for the food crop by its rice-eating population. The former is a problem of nutrition, which raises far-reaching issues of national well-being; the latter is a severely limited problem of economics, in which we are interested at the moment. The trend of reasoning followed by the Bengal National Chamber of Commerce does not, therefore, assist us in arriving at a summary solution of our problem. We must continue to follow the lines of analysis already laid down by us.

49. Having examined the position in regard to domestic demand, we can now proceed to enquire whether there has been any changes in the volume of the external demand for rice. The external demand arises from (i) foreign exports, (ii) coastwise exports, and (iii) exports to other Provinces and areas within India. The following table will show the extent of the variations in exports of rice in successive years. The exports of paddy throughout this period were small and may be left out of consideration.

Exports of rice to foreign countries.

(Tons.)

Years.	Volume of exports.	Quinquennial annual average.	Percentage variations as compared with the previous quinquennial average.
1919-20	48,078	114,452	
1920-21	10,502		
1921-22	11,711		
1922-23	207,319		
1923-24	294,651		
1924-25	323,501	161,997	+ 42
1925-26	143,485		
1926-27	109,204		
1927-28	126,896		
1928-29	106,897		
1929-30	120,040	118,193	- 27
1930-31	118,886		
1931-32	123,185		
1932-33	120,195		
1933-34	107,657		
1934-35	94,151	95,014 (three-year average).	- 19
1935-36	80,140		
1936-37	110,752		

It will be seen from this table that from the middle of the twenties, the foreign exports have been steadily declining, reaching their lowest point in 1935-36. In a period of general depression, characterised by a precipitate fall in prices, the decline of foreign demand to the extent of 27 per cent. over the average annual figures of the pre-depression quinquennium was bound to act as a heavy drag on prices. In different circumstances, this decline might not have affected prices to the same extent. The price-history of the post-war quinquennium 1919-20 to 1923-24 illustrates this point. Although in the first three years of this quinquennium the foreign exports were very small—due largely to the after-war measures of restriction on foreign exports and on inter-provincial movements of food grains—the price of rice remained comparatively high on account of the very high world price of rice prevailing at that time. But the fall in foreign exports during the post-depression quinquennium was accompanied by a completely different set of circumstances. Its economic effect was not offset by any bullish factors; on the contrary, it aggravated the fall in rice-prices.

50. The history of coastwise exports confirms the above finding. Bengal's exports to Madras, her principal coastwise customer in India, in 1923-34 and 1924-25 amounted to 104,984 and 105,164 tons of rice and 22,130 and 5,825 tons of paddy respectively. This substantial volume of exports fell rapidly after 1925-26, and in the post-depression quinquennium averaged only 11,345 tons a year. The average of the last three years has fallen still further to 4,179 tons. Another measure of this fall in our coastwise exports is provided by the following figures of exports from Burma since 1929-30.

Year.	Volume of exports (tons).
1929-30	342,587
1930-31	507,649
1931-32	524,000
1932-33	472,000
1933-34	647,000
1934-35	749,000
1935-36	956,000

51. The statistics relating to rail and river-borne exports to other inland provinces of India are not available for comparison prior to 1933-34. We are, therefore, unable to ascertain whether the demand of these inland provinces for Bengal rice declined during the post-depression period in the same way as the demand from the maritime province of Madras appears to have fallen. That Burmese imports have made similar inroads into the markets for Bengal rice in these inland provinces as well admits of little doubt. As, however, we have been unable to collect reliable statistics bearing on this point we refrain from making any further comments on this aspect of the external demand for Bengal rice.

52. It will appear from what we have stated in the preceding paragraphs that one of the important factors which have contributed to the excessive depression in the prices of paddy and rice, in a period of rapid fall of the general price-level, has been the decline in the external demand for Bengal rice. The principal reason for this decline has been the loss of markets both inside and outside India on account of competition with the other great paddy-producing countries, viz., Burma, Siam and Indo-China.

53. Having examined the position on the demand side, we now turn to enquire whether the fall in prices has been due to a disproportionate increase in production or in imports from abroad or from other provinces of India. The following table gives the acreage under rice, and its yield since the onset of the depression in 1929-30:—

Year.	Acreage under rice (000, acres).	Yield (000, tons).	Percentage variation of acreage as compared with the previous year.	Percentage variation of yield as compared with the previous year.
1	2	3	4	5
			Per cent.	Per cent.
1929-30	20,225	8,202	..	..
1930-31	20,582	9,206	+1·7	+12·2
1931-32	22,129	9,493	+7·5	+3·1
1932-33	21,779	9,364	-1·5	-1·4
1933-34	21,672	8,680	-0·5	-7·3
1934-35	20,740	8,273	-4·3	-4·7
1935-36	21,092	7,208	+1·7	-12·9
1936-37	21,993	10,668*	+4·2	+48·0

*This figure, along with others in this column, is taken from the Estimates of Area and Yield of Principal Crops in India (1936-37). The Director-General of Commercial Intelligence and Statistics, however, places the yield for 1936-37 at 9,805,000 in his reply to the questionnaire issued by us.

The characteristic feature of the above table is the extremely irregular nature of the fluctuations in both the acreage and the yield figures. No steady increase in either the acreage or the yield, such as would justify the inference that the fall in prices of paddy and rice was due to increased domestic production, is noticeable during this period. Indeed, we have been unable to trace any close correlation between the yield of the crop and its price. The following table will show the variations in the price of rice as compared with changes in its yield:—

Year.			Variations in the yield of rice (expressed as percentages over the previous year's yield).	Index numbers of the prices of Ballam No. 1 (Base—1929—100).	Variations in the average price of Ballam No. 1 (expressed as percentages over the previous year's prices).
1			2	3*	4*
			Per cent.		
1930-31	..	..	+12.2	91.6	-8.4
1931-32	..	..	+3.1	61.8	-32.5
1932-33	..	..	-1.4	50.6	-18.1
1933-34	..	..	-7.3	49.6	-1.6
1934-35	..	..	-4.7	55.3	+11.0
1935-36	..	..	+12.6	54.3	-1.8
1936-37	..	..	+48.0	61.8	-13.8
1937-38	..	..	-15.3	58.7	-5.0

54. It may be legitimately argued that the price variations calculated on the basis of indices of wholesale prices exaggerate the influence of those world factors, which must be discounted before any correlation between the changes in yield and price can be traced. Assuming that the ratio between the index number for all commodities and the index number for rice measures the price-variations due to the special factors affecting the supply and demand of rice, we have prepared a different set of indices, which we call the "adjusted index numbers of wholesale

*N.B.—The figures in columns 3 and 4 are those for the calendar years. This fact however does not materially affect the comparison between changes in yield and changes in prices.

prices of rice". The following table will show the variations in the price of rice according to these indices, as compared with the changes in yield:—

Year.	Changes in yield (expressed as percentages of the previous year's output).		Adjusted index numbers of prices of Ballam No. 1 (Base— 1929—100).	Variations in the price of Ballam No. 1 (expressed as percentages over the previous year's figures).	
1	2		3	4	
	Per cent.				
1930-31	..	..	+12.2	111.3	..
1931-32	..	..	+3.1	90.7	-18.5
1932-33	..	..	-1.4	78.4	-13.5
1933-34	..	..	-7.3	80.7	+2.9
1934-35	..	..	-4.7	87.6	+8.5
1935-36	..	..	+12.9	84.3	-3.7
1936-37	..	..	+48.0	85.4	+1.3
1937-38	..	..	-15.3	86.8	+1.6

The same conclusions emerge from this table as from that in paragraph 53. While in most of the years under discussion, prices have generally varied inversely as the changes in the volume of output of the crop, there have been some years when this direction has been reversed. But much the more important consideration is the significant fact that the extent of the variations in prices has borne no close relation to the fluctuations in yield. In the case of a staple food crop like rice, we should normally expect an extremely inelastic demand in a province like Bengal, which depends almost exclusively on it for feeding her teeming population. If this be so, a small decline in yield should lead to a large increase in price; and conversely a small increase in yield should precipitate a fall in price. In practice, none of these consequences appear to have ensued. On the contrary, the price movements indicate the existence of other factors on the supply side which appear to have largely neutralised the effect of variations in output.

55. This conclusion receives further confirmation from a piece of indirect evidence to which we alluded in paragraph 10 of our report.

We refer to the growth of the rice-eating population of the province during the last decade.*

*R. K. Mukherjee in his "Food Planning for 400 millions" calculates the index numbers of variation of population and food supply as follows (*vide* Chapter II, page 18).

Year.	Population.				Food supply available for consumption.	
1	2				3	
1915-16	..	..	..	..	103	125
1916-17	..	..	..	..	104	126
1917-18	..	..	..	..	104	122
1918-19	..	..	..	..	105	87
1919-20	..	..	..	..	100	113
1920-21	..	..	..	..	99	99
1921-22	..	..	..	..	100	120
1922-23	..	..	..	..	101	125
1923-24	..	..	..	..	101	109
1924-25	..	..	..	..	101	103
1925-26	..	..	..	..	101	113
1926-27	..	..	..	..	102	117
1927-28	..	..	..	..	102	111
1928-29	..	..	..	..	103	120
1929-30	..	..	..	..	104	122
1930-31	..	..	..	..	107	123
1931-32	..	..	..	..	114	122
1932-33	..	..	..	..	117	123
1933-34	..	..	..	..	118	122
1934-35	..	..	..	..	120	123

During this period the production of rice in India increased by only 10 per cent. as compared with the increase in the total food production of 25 per cent. If we assume that the rice-eating population in Bengal increased in the same proportion as the total population in India, and that the increase in the production of rice in Bengal was proportionate to the increase in India as a whole,—no illegitimate assumption—the strength of the statistical position regarding the domestic supply of rice in the province can be easily appreciated.

As we argued in paragraph 48, the food requirements of this increased population, based on hypothetical consumption standards, cannot be used to *measure* the effective demand for rice. Nevertheless, an increase in population can always be reckoned as a factor that will not only impart a firm tone to the demand schedule for the principal food crop of the province, but will also tend to raise it above its existing level. Normally, therefore, we should have expected that an increase in the rice-eating population would have raised the price of rice. But the variations in the adjusted indices of wholesale prices which were set out in paragraph 54 tell a different tale. We are, therefore, fortified in our conclusion that it is not the domestic factors, either on the supply or the demand side, that have contributed to the present disproportionate fall in the price of rice.

56. Apart from domestic production, the other sources of supply of rice into this province are the neighbouring provinces of India and Burma, Siam and Indo-China do not figure in the import trade of Bengal. The imports from the neighbouring provinces may be (i) coastwise or (ii) by rail or river. (i) Most of the coastwise imports are from Orissa. The following figures will show the imports from Orissa since 1929-30.

Imports of paddy and rice from Orissa.

Year.					Rice in the husk.	Rice not in the husk.
					(Tons.)	(Tons.)
1929-30	..	..	..	..	3,071	1,964
1930-31	..	..	..	..	5,721	2,690
1931-32	..	..	..	..	3,937	4,009
1932-33	..	..	..	..	3,746	4,288
1933-34	..	..	..	..	4,420	2,732
1934-35	..	..	..	..	6,505	1,469
1935-36	..	..	..	..	29,318*	1,756
1936-37	..	..	..	..	26,780*	1,891
1937-38	..	..	..	..	14,229	2,200

*The comparatively large imports of paddy in these two years from Orissa are exceptional, being presumably due to the poor crops in Bengal in 1934-35 and 1935-36.

Not only are the imports trifling in comparison with the total volume of production, but the changes from year to year are also insignificant.

57. (ii) No comparable figures of imports by rail or river are available prior to 1933-34, as the compilation of statistics was discontinued after 1921-22. The figures for this latter year however show that the imports of paddy and rice at that time were much larger than they are at present. We presume, therefore, that it will be safe to conclude that the present disproportionate fall in prices

cannot be connected with an increase in the imports of paddy and rice from other provinces of India.

58. We now come to the imports from Burma. The following table will show the imports of paddy and rice since 1923-24. We have chosen this year, because a study of the comparative figures prior to it is vitiated by several extraneous factors, e.g., the abnormal world price for rice prevailing just after the close of the Great War, and the various restrictions on movements of paddy and rice imposed by the Indian Government, during this period, with the object of keeping down the price at a reasonable level.

Year.					Rice in the husk.	Rice not in the husk.
					(Tons.)	(Tons.)
1923-24	..	..	..	..	1,410	21,673
1924-25	..	..	..	..	7,845	69,355
1925-26	..	..	..	..	39,433	206,489
1926-27	..	..	..	..	19,809	118,210
1927-28	..	..	..	..	64,686	489,216
1928-29	..	..	..	..	34,875	569,299
1929-30	..	..	..	..	9,787	194,011
1930-31	..	..	..	..	26,426	121,040
1931-32	..	..	..	..	42,683	311,202
1932-33	..	..	..	..	1,003	127,502
1933-34	..	..	..	..	25,245	472,030
1934-35	..	..	..	..	66,476	840,756
1935-36	..	..	..	..	40,521	257,017
1936-37	..	..	..	..	26,086	410,724
1937-38	..	..	..	..	4,386	145,185

59. The two striking features of this table are (1) the absolute increase in the volume of imports since 1923-24, and (2) the fluctuations in the volume of imports from year to year. In order to examine the full implication of the imports from Burma, we shall examine in detail these two features of the movements of paddy and rice from Burma into Bengal.

60. For our present purpose, the latter feature of the imports from Burma possesses little causal significance. On the contrary, the irregularity of the fluctuations in the volume of imports from year to year masks the tremendous influence exerted by them on the level of paddy and rice prices in this province. For, the absence of any visible correlation between the annual imports and the annual level of prices puts the inquirer off what we believe to be the right track, and hampers correct diagnosis of the problem. The fluctuations in the annual imports from Burma arise partly from the nature of the domestic production, and partly from the circumstances of rice production in Burma. As for domestic production, not only is rice cultivation in Bengal almost entirely dependent on seasonal condition

factors; but, what is more important, the province is normally on the border line between a deficit and a surplus position as to her annual food requirements. The imports from Burma are the balancing factors, and consequently fluctuate with the variations in the annual output of the crop. Thus the heavy imports of 1927-28 and 1928-29, in the pre-depression period were due to the short crops of 1927-28, and the similar increase of imports in 1933-34, 1934-35 and 1936-37 were primarily due to the crop failures of the previous years. As against these uncertainties of the domestic production must be set the character of rice production in Burma. Rains seldom fail in that happy country, and normally, Burma has a large exportable surplus of rice, which must find an outlet either in her neighbouring or distant foreign markets. Only a very slight inducement is necessary to attract the flow of imports into this province. So, it is not to be inferred that all the imports that came from Burma during these years went to meet the deficit in the province's consumption of rice. Perhaps, a large percentage of it was essentially of a competitive nature, and was attracted to the Bengal market by the signs of firmness which it evinced at the short crop prospects of these years. Be that, as it may, from the point of view of the problem before us, the importance of these facts lies in the demonstration which they offer of the existence of an apparently inexhaustible source of supply of rice near at hand, on which dealers in this province, can always draw whenever the domestic price-level shows a tendency to rise.

61. That brings us to the other feature of the imports from Burma, viz., their rapidly rising trend since 1925-26. The imports of rice not in the husk during this period averaged as follows:—

Average—

1923-24 }	45,514
1924-25 }	

Three-yearly average—

1925-26 }	271,302
1926-27 }	
1927-28 }	

Three-yearly average—

1928-29 }	294,783
1929-30 }	
1930-31 }	
1931-32 }	303,578
1932-33 }	
1933-34 }	
1934-35 }	502,832
1935-36 }	
1936-37 }	

These averages bring out into bold relief the underlying *trend* of the fluctuations in the volume of imports. It is unnecessary for the purpose of the argument of this chapter to engage in a detailed investigation into the causes of this increase in imports from Burma. Several factors contributed to this end, the most important being the rapid increase in the production surpluses of Burma, and the contraction of

Burma's other foreign markets. In the following table*, we give comparative figures of the rice surpluses of Burma, and her two other great rivals in the export trade, viz., Siam and Indo-China, and set them against the increase of imports of Burma rice into this province.

(Tons.)

Year.		Volume of imports from Burma into Bengal.†	Total of export surplus of rice from Burma (a).	Total of export surplus of rice from Indo-China (b).	Total of export surplus of rice from Siam (c).
1909-13 (Average)		..	2,309,664	877,884	775,866
1922	..	} 45,514	2,395,316	1,009,890	1,104,852
1923	..				
1924	..				
1925	..	} 271,302	2,677,164	1,300,146	1,313,494
1926	..				
1927	..				
1928	..	} 294,783	2,829,652	1,303,302	1,089,956
1929	..				
1930	..				
1931	..	} 303,578	3,120,222	1,052,128	1,387,386
1932	..				
1933	..				
1934	..	} 502,832	3,550,666	1,526,605	1,600,957
1935	..				
1936	..				

62. The above table offers an adequate explanation of the nature of the influence exerted on our domestic prices by the increasing exportable surpluses from Burma. It will be seen that, since the Great War, not only Burma but the two other great rice-exporting countries of Asia, viz., Siam and Indo-China, have also been placing increasing surpluses of rice on the export market. Two important consequences have resulted directly from this situation. In the first place, the world price of rice has remained low consistently throughout the depression in spite of an appreciable increase in its demand. Secondly, the simultaneous increase in the surpluses of all the three exporting countries has induced Burma to turn more and more to the Indian market, in which Burma possesses comparative advantages over her other two rivals by reason of her close proximity to, and the long-established trade association with, India. It is not therefore surprising to find that during all these years, Burma has been increasingly seeking an outlet for her huge exportable surplus

*Compiled from International Year-Books of Agricultural Statistics.

†The figures are for the fiscal years mentioned in paragraph 61 ante.

(a) The figures in this column have been collected from the Report of the Rice Export Trade Enquiry Committee (1937) of Burma.

(b) and (c) The figures in these columns have been collected from the International Year-Book of Agricultural Statistics, and converted from quintals into long tons on the basis of 1 quintal = .098 long ton.

of rice in the Indian market. The following table* showing the changes in the direction of Burmese exports will bring out this point at a glance:—

Countries.	Exports (in tons).			
	Average of 3 years, 1928-29 to 1930-31.	Average of 3 years, 1931-32 to 1933-34.	1934-35.	1935-36.
Group A—				
Europe	630,557	765,614	642,870	482,658
Group B—				
Various Western markets	173,336	155,036	120,830	127,869
Group C—				
Far East	795,873	660,405	478,725	382,490
Group D—				
Ceylon and India ..	1,449,247	1,691,105	2,519,092	2,097,708
Total	3,049,013	3,272,160	3,761,517	3,090,725

More than any argument of ours these figures will tell how Burma has been steadily losing ground in her other export markets ever since the beginning of the depression. Between 1928-29 and 1935-36, Burma's exports to Europe, the other western countries and the Far East all declined by 22 per cent., 26 per cent. and 52 per cent., respectively, while her exports to the Ceylon and Indian market increased by nearly 48 per cent. The existence of this huge exportable surplus of rice always ready to overwhelm the Indian market exerts a deleterious influence on domestic prices, which need hardly be emphasized any further. It is this statistical weakness in regard to our foreign supply position, which seems to us to exercise the most dominating influence at present on the current level of paddy and rice prices in our province.

63. It will be convenient here to dispose of two counter-arguments. It is sometimes argued that the large rice surplus in Burma and other neighbouring exporting countries does not indicate any overproduction of food-supply, particularly if account is taken of the trend of increase in the aggregate rice-eating population of the world. It is unnecessary for us to examine this argument closely. Whatever may be the nature of the adjustment in the long period, there can be no doubt that in the short period the existence of excessive supplies of a commodity acts as a serious drag on prices. As one competent critic observes: "It may be true that over a long period the increase in production has not been abnormal, if account is taken of the increase in population, but it seems equally true that in the short period since 1929, an entirely exceptional and unprecedented position has arisen owing to the world's markets being burdened with enormous stocks, with the result that the supply offered for sale on the international market has been continuously in excess of any possible demand".

In assessing the effect of supplies on prices, it is their excess or deficit in relation to the level of *effective demand* at any particular moment, that alone is a relevant consideration. Judged by this criterion, there can be little doubt that the disproportionate fall in

*Compiled from statistics supplied in the Report of the Burma Export Trade Enquiry Committee (1937), page 1 and Appendices 5 and 6.

prices during the post-depression years was directly connected with the huge rice surpluses in the producing countries.

64. The other counter-argument proceeds on a slightly different line. It is contended that it is only the total supply on offer in the market that can influence prices; and hence, unless a direct correlation can be established between the annual imports and the yearly fluctuation of prices, it is argued, the former cannot be described as the cause of the present depressed condition of the rice market. This form of reasoning arises from a fundamental misconception of the pricing processes. Leaving aside long-range considerations, in the short period, it is not merely the supplies on the spot, but the entire stock of supplies that may be available, within this period, for entry into the market, that affects prices. Commenting on the precipitate fall of wheat prices, after the onset of the great depression, one acute critic observed—"Prices in the international markets depend on the total supplies, actually on offer, or *known to be available*, and when current supplies combined with large stocks or more than sufficient to meet any anticipated demand, prices must necessarily be forced downwards".* In this province, we are familiar with the effect of stocks of raw jute on its prices in the years immediately following the beginning of the great slump. Whether the stocks exist in the godowns or warehouses of dealers in the consuming countries, or in the form of a surplus of production in the countries of origin is immaterial, as regards the effects they exert on the level of prices in the consuming countries. Just as it was the enormous increase in the exportable surplus, which depressed wheat prices excessively after 1929-30+, so it was the huge surpluses of rice in the great exporting countries that brought down rice prices during the period of the depression. So far as Bengal is concerned, both Indo-China and Siam are out of the picture. We, therefore, conclude that it is the huge exportable surplus of rice in Burma—which always seeks an outlet in the neighbouring markets—that is one of the most potent causes of the present disproportionate fall in rice prices.

*Mr. R. J. Thompson in a note to a study group of members of the Royal Institute of International Affairs, *vide* World Agriculture; An International Survey, page 13.

†Those who are interested in the study of comparative economics, will be interested in the following figures of supplies and imports of wheat. They bring out very clearly the influence exerted by exportable supplies on the level of prices.

(Millions of bushels.)			
Year.	Exportable supplies.	Total quantities imported.	Exportable stocks residual at the end of the season.
1926-27	1,070	819	251
1927-28	1,110	801	309
1928-29	1,420	886	536
1929-30	1,130	662	468
1930-31	1,350	804	546
1931-32	1,338	880	458

It will be noticed that there was no direct correlation between prices and the actual volume of imports. The table has been copied from the "The World Agriculture—An International Survey (1932), page 264".

65. The arguments of the preceding sub-section have brought out the comparative strength of our *domestic* statistical position as regards

the supply and demand of the rice crop. We have seen that, apart from causes affecting the general level of prices, the present depression in paddy prices is due to (a) decline in the export trade and (b) the existence of huge exportable surpluses in Burma which normally supplies almost the whole of our import requirements. The effect of the decline in exports might have been neutralized to a certain extent by the increased domestic consumption, in consequence of the increase in population which has taken place since the last census. But the increasing rice surpluses in Burma introduced another bearish factor. In the present conditions of the trade in paddy and rice, it is this factor which seems to us to exert a primary influence on the level of domestic prices.

66. It follows from the above summary of our findings that our commercial policy should be directed to the encouragement of exports, and to the regulation of the volume of imports, having regard to the nature of our annual requirements. As regards exports, our attention was drawn to the duty on rice. We, in this Committee, are concerned with the duty only in so far as it affects the price of rice, either directly or indirectly through the discouragement of exports. The duty is a long-standing one, and the amount of it is also small. If the price of rice were as high as it was immediately after the war, the burden of the duty would have been very small indeed. But, with the gradual decline in prices, the burden has also been increasing. Besides, with the separation of Burma from India, the latter has ceased to be a large exporter of rice. She can now secure a market for her precarious exports only in competition with the three great rice-producing countries across the Bay of Bengal. It would thus appear that two of the three conditions, which the Indian Fiscal Commission (1920-21) laid down in paragraph 182 of their report as justifying the duties on exports have ceased to exist. It is difficult to resist the conclusion that the duty on rice now falls, in the ultimate analysis on the actual producer. The Taxation Enquiry Committee of 1924-25 supported this duty on the further ground that, as both Indo-China and Siam had levied an export duty on rice, the Indian duty imposed no differential handicap on the Indian producer. "Its remission", they argued, "would in fact put an equivalent amount of money into the hands of producers and the middlemen." The circumstances of our export trade have changed beyond recognition since the Taxation Enquiry Committee reported in 1924-25. India no longer controls nearly half of the Export trade in rice, as she did before. She is on balance an importing country, and her exports have to fight for their markets with those of Burma, Siam and Indo-China. As we pointed out in paragraph 49, the exports have showed a steady tendency to decline in recent years; and the problem before us is not merely the maintenance of parity with the other great exporting countries of the world, but of definitely encouraging exports as a method of raising the price of paddy and rice. What is wanted is a positive competitive advantage. We believe this can be achieved by the abolition of the export duty. We note that the proceeds from this export duty in India proper were as follows:—

Year.					Lacs. Rs.
1935-36	..	..	..	..	8.82
1936-37	..	..	..	..	9.47
1937-38	..	..	..	..	10.65

As regards the financial implications of our recommendation we recognise that the question of remission of the export duty is essentially a

budgetary one, and is one that concerns the Government of India. On this aspect of the matter, we are unable to express any opinion. But we strongly recommend that the entire question should be thoroughly re-examined in the light of the altered circumstances of our export trade.

67. There is another important direction in which an improvement in the export trade can be expected. Our exports of paddy and rice are generally of a higher quality than the exports of Burma and other countries. It is here that our competitive advantage lies. Unfortunately, however, no recognized system of grading in the export trade exists at present. The following excerpts from the reply of the Director of Statistics to our questionnaire sets out the defects and deficiencies of the present arrangements in the export trade:—

“There appear to be no clearly defined or generally accepted commercial descriptions used in the trade in Indian rices. In India transactions are very largely governed by fair average quality terms. A considerable volume of trade is also done on the basis of samples, particularly in the higher qualities. Where a firm uses its own brands or marks or where sales are made according to certain trade descriptions, each firm adopts its own standards. For example, Seeta No. 1 (Patnai) as marketed by one firm would not necessarily be the same as Seeta No. 1 handled by another, and would differ in respect of polish or general appearance and proportions of brokens present. This is not sold under any uniform qualities. By long experience, traders get to know what kind of rice to expect from certain exporting areas, and apart from examining samples of early arrivals, these dealers usually order the fair average quality of the season.” While the present system might work, without any serious hitch, in relation to our existing trade-connections, it definitely hinders the development of the export market, and unnecessarily increases the difficulties in the way of establishment of new connections. We suggest that the matter is important enough for Government to take a hand in it. This question is, of course, bound up with that of grading, and is not easily tackled. We shall discuss this matter further, in due course, when we have occasion to examine the existing system of marketing. For the present, we merely emphasize the need for early action in this direction in the export market.

68. Some of the witnesses examined by us suggested the constitution of a central organisation, similar to the Rice Trade Advisory Committee, the establishment of which was recommended by the Rice Export Trade Enquiry Committee of Burma. While we are impressed by the possibilities of a central organisation, we are of opinion that the initiative for its formation should come from the rice trade itself. No organisation foisted by Government on the trade is likely to achieve much good. Besides, in the present unorganised state of the rice industry in this province, we are not sure if the establishment of a central export organisation at Calcutta will serve any really useful purpose. Be that as it may, it is primarily a question for the trade to decide; and if the initiative comes from the trade, we suggest that Government should examine the proposal closely and carefully in the light of its possible bearings on the export trade.

69. The problem of the Burmese imports presents fewer complexities, but raises more far-reaching issues of commercial policy. We argued in paragraph 62 that by far the most potent cause of the

disproportionately low level of paddy and rice prices was the large excesses of rice production in Burma, in recent years, the existence of which, we found, acted as a perpetual drag on the level of domestic prices. *Prima facie* the remedy for this situation would be to restrict the imports of paddy and rice into Bengal. There is, however, one fundamental consideration, which should not be overlooked in this connection. We have emphasized it in paragraph 43, Chapter IV, of our report. It will follow from the analysis of that chapter that the imposition of restrictions on the imports of rice, by the rise in price that they will induce, will prejudicially affect the interests of a substantial percentage of the population of the province. It should be the objective of our policy to limit the extent of this deleterious consequence as much as we can. We believe this can be best achieved by the allotment of a free quota together with a duty on imports, which exceed this quota. The determination of the size of the free quota will not be free from difficulties. It could not be obviously based on the estimated annual deficit of the production of rice in Bengal, calculated on the basis of hypothetical consumption standards, which have no relation to actuals. The size of the free quota must necessarily be determined by the average volume of imports during the post-depression years. All imports over and above this free quota should pay an import duty equivalent to the difference in the average cost of up-country rice at Calcutta, and the average cost of Burmese rice at Rangoon.

70. The allocation of a free quota will ensure that the actual supply position will not be abruptly disturbed, causing a precipitous rise in prices. At the same time, the imposition of a duty on imports that may exceed this quota will serve the purposes of—

- (a) safeguarding the domestic market against the uncertain and incalculable arrivals of unregulated Burmese imports;
- (b) preventing speculative action by the dealers of Burma rice, such as might, otherwise, raise prices to an abnormal height. The possibility of imports of rice exceeding the free quota will also act as a safety-valve in times of sudden and unforeseen emergency, when a volume of imports exceeding the free quota may conceivably be required; and
- (c) an incidental advantage of this scheme will be the increase in the revenue from customs, which will partially offset the loss resulting from the abolition of the export duty, if our recommendation in this regard is given effect to.

71. We have purposely refrained from making any attempt to calculate the proper size of the free quota, or the rate of duty that should be appropriate to imports which enter the province over and above the free quota. These are matters outside the competence of the Provincial Government, and must necessarily be decided on an All-India basis. The interests of other rice-producing and rice-importing provinces of India will also have to be taken into account, and the general structure of the trade between India and Burma in all commodities—not merely the trade in paddy and rice—will form the basis of negotiations that must be started on this subject. No useful purpose will, therefore, be served by our trying to prescribe figures based on a limited and sectional view of the trade between the two countries. If the general principles which we have sought to lay down are borne in mind, the consequential

details will not be difficult to work out. We understand that the Government of India propose shortly to initiate talks regarding the revision of the existing Indo-Burmese Trade Agreement. We suggest that the considerations that we have set out in this sub-section should be pressed upon the Government of India at the earliest possible time. There is, however, one point of detail which we desire to mention here. If our recommendation of a free quota together with a duty on imports in excess of this quota is accepted, it will be necessary to provide for the increase of the quota or the reduction of the import duty in times of scarcity and distress. In other words, the trade arrangements that we may enter into this subject must be of a sufficiently elastic nature to meet the special requirements of abnormal times. In Chapter IV, we have already argued the necessity for a price-policy for paddy and rice which would take due account of not only normal conditions but also of abnormal circumstances like droughts and floods. No further elaboration of this point is therefore called for.

CHAPTER VI.

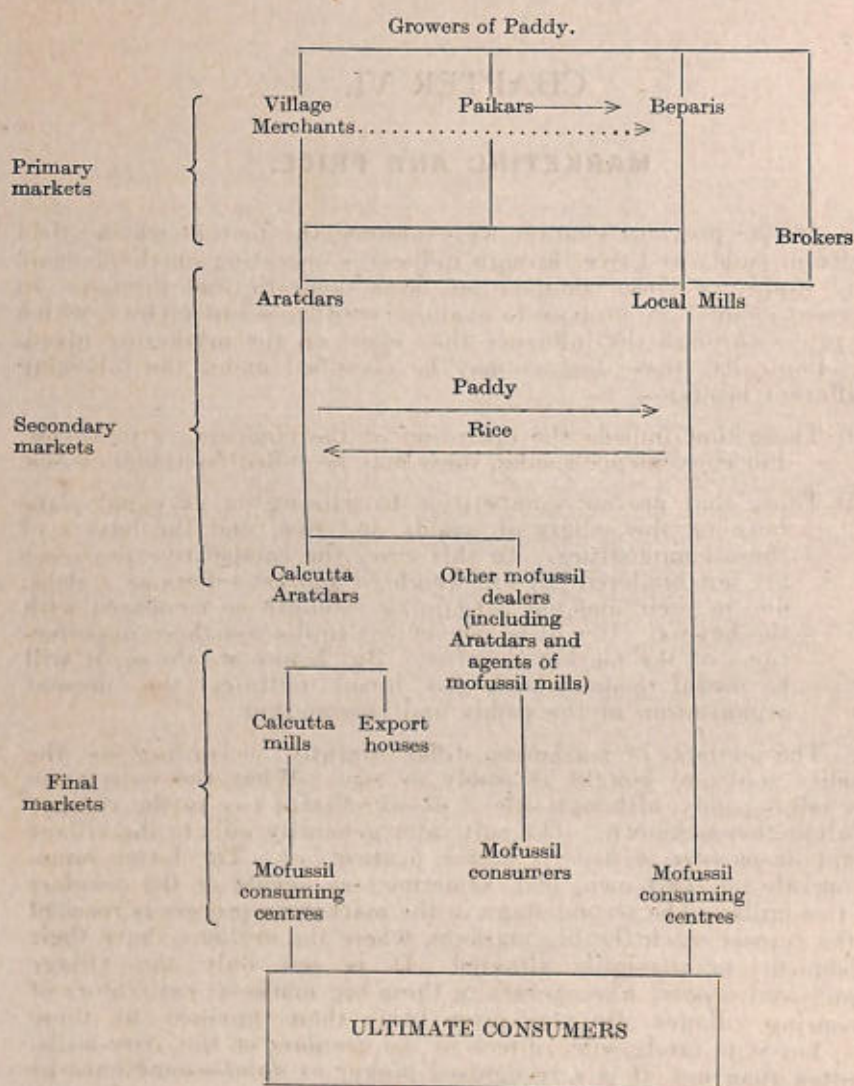
MARKETING AND PRICE.

72. In the previous chapter we examined the factors which affect the price of paddy and rice through influences operating on the demand for and supply of these commodities, both domestic and foreign. In the present chapter we propose to examine another set of factors, which affect prices through the influence they exert on the marketing operations. Logically, these factors may be classified under the following two different heads:—

- (a) Those that impede the operation of the competitive processes. For convenience's sake, these may be called frictional causes.
- (b) Those that prevent competitive bargaining on an equal plane between the sellers of paddy and rice, and the buyers of these commodities. In this case, the competitive processes are not hindered but are weighted against sellers as a class, due to their unequal bargaining strength as compared with the buyers. It will be convenient to discuss these imperfections of the market *seriatim*. But before we do so, it will be useful to describe in its broad outlines the present organisation of the paddy and rice market.

73. The methods of marketing differ slightly, according as the commodity sold and bought is paddy or rice. What the cultivators usually sell is paddy, although sale of *dhenki-husked* rice in the villages is not altogether unknown. The cultivator generally sells to the village merchant or *paikars* or *beparis* at the nearest *hat*. The latter sometimes operate on their own, and sometimes as agents of the *aratdars* or the rice-mills. The second stage in the marketing process is reached when the cereals reach the big markets, where the *aratdars* have their establishments or rice-mills situated. It is not only the village establishments and *beparis* who operate in these big markets; cultivators of neighbouring villages also very often bring their produce to these centres, but it is rarely sold direct to the *aratdars* or the rice-mills. More often than not, it is a recognised broker or *dadal*—sometimes he is also called a *bepari*—who acts as a go-between between the cultivator and the *aratdar* or the mill. For his labours, the broker gets a small commission from the *aratdar* or the mill. The third stage in the marketing process is reached when paddy and rice start to move from these mofussil centres. The *aratdar* sells his paddy either to the paddy merchants in the Port markets at Chetla, Ultadanga, Ramkrishnapur or Hatkhola, or to other *aratdars* of neighbouring districts. The rice husked by the mills is, in its turn, sold to different consuming centres both inside and outside the province. The last stage concerns the export of paddy and rice to foreign countries through well-known exporting houses in Calcutta, many of which also carry on extensive business in imports.

74. The following "tree" will show the different phases of the marketing process in paddy and rice at a glance:—



75. With this picture of the organisation of the paddy and rice market in our mind, we may now proceed to examine its principal "frictional" deficiencies, which depress the price realised by the seller below the level, which it might have otherwise attained.

76. (1) *Standardisation of weights and measures.*—One of the most important deficiencies of the category we discussed in the previous paragraph concerns the unsatisfactory character of the existing weights and measures in this province. In course of our tours in the mofussil,

a bewildering variety of weights and measures came to our notice. Not only did these vary from district to district, but they varied also within a district itself. We were told that the buyers and sellers of a particular locality were familiar with the weights and measures prevailing in that area, and no large-scale malpractices were practised anywhere. While we can readily accept this assurance, the prevailing "anarchy" in this respect seems to us to call for immediate remedial action. Not only does the existence multitudinous weights and measures offer a fruitful source of abuse and corruption to wily traders, small as their number must necessarily be, but the very possibility of such abuse creates suspicion and discontent between the buyers and sellers in the country-side. We were not, therefore, surprised to find that the witnesses, who appeared before us in the mofussil, were unanimous as to the need for standardised weights and measures—although very few of them could point to any large-scale misuse of the existing counters by the itinerant traders or the trading firms or houses at the bigger centres. We fully endorse this popular demand, and recommend that Government should take necessary steps in this matter without further delay.

77. Under the existing allocation of functions between the Provinces and the Central Government in India, weights are a Central subject, whereas measures belong to the Provincial list. We understand Government of India have recently passed an enabling statute under which it will be possible for Provincial Governments to enact necessary legislation for standardising weights all over the province. Measures are of comparatively minor importance in Bengal; but if uniformity is desired, necessary legislation for regularising measures may also be undertaken simultaneously with that for standardisation of weights.

Hitherto, the necessary reforms in this direction have been held up by the difficulty of enforcement of the prescribed weights and measures. The Bengal Jute Enquiry Committee, which reported in 1933 discussed these difficulties at some length at page 27 of their report. Whatever might have happened in the past, we do not think that vigilant public opinion of to-day will lightly tolerate open abuses of the provisions of a law which affect the rural population so intimately in the daily transactions of their life. Besides, we propose that all Government Officers, not below the rank of Circle Officers, should be appointed Inspectors of weights and measures (ex-officio), so that in course of their normal tours, they may be in a position to detect evasions of the law or such malpractices in this respect as might still linger on. We believe these steps will be sufficient to secure enforcement of the standardisation law. We realise that it may be necessary to appoint a few testing experts at the Provincial headquarters and at the more important trading centres in the province. We do not think the cost of such expert officers will be very heavy in comparison with the importance of this subject. Apart from the drawbacks of the existing system which we have mentioned earlier, the prevailing "babel" of weights and measures, definitely hinders the free movement of the cereals all over the province, by preventing a ready comparison between the prices prevailing in different parts of it. The Bengal Provincial Banking Enquiry stated, "Some witnesses have observed that owing to the prevalence of different weights and measures it is very difficult to compare prices ruling in different centres. The cultivators in a particular district cannot for this reason ascertain whether they are getting the same price as is paid to cultivators in

another. The difficulty can be removed only by standardising the weights in all centres." We strongly endorse this finding.

78. (2) *Deductions and allowances*.—Another factor which lowers the return available to the cultivators is the allowances and deductions to which the sellers of paddy have to submit themselves. At most of the mofussil centres we visited, we were supplied with lists of items in respect of which deductions were made from the price paid to cultivators. These lists generally included the following items:—

- (i) *Dhalta* (allowance for dust or dryage).
- (ii) Tolls.
- (iii) *Brittis*—divided into two main classes:—
 - (a) religious, e.g., *Iswar Brittis*, and
 - (b) public charities, e.g., *School Brittis*.
- (iv) Charges for weighing—*Kayali*.
- (v) *Aratdari*.

It is not to be assumed that these deductions and allowance prevail in every district of Bengal; their number and nature vary from district to district. Nor is it to be assumed that it is only the cultivators who have to submit to these deductions. The growers who sell their produce at home very often escape these payments except *dhalta*: the number of deductions is generally larger in the bigger trading centres than in the village *hats*.

79. It will be observed that some of these deductions are really payments for services rendered; some again are in the nature of fees for privileges obtained. The principal allowance *dhalta*, is an excess delivery made by the cultivator ostensibly on the ground of dust contained in the paddy; but this excess is rarely appropriated by the *paikar* or *bepari*. He has to deliver the same excess amount or a part of it to the *aratdars* or to the mills. There can be little doubt that most of these deductions and excess allowances are taken into account into actual price-calculations and that the market quotations are determined with reference to them. While this is the general effect of such deductions and allowances, we can imagine circumstances in which particular growers may be unduly victimised by unscrupulous buyers. Much of the existing popular feeling against these unauthorised deductions and allowances arises from this fact. Another serious objection against the continued existence of these unauthorised exactions lies in the absence of any correlation between their size and the functions for which they are stated to be payments. For example, the great majority of the growers are in the dark as to the precise extent to which the *brittis*—which are really in the nature of communal levies for charitable purposes—are in fact spent on these objects for which they are avowedly collected. The objections to the unauthorised deductions are, therefore, at present partly economic and partly psychological. We have carefully considered the subject but are unable to devise any effective measures that will check the evils arising out of it. Legislation alone is likely to be infructuous, and apart from regulated markets, we must continue to rely for many more years to come on the restraining influences of education, propaganda and public opinion. In another sub-section of this chapter, we shall discuss the bearings of regulated markets on this subject, and their possibilities in the present conditions of agricultural development in Bengal.

80. (3) Another way in which the deficiencies of the existing marketing system prevents the growers from obtaining the best value for their crops arises from the absence of any discrimination for quality. Like all other agricultural products, paddy is also sold in the lump, regardless of its varieties. The price-premium for better qualities of paddy has steadily gone down during the last ten years, on account of the heavy fall in prices. But, even at the best of times, the cultivators hardly ever got an adequate premium for his better-quality crops. The absence of any system of grading was largely responsible for this fact. We realise the practical difficulties of grading paddy and rice according to quality. Unless the quality of the grain is standardised, in a particular area, through systematic control of methods of cultivation, it becomes extremely difficult to grade the produce according to quality at a subsequent stage. Nevertheless, we consider that a beginning should be made by the establishment of suitable grading stations in the more important paddy-growing districts of Bengal. We understand that action in this direction is contemplated with regard to *Patnai* rice under the Agricultural Produce (Grading and Marking) Act of 1937. The details of the proposed scheme are not in our possession; but presumably grading stations for *Patnai* rice will be established, in due course, at selected centres in the area growing this particular variety of paddy. We recommend that steps should be taken to initiate similar grading schemes for other high quality rices, e.g., *Kataribhog*, in the district of Dinajpur—in the more important paddy-growing districts of this province. If these schemes can be worked successfully—unlike jute, the grading of paddy and rice involves very few complexities—not only will the cultivators of these varieties benefit by the premium, which they will earn, on their quality products, but the incentive to improvement of quality will also enormously increase.

81. (4) We now turn to another factor which greatly impedes the marketing operations in the mofussil, viz., the existing means of communication. Wherever we went, in course of our tours in the mofussil, our attention was drawn to the neglected state of communications in the interior of the districts. The problem in this respect is much less acute in Eastern and Northern Bengal. In Eastern Bengal, most of the inter-district and intra-district trade is river-borne and carried on in country-boats. In Western Bengal, and in most of the districts of Northern Bengal the predominant form of transport is road haulage, and it is the state of these inter-district and intra-district roads that calls for immediate action. The effect of bad roads is not merely to increase the cost of transport, and thereby to reduce the net profits of the paddy-growers, but also to discourage the movements of paddy from the village to the terminal market, where prices are generally several points higher than in the places of their origin. Bad communications therefore depress the income of the paddy-growers both directly and indirectly. From the tenor of the evidence that we received in the mofussil, we are left with no doubt as to the fact that bad communications in the mofussil are one of the important factors that hamper the working of the competitive processes to the advantage of growers as a class. Most of these rural communications are under the supervision and control of district boards. Some of the witnesses, who appeared before us, opined that expenditure on communications was not popular with the majority of the members of the district boards, and the conventional fixation of a definite percentage of the revenue of a district

board for expenditure on roads and other communications would go far to remove the just grievances of the cultivators. We commend this suggestion to Government, and urge the formulation of a comprehensive policy with regard to rural communications which is long overdue.

82. In this connection, we consider it necessary to say a few words about the roads policy which, we understand, Government in the Communications and Works Department propose to adopt. We were told that following the general lines of the comprehensive recommendations of the Special Officer appointed by the department some time ago to enquire into this matter, Government proposed to concentrate expenditure on the construction of trunk roads, and to take up the inter-district main roads, and the intra-district main and secondary roads only after the trunk road schemes had been executed. We do not know if the policy of the Communication Department has undergone any change meanwhile; but if the policy still remains what we were told it was some time ago, we can only characterise it as somewhat top-sided. It would be a serious mistake to delay the development of rural communications, on which the agricultural improvement of the countryside so largely depends. Railways and steamships between them have hitherto served the needs of long distance commercial transport fairly well. Trunk roads for long distance motoring will no doubt be a great improvement in non-competitive areas. But we find it difficult to imagine how in any circumstances they can have priority over the inter-district main and intra-district main and secondary roads, which connect the principal trade centres in different districts and within the same district with each other and with the important railway and steamer stations. We believe one of the most important objectives underlying the initiation of the Road Fund by the Government of India was to reduce the cost of transport of agricultural produce to markets and railways and steamer stations. The realisation of this objective is likely to be delayed if not altogether defeated, if the policy of concentration on trunk roads is given prior consideration to the necessarily inevitable neglect of rural communications. In view of the importance of the subject, we desire to emphasise the need for a careful formulation of an appropriate roads policy for this province.

83. (5) Having examined the principal defects and drawbacks of the existing system of marketing, we now proceed to a consideration of regulated markets. The principal object of these markets is to eliminate the existing drawbacks of the marketing system, and to regularise the competitive processes as far as possible. The normal organisation and working of these markets have been adequately described in the Majority and Minority Reports of the Bengal Jute Enquiry Committee, and also in the earlier Report of the Royal Commission on Indian Agriculture.* We would refer the interested reader to those reports for further details. In this section, we shall merely try to evaluate the possible advantages to be derived from the regulated markets, and to estimate their position in the reorganised scheme

**Vide* Report of the Bengal Jute Enquiry Committee (1933), pages 23-26 and pages 116-21.

Also *vide* Report of the Royal Commission on Agriculture in India (1928), pages 388-95.

of agricultural marketing that we envisage. The benefits to be derived from regulated markets can be thus summarised—

- (i) use of standard weights and measures;
- (ii) reduction of market charges to the minimum;
- (iii) abolition of all improper allowances and deductions;
- (iv) supply of market intelligence;
- (v) storage facilities; and
- (vi) quick settlement of disputes.

Items (i) to (iii) have been already discussed and require no further comments. The supply of market intelligence is an important function of a regulated market. In the case of paddy and rice, for instance, mofussil regulated markets would daily publish the price-quotations in Calcutta of the principal varieties of paddy and rice marketed in that particular locality, and also the price-parities of the local varieties offered for sale at these markets. The publication of these figures will prevent victimisation of uninformed sellers and reduce haggling and disputes to a minimum. As regards item No. (v), one of the drawbacks of the existing system of marketing, is the lack of adequate storage facilities at the terminal markets. If a cultivator brings a cart-load of his produce to such a market he finds himself obliged to sell it in course of the day. Naturally, he does not get the best value for his crop. The regulated markets will remove this weakness in the position of the cultivators by enabling them to store their produce, if necessary, pending its disposal, on satisfactory terms to sellers. The last item calls for no comments.

84. The Senior Marketing Officer, Bengal, estimated that a cultivator, on an average lost about As. 5 to As. 6 a maund which he could easily recover by marketing his wares at a regulated market. We consider this margin to be definitely on the high side. In course of our evidence in the mofussil, we were informed that the dealers in paddy and rice, in the great majority of cases, worked on a very small margin of profit. More often than not, it was stated, his profits consisted mostly of his earnings on transport. It was only in exceptional cases that the difference between the prices prevailing in the village *hats* and the terminal markets exceeded As. 4 a maund. If this evidence can be relied upon, we should not think that a cultivator would get more than As. 2 a maund by selling his paddy and rice in the regulated market instead at his village *hat*. Apparently this margin is not very large; but on an average cultivator's total turnover it may easily amount to a substantial sum, which he can hardly afford to forego. The following formula would give an indication of the different items involved in this calculation of loss and gain:—

Cultivator's gain = $(P_s - P_p) + (W + D) - T - M$ where—

P_s = Price in the secondary market.

P_p = Price in the primary market.

W = Loss sustained on account of the use of wrong and false weights.

D = Value of the illegal allowances or deductions.

T = Cost of transport from the primary to the secondary market.

M = Market charges.

The obvious difficulty that will face the cultivators in bringing their produce to the regulated market is concerned with transport. We realise that the small growers may find it difficult to arrange for the transport of their produce to distant regulated markets, and may prefer to market their crop at the nearer village hats. This difficulty cannot be obviated except by the simultaneous establishment of a large number of regulated markets all over the paddy-growing districts, or by arrangements for assembling the cultivator's paddy by the market committee itself. Both these steps we deprecate at the initial stages. We have already observed that the net gain in price, which we expect from dealings in the regulated market in the case of paddy and rice is not likely to be very large. We should, therefore, proceed very cautiously in the matter. Unless we have first succeeded in strengthening the financial basis of our scheme, it would not be prudent to go very fast in the matter. We, therefore, propose that Government should establish a few regulated markets at selected centres on an experimental basis for the present. If the experiment yields substantial results, there will be time enough for the extension of the markets in other parts of the province. We understand that Government contemplate the establishment of some regulated markets in jute in the near future at selected centres. If this is so, these sites could conveniently be selected also for the regulated markets in paddy and rice. We believe there would be considerable saving in the overhead costs by such joint marketing of jute and paddy in the experimental regulated markets. In the beginning, one market committee could run both the markets for jute and paddy; but it would be no derogation from the principles underlying regulated markets, if separate marketing committees for jute and paddy are considered necessary at a later stage in the development of these markets.

85. In order to make these markets a success, the Royal Commission on Agriculture in India recommended that "unauthorized markets within a certain radius from the regulated markets should be prohibited by statutes". We strongly endorse this suggestion. In the beginning it would be the constant endeavour of the vested interests to strangle these markets at their birth by all sorts of unfair tactics. One common device, likely to be adopted by these interests, will perhaps be to wean away the cultivators within the notified area from their loyalty to the newly established regulated markets. Constant propaganda and persuasion will be required in the initial stages; but, as the necessary propaganda will have to be carried on against great odds, we consider it only fair that the hands of the pioneers should be strengthened by the statutory prohibition of unauthorized markets within a prescribed radius of the regulated markets.

86. In paragraph 72 of this chapter, we distinguished between two analytically distinct sets of factors, viz., (a) those that hampered competitive processes—we described them as frictional causes, and (b) those that affected the relative bargaining strength of buyers and sellers and prevented competition between them on an equal plane. In the previous sub-section, we have discussed the main factors belonging to the former category. In the present sub-section we propose to discuss some methods of increasing the bargaining strength of paddy-growers, so that they can compete on an equal footing with the buyers of their produce.

87. The most characteristic feature of the marketing of all agricultural produce—and not merely paddy—in this country is the heavy selling pressure on the market immediately after the harvest. The pressure continues till about *Falgun* or *Chaitra*, i.e., the end of March and then gradually abates. It is during this period that the cultivator must dispose of the whole of his saleable surplus. There is no corresponding urgency on the part of the merchants or dealers to buy the new crop; if they have to buy, they must do so on terms suitable to themselves. It is no wonder that prices are depressed immediately after the harvest, and do not rise till the selling pressure disappears. One sure way of increasing the prices realised by growers would be to avoid this selling pressure, immediately after the harvest.

88. It is sometimes suggested that the cultivator has no storage facilities in the villages and therefore is obliged to sell his produce as soon as the harvest is over. For this opinion we found very little support in the mofussil. No noticeable complaints about lack of storage facilities was made to us anywhere, in course of our tours. On the contrary, we received evidence from several representatives of growers, in the predominantly paddy-growing districts of Western Bengal to the effect that the more substantial cultivators habitually stored their surplus stock for months on end, and sometimes even for more than a year. We were informed that under the indigenous methods of storage practised in these districts, paddy and rice stored in the village granaries hardly suffered any appreciable deterioration in quality in course of a year or two. The climatic and weather conditions in the water-bound districts of East Bengal might present difficulties in the way of prolonged storage, but from what we saw and heard in the more important of the West and North Bengal districts we were convinced that the prevailing methods of storage could not certainly be cited as a cause of the heavy selling pressure immediately after the harvest. As far as we could make out, the reasons for this are not technical but essentially financial and economic.

89. The cultivator is obliged to sell his produce immediately after harvest, because he wants cash, and cannot hold up the crop. He has no reserve of financial strength, and, therefore, he cannot wait for prices to improve. Any attempt at joint action for the marketing of the growers' produce must take due note of this fundamental weakness in their economic position.

90. Some of the witnesses we examined—generally of the official and the non-official professional classes—suggested the establishment of co-operative purchase and sale societies. It was argued that the only way to increase the competitive strength of the growers was to pool their resources and to market their produce through a co-operative society. On the other hand, the proposal met with very little enthusiasm from the great majority of the growers' representatives and, surprisingly enough, also, from the departmental officers. The growers' representatives insisted that, short of almost full payment for their produce, it would not be worth the cultivators' while to market their produce through co-operative societies, whereas the departmental officers complained of the lack of honest and competent co-operative workers, and the disloyalty of members.

91. We have carefully considered this question in all its bearings, and are inclined to think that the establishment of properly organised co-operative purchase and sale societies at selected centres,

for a crop like paddy, offer possibilities which should not be altogether ignored. Paddy prices follow a more or less well-defined and predictable course. Generally speaking, prices continue to be low up to February-March, after which they begin to rise, reaching their peak about the end of September or October. The following table will show the seasonal fluctuations in price at Burdwan between 1926-35.—

Average price per maund of common paddy in annas.*

Year.	Average prices at Burdwan.	
	January-March.	July-September.
1926	63½	67
1927	63½	69
1928	65	63½
1929	48½	50
1930	38	44
1931	..	..
1932	24	25½
1933	25½	29
1934	23½	30½
1935	30½	31½
Average	42½	45½

It will appear from this table that the the price of paddy in Burdwan increased by As. 3 to As. 6 per maund during the rainy season in almost every year since 1926. The evidence received in the mofussil confirmed this fact. In almost all the paddy-growing districts, we were told that the prices rose steadily from the breaking of the rains to a maximum in September-October, and that deviations from this usual trend were rare. If the growers could only hold up their crop, and sell it in the highest market they would be ensured of a much higher price for their paddy and rice. We see no other practicable method of doing this except through co-operative sale societies of growers. The fact that the seasonal price fluctuations, in the case of paddy, unlike those of jute, are remarkably regular largely eliminates the speculative element in a scheme of such societies and renders their administration far less difficult than they otherwise would have been.

92. The real difficulties in the way of the successful working of these schemes are those relating to (i) management and (ii) finance. As for management, the work involves not merely purchase or collection of the paddy deposited by the members, and disposing of it when the price is at its highest, but also the maintenance of elaborate accounts in the name of each individual cultivator, payment to him at a rate to be fixed by the society; storage and grading of the paddy received from the members, negotiations for the disposal of the paddy collected from the members at the highest possible price, arrangements for the transport of the paddy from the society to the nearest terminal market or to Calcutta,

*Compiled from a note prepared by Mr. A. E. Porter, I.C.S., on the possibilities of Co-operative Jute and Paddy Sale Societies.

as the case may be. All this is much more than merely mechanical work, and calls for considerable business ability. It is hardly to be expected that a society of ordinary paddy-growers will be able to carry on marketing on this elaborate scale. The only practicable way is to work through a Central Paddy Sale Union to which village paddy purchase or rather paddy collection societies would be affiliated.

93. In view of the importance of this subject, we think it will be desirable to elaborate a little further the scheme that we have in mind. Co-operation could be best applied to the marketing of paddy in the villages by the establishment of what for lack of a better name, we propose to call paddy collection societies. A separate department to be called the paddy collection department might be attached to every village credit society in a paddy-growing area. It would be the function of this department to collect the paddy of the members of the credit society, and to arrange for its transport to a Central Paddy Sale Union to be established at the nearest important paddy market, which has facilities of road, railway or river communication with a marketing centre or with Calcutta. The village paddy collection societies would be affiliated to the Paddy Sale Union, and would be its shareholders. Under this scheme of co-operative organisation, the functions of the village paddy-growers would be strictly limited. They would be called upon merely to collect their paddy and to transport it through the collection society to the sale union. Payment would normally be made by the Paddy Sale Union through the paddy collection societies in the villages. As the Paddy Sale Union will be run by an expert staff, the problems of management will not present any difficulties to the paddy-growers in the villages. The price paid for the produce will be at the prevailing market rate; it is only after the entire paddy is marketed by the Sale Union, that the affiliated societies, and through them the paddy-growers will share in the increased prices obtained by the disposal of the produce in the best market.

94. The organisation of paddy collection societies or of paddy collection departments attached to the existing co-operative credit societies—where we desire to see co-operative effort concentrated for the present—will not, we fear, be all smooth sailing in the beginning. The cultivator's rooted dislike to pooling his produce with others, as well as his distrust of people who call upon him to part with his produce without paying for it in advance, may present stiff hurdles for the village societies to clear in the first few years of their effort at co-operative marketing. These difficulties can only be overcome by intensive educative propaganda, and prompt payment of the cultivator's dues. For all this very close supervision of these village societies, as well as of the Paddy Sale Union will be necessary in the first few years of the proposed organisation. We recommend that the above scheme be given effect to on an experimental basis, in a few selected paddy-growing districts for the present. If the scheme succeeds, the experiment could be easily extended to the other paddy growing areas of the province. We understand that a similar scheme was administratively approved of, and sought to be given effect to, at Memari in the district of Burdwan by the co-operative department a few years ago; but for some unforeseen reason, the scheme was never tried. If this is so, we take it that Government is already committed to the principle underlying the plan that we have elaborated in the foregoing paragraphs.

95. One serious practical difficulty in the way of implementing a scheme of this nature arises from the need for provision of adequate finance. Normally, this burden should be borne by the Central Co-operative Banks operating in the areas of the proposed Paddy Sale Unions. In the present state of co-operative finance in this province, we do not know if it will be possible for the Central Co-operative Banks to undertake this task without any substantial assistance from the public exchequer. Naturally, the financing capacity of the particular local Central Bank will determine the location of the Paddy Sale Union that we contemplate. Nevertheless, if in any particular case, having regard to the other advantages of the site, the establishment of a Paddy Sale Union is considered desirable, we do not think the project should be abandoned merely because the local Central Bank is unable to finance the union adequately. In such a case, we believe it will be both necessary and prudent for Government to supplement the efforts of the Central Bank by loans or appropriate guarantees. The object and the nature underlying the scheme justify the assumption of some reasonable financial risk by Government.

CHAPTER VII.

THE PROBLEMS OF PRICE-FIXING.

96. In this chapter, we propose to examine the possibilities of increasing the price of paddy and rice by direct manipulative action. At an early stage of our enquiry, the idea of fixation of a minimum price for paddy and rice attracted some of us; but as the enquiry proceeded, the difficulties underlying any such proposal revealed themselves more and more, and by the time we concluded our enquiry, the suggestion had very nearly lost all its attraction, and receded into the background of our thoughts. The mufassal witnesses that we examined on this subject—including the representatives of growers—were overwhelmingly against the fixation of a minimum price for a food crop like paddy. Nevertheless, we consider it desirable to examine carefully the issues underlying the proposal, so that the prevailing confusion of ideas on this subject may be clarified and the proposal may be seen in its true perspective in the cold light of reason.

97. The formulation of a minimum price raises some serious difficulties. One of these arises from the variable costs of cultivation of paddy in different parts of this province. At present we do not possess reliable statistics of costs of cultivation; but such materials as exist point to remarkable divergencies not only from district to district but also within a district itself. It is true that the mere range of variations is misleading and that the frequency distribution of variations, showing the limited ranges, within which the majority of the results lie, would give a more correct and balanced picture of cost variations. Unfortunately, however, in the case of paddy, these limited ranges are not always very narrow. Any attempt at prescription of a minimum price must, therefore, imply a prior agreement as to the figure which must be taken as the standard cost of cultivation in the province as a whole. This presupposes an elaborate investigation into the costs of cultivation of paddy in carefully demarcated, regionally homogeneous paddy-growing areas of this province. Hitherto, the only approach towards an investigation of this type in this province has been the recent enquiry* into the cost of production of jute and paddy carried out under the auspices of the Imperial Council of Agricultural Research in a few selected villages of Rajshahi-Bogra and Birbhum.

98. Even if the above statistical difficulty about the ascertainment of a standard cost of cultivation for the whole of the province could be solved, a more fundamental difficulty connected with this issue would still remain. In the case of a food crop like paddy, must our minimum price be fixed with reference to the "business costs of cultivation" or with "the farming costs of cultivation"? The former costs, which are calculated according to strict business costing methods would necessarily be much higher than the latter and the popular estimates of costs of cultivation, which were submitted to us by the mufassal witnesses in course of our tours. As the implications of these two different concepts

* See report on the cost of production of crops in the principal sugarcane and cotton tracts in India, Vol. VI, Bengal (1938)—published by the Imperial Council of Agricultural Research, New Delhi.

have been fully explained in the Report of the Imperial Council of Agricultural Research, to which we have already made a reference*, we do not propose to engage in further elaboration of the arguments contained there. So far as Bengal is concerned, broadly speaking, the "farming" costs of cultivation will fall short of the "business" costs of cultivation by the market value of the family labour engaged in agriculture and the interest on the cultivator's own capital invested in his farming. The difference on account of these two factors may often be considerable, and a minimum price based on "business" costs may well exceed that based on "farming" costs by a substantial margin. The choice between these two alternative bases of price-fixation is not likely to be determined by the mere application of economic analysis; it can be determined only by a clear perception of the nature of the economic welfare that we desire to achieve.

99. If the above basic difficulties are solved, the next practical problem, that will confront any attempt to fix a minimum price for paddy, will arise in regard to the numerous varieties of paddy grown all over Bengal. Will there be only one minimum price for the lowest quality of paddy grown in the province or a table of minima for all the principal varieties? If it is decided to proceed on the former basis, how is quality to be defined for the purposes of any minimum legislation? Apparently quality has to be fixed on the basis of such "consumption characteristics", as can be readily ascertained, e.g., size, shape, texture, colour, and perhaps also taste, when the paddy is boiled into rice. An elaborate system of grading on the basis of these "consumption qualities" appears to be a *sine qua non* of any scheme of fixation of a minimum price. But the practical difficulty does not end there. If after such definition, only the price of the lowest "quality" is fixed—presumably a little above the market rate—there will be a transference of demand from this quality to the unregulated varieties. As a result of this shifting of demand it may be difficult to enforce the price for the lowest variety. Consequently Government may, in the end, be compelled, by the logic of their original decision, to fix minimum prices for all the principal varieties usually consumed in this country. This step will necessitate the preparation of an elaborate chart of minimum prices for at least the more common varieties of paddy grown in this province. This by itself will be no easy task; the enforcement of the minima will be a far more complicated problem. We do not see how under the existing system of production all this work could be got through without the creation of an elaborate administrative bureau or department for this purpose.

100. We now come to the problems of administration and control. It is a common place of economic theory that, given the conditions of demand, the price for a commodity can be manipulated only if its supply can be appropriately controlled. In the case of a monopoly product, the supply is naturally controlled; in the case of other commodities price can be influenced only by artificial control of supplies. This implies control over domestic production as well over imports from outside. In the present context, it is the latter problem that seems to us to present well-nigh insuperable administrative difficulties. If the prescribed minimum price or the table of minima, as the case may be, is fixed—as, presumably, it must be—at a level higher than the market

*Vide page 5, report on the cost of cultivation, etc. *op cit*.

price for paddy that prevailed immediately before the minimum law came into force, there will be a tendency for paddy and rice from the neighbouring provinces to flow into Bengal in order to take advantage of the higher price-parities obtaining here. The immediate effect of this would be to force the market price below the legal price. If Government desires to maintain the price prescribed by law, they must be prepared to buy up all these imports at the legal price—which would be clearly a fanatastic policy to pursue. The only other way in which the minimum or minima could be maintained would be to control imports on an appropriate scale. Situated as we are in this province, this would mean the raising of a high tariff wall all along our land and sea-frontiers. Apart from the fact that the erection of such a Chinese wall against many of our neighbouring provinces will be constitutionally improper and impracticable, the administrative problems implicit in such a heroic measure will shake the whole structure of our provincial Government to its foundations. We do not think we need pursue this aspect of the problem any further.

101. We believe the arguments of the foregoing paragraphs will be a sufficient refutation of those facile references to the fixation of a minimum price for paddy, which were made from time to time during our enquiry, both in the press and on the platform. We do not therefore propose to discuss at much greater length the other concomitants of a scheme of minimum prices. In order, however, to complete our argument, we shall merely mention them *seriatim*:—

- (i) The policy will involve an obligation on the part of Government to buy all the surplus paddy that cannot be marketed at the fixed minimum prices.
- (ii) It will involve the storage or warehousing of this surplus produce.
- (iii) This, in turn, will involve the maintenance of godowns or warehouses, and a trained staff for the work in connection with them.
- (iv) The entire surplus produce will have to be withheld from the market as long as the price position does not improve.
- (v) Adequate funds should be provided for the above items (i) to (iv).

The magnitude of the task involved in all these measures can be easily imagined.

102. In the foregoing paragraphs, we have endeavoured to examine the more fundamental of the practical problems involved in a scheme of minimum prices for paddy and rice. Throughout this analysis, we have assumed that the fixation of a minimum price is an appropriate policy for a food crop like paddy. We shall now proceed to examine this claim a little more closely. Having regard to the interests of the community as a whole, is it, by itself, an appropriate and adequate price-policy? In Chapter IV of this report, we have indicated the outlines of what we believe to be an appropriate and comprehensive price-policy for paddy and rice in this Province. Does the proposal to fix a minimum price or a series of minimum prices fit in quite completely with the outlines of the policy of our adoption? *Prima facie*, a scheme of minimum price or prices for a staple food crop, which is the principal article of diet of millions of people in this country

cannot, by itself, represent a comprehensive policy; logically as well as in fact, it involves a sectional view of the problem. The plea for a minimum price for jute stands on a fundamentally different footing. Jute is not a commodity on which our nationals depend for their bare living; no upper limit to its price is, therefore, socially necessary except such as is imposed by the compelling demands of the economic principle of substitution. In the case of a food crop—and the most important food crop at that—an upper limit is as much necessary in the interests of consumers as a lower limit (*i.e.*, a minimum price) is necessary in the interests of growers *qua* growers. An adequate and logically complete food policy, based on the method of direct manipulation of prices, must, therefore, necessitate not merely the fixation of a minimum price, but also the enforcement of a prescribed maximum if and when necessary. For a food crop like paddy—we again emphasize this distinction—direct interference with prices implies intervention at both the upper and the lower ends. Logic, as well as social justice, requires this. And, what is very important to recognise is that, unlike commercial crops, in the case of paddy and rice, such interference with prices at the upper end, may be necessary long before the economic principle of substitution has come into play.

103. The argument of the previous paragraph underlines the essential complexities of any scheme of direct manipulation of prices for a food crop like paddy. If we are prepared to interfere directly with prices, we must be prepared to do so, so as to prevent an improper fall as much as an improper rise. In its practical consequences, such a policy will involve the erection of not merely a complicated administrative structure, but also the assumption of financial commitments on an unprecedentedly large scale. Of the countries nearer home, Japan alone seems to have engaged herself in the working out of such a policy since 1921. In an annexure to this chapter, we include a short historical and analytical note on the Japanese Food Control System prepared by our Secretary. It will reveal more than any argument of ours can do how extremely complicated is the nature of the organization engaged in the work of price control in Japan, and how very heavy is the financial burden of the system on the Japanese national exchequer. We note that the Japanese Rice Fund—the financial fulcrum on which the whole system hinges—amounts at present to the colossal sum of 850 million yen. We do not think we can suggest, without being guilty of reckless imprudence, the investment of resources on such a large scale in schemes, for which, we feel, there is no pressing necessity at present.

ANNEXURE TO CHAPTER VII.

A short note on the system of control of rice prices in Japan by Mr. D. L. Mazumdar, I.C.S., Secretary, Bengal Paddy and Rice Enquiry Committee.

1. Historically, the Japanese system of control of rice prices owes its origin to the war-time measures adopted to deal with the abnormal food situation which arose in Japan during the last Great War, and its aftermath. It will be recalled that our own Government had also to embark on an elaborate system of controls and restrictions at the same time for precisely the same reasons. The Japanese Government, however, decided to incorporate the ideas underlying these war-time experiments permanently into its normal peace-time economic policy, and, accordingly, by the Rice Law No. 36 of 1921, laid the foundations of its present food control system.

2. From the very beginning, the Japanese Government appears to have appreciated the inadequacy of a price-policy for a staple food product, which did not contemplate a scheme of symmetrical control, i.e., control at both the lower and the upper ends. They seem to have recognised from the outset that, in the case of a staple food crop, it was not sufficient merely to fix a minimum price, and to leave the upper limit alone to be fixed "automatically" by the operation of the economic principle of substitution. As the writer of a recent official monograph on this subject† observed somewhat quaintly, "Japan belongs to the third category (of self-supporting countries), and we stand exactly between food producers and consumers, so that the policy we pursue must have such a character as (is) equally fair and good to, and should be on behalf of, the producers as well as consumers". "From the historical point of view, the law (Rice Law) may be referred to as the modernization of the ancient system of 'Joheiso' (Jo-hei-so system literally means the permanent-levelling-granary system)* * * * * The Joheiso system consisted in the stabilization of corn prices by Government equipped with granaries at principal marketing points, where the Government purchased corn at higher price for the protection of farmers when it was lower, and sold at lower price for the benefit of the common people when it was higher, than the average price." In practice, this policy has implied not only the fixation and enforcement of a "standard minimum price", but also the prescription and enforcement of a "standard maximum price".

3. It will be convenient as well as instructive if we essay a rapid survey of the growth and evolution of the Japanese system of Rice

* Cf. the concept of the "Ever-green granary" recently elaborated by the American Secretary of Agriculture, Mr. H. A. Wallace. To the students of the economic history of India, the Jo-hei-so system has a strange family resemblance to the system of food regulation in ancient India, with which the author of the "Arthashastra" has made us familiar.

† Recent Food Control System in Japan—Government measures for Rice Control from 1921 to 1936, published by the Japanese Ministry of Agriculture and Forestry—Rice Bureau, 1937.

Control, ever since the passing of the Rice Law of 1921. The Law of 1921 empowered the Government—

- (i) “to buy, or sell, or exchange or process or store rice, *if it deemed it necessary to do so* for the adjustment of supply to demand”,
- (ii) “to regulate the imports and exports of rice by import duties or otherwise, *if it deemed it particularly necessary to do so* for the adjustment of supply to demand for rice,” and
- (iii) to establish a “Special Account”—popularly known as the Rice Fund—for carrying on the purposes of the Control Scheme. Accordingly a Rice Fund, with a maximum upper limit of 200 million yen was started in this year. It was further provided that loans up to the prescribed maximum could be raised on the resources of this fund. For all practical purposes, therefore, this was an autonomous fund, on which Government could operate at their discretion, for the maintenance of rice prices.

4. It was soon felt that the objective underlying the Rice Law of 1921 lacked quantitative precision. Some more definite guidance than the somewhat vague clause—“when it deemed it necessary to do so” used in the Rice Law of 1921 was required by the authorities administering the control scheme. Accordingly after several minor amending measures had been tried, the Japanese Government passed an important amending Act in 1931 in which it was provided that the Government should not buy or sell rice within the Empire, unless “the price of rice” had fallen below the minimum price or risen above the maximum price, as notified by Government. It was for the Ministry of Agriculture and Forestry to calculate the relevant “price of rice”, and also to prescribe the minimum and maximum prices, on the basis of which the system of control was to work. Detailed provisions were made about the same time by an Imperial Ordinance regarding the methods of calculation of the minimum and maximum prices, on the basis of the cost of production, the cost of living and the trend of rice prices as determined by the ratio of the index-number of the price of rice to the index-number of the prices of commodities in general. In order further to strengthen the control system, the existing methods of control of imports and exports were superseded by a regular system of permits or licences. Nobody was permitted to export or import paddy or rice without a licence. Simultaneously with the promulgation of this law, steps were taken to carry out elaborate investigations into the cost of production of rice, and the cost of living. It will be interesting to note that soon after the passing of the Amending Act, the Government discovered that it was necessary to control the imports of other competitive food crops as well if the scheme of control was to be strictly enforced. Accordingly the imports of millets, the most important competitive food crop in Japan, was regulated by the imposition of import duties with effect from 1932.

5. This system continued till 1933, when an important departure from the principles hitherto governing the operations of the scheme was initiated by the Rice Control Law of 1933. Hitherto, the prescribed maximum and the minimum prices appear to have been regarded as no more than pointers, which merely indicated that the time for such action, as the Rice Bureau might consider it necessary to take under the

Rice Control Law, had arrived. But, henceforth, in the words of the official monograph the Government intended "to establish more effective and thorough-going control, taking also the firm relief problem of the time into consideration." Accordingly, in the Control Law of 1933 it was provided:—

- (i) That Government must not allow prices to fall below the prescribed minimum or to rise above the prescribed maximum.
- (ii) These minimum and maximum figures were to be calculated on the same basis as before.
- (iii) In order to maintain the said minimum price or maximum price, the Government must accept offers for sale at the minimum price or offers for purchase at the maximum price and buy at the minimum price or sell at the maximum price, any quantity of rice so offered to it.
- (iv) The Government might also buy rice for importation or sell rice for exportation, if it considered it necessary to do so. The imports or exports of rice on private account, except through licences, were prohibited.
- (v) If the Government considered this course necessary for the control of rice prices, it might restrict the importation of millet, kaoliang or panic millet for any specified period.

6. These provisions will indicate the implications of a policy of control of rice prices by direct manipulative action. It may be instructive to examine at this point the salient features of the method of fixation of minimum and maximum prices as laid down in a supplementary Imperial Ordinance (No. 327 of 1936). Unfortunately, the official English version of this Ordinance is not a particularly perspicacious document; the phrasing is sometimes so obscure as to conceal the full meaning of some of the key provisions. Nevertheless the following summary description will, it is hoped, give some indication of the outlines of the Japanese method:—(1) The first stage is apparently the prescription of a "standard minimum price" by the Ministry of Agriculture. This price must be between two well-defined limits. One of the limits is fixed by the cost of production plus freight and other charges; and the other limit is fixed by the ratio of the index number of the price of rice to that of "all commodities" subject to a percentage reduction varying between 10 per cent. and 20 per cent. at the discretion of the Minister of Agriculture. In other words the standard minimum price must be somewhere between the cost of production plus freight, etc., on the one hand, and the calculated price-index of rice on the other; (2) Once the "standard minimum price" has been fixed, the Minister of Agriculture and Forestry proceeds to fix the minimum price "for each of the *types* and *grades* of home-produced rice of the year" in such a way that the total average of the minimum prices of rice included in the types and grades designated by the Minister may be equal to the "standard minimum price" fixed by the Minister; (3) It will be noticed that this procedure involves the notification of the types and grades in respect of which minimum prices are fixed, by the Minister of Agriculture and Forestry.

7. A similar procedure is adopted in regard to the fixation of maximum prices (1) first, a standard maximum is fixed within the limits of two prices, the one being the price calculated on the basis of the cost of living examined in the year, and the other being the price fixed by

the Minister on the basis of the price "calculated in the relation of the index-number of the price of rice to the index-number of the prices of commodities in general," subject to an increase of 20 per cent. to 30 per cent. In other words, the standard maximum price must lie between the cost of living index, and the calculated price-index of rice raised by 20 to 30 per cent.; (2) once this standard maximum price has been fixed, the maximum prices of the different types and grades of rices, are fixed by adding to their minimum prices the difference between the standard minimum price and the standard maximum price.

8. The object of the elaborate provisions of the Rice Control Law of 1933, and the supplementary Imperial Ordinance was to enforce maintenance of the prices at the upper or the lower limit, as the case might be. The law was put to a severe test immediately after its promulgation. For, in 1933, the yield of the rice crop in Japan broke all previous records, and the maintenance of rice prices at the prescribed minimum strained all the resources of Government. Although the Rice Fund has meanwhile been increased to the colossal figure of 850 million yen, some further buttresses to the Rice Control Law of 1933 appeared to be necessary. Accordingly, in 1936, two very important laws, which for the first time, attempted decentralization of the obligations assumed by the Japanese Government in this respect, were passed. They were (1) the Autonomous Rice Control Law of 1936, and (2) the Co-operative Paddy Store Aiding Law.

9. The writer of the official monograph referred to above describes the purpose of the Rice Control Law of 1936 to be "the facilitating of Government activities, while lightening its heavy financial burdens in rice-controlling, by means of autonomous adjustment of supply of rice on the part of the organisations or corporations connected with, or interested in the production or distribution of rice through rice control associations set up for the purpose." The law provided for the establishment of "rice control associations" throughout the Japanese Empire, consisting of rice-producers, landlords, and others receiving rice as rent. The functions of these associations were stated to be as follows:—

- (i) allotting to each of its members a quantity of rice, which is to be controlled by the association,
- (ii) storing rice, which is to be controlled by the association,
- (iii) furnishing funds to the members, with respect to rice stored by them,
- (iv) delivering the rice stored to Government for sale under prescribed conditions,
- (v) issuing warehouse certificate for rice stored, and
- (vi) selling rice which has been set free.

The allocation of the provincial quotas to be stored would be made by Government having regard to the quantity of supply in every year.

10. The object of the Co-operative Paddy Store Aiding Law was "to aid in storing paddy* * * and to cause the prefectures, organizations or corporations interested in rice production or distribution to take part in the Government control of the marketable quantity in the rice season and to lighten its financial burdens as well." In other words, while the Autonomous Rice Law sets up special Rice Control Associations, the object of the Co-operative Paddy Aiding Law is to assist the already existing private organizations in storing paddy.

The official chronicler of the history of the food control system in Japan, thus summarises the principal stages in the evolution of Government policy in the matter:—

- “(1) First, quantitative control.
- (2) Secondly, price-control side by side with quantitative control.
- (3) Thirdly, the setting up of a standard maximum price and minimum price as the criterion in price control.
- (4) Fourthly, establishment of official maximum price and minimum price be strictly maintained in price control.
- (5) Fifthly, the participation of organizations or corporations in co-operations with the Government rice control.”

No student of recent currency history can fail to be struck by the remarkable similarity between the mechanism of the Japanese Price Control System and the technique underlying the systems of exchange control prevailing in many important countries of the world, including our own. Both aim at the maintenance of prescribed upper and lower points by means of unlimited buying or selling—rice in the one case, and foreign exchange in the other. For this purpose, both the systems rely on extensive operations on *ad hoc* financial pools, viz., the Rice Fund in the case of the Japanese Price Control System, and Stabilization Funds, Exchange Equalization Accounts, or Currency Reserves specially set apart to this end, in the case of the Exchange Control Systems adopted in different countries. To any one familiar with the technique and working of these currency systems, these structural similarities will at once indicate the complicated nature and magnitude of the operations in which the Japanese Government must have been engaged in order to maintain rice prices between the price-limits prescribed by the Rice Control Law. Without the technical organization and resources of Japan, it would be futile to emulate the Japanese example.

11. The financial burden imposed on the State by the administration of the Rice Control Law will be apparent from the increasing size of the Rice Fund. From 200 million yen in 1921, the Fund has risen to the colossal figure of 850 million yet or over 70 crores of rupees at the current rate of exchange.

12. The nature of the organization entrusted with this work is no less formidable. The Rice Bureau is a practically autonomous department under the Ministry of Agriculture and Forestry and consists of the following sections:—

- (i) Rice Policy Section.
- (ii) Investigation Section.
- (iii) Home Section.
- (iv) Overseas Section.
- (v) Special Accounts Section.
- (vi) Rice Utilization Laboratory.

The number of officials and employees engaged in the rice administration service, at the end of 1936 (including the members and employees in the Rice Bureau, its Branches, Laboratory, and in prefecture) was 948.

CHAPTER VIII.

OTHER IMPROVEMENTS.

104. In this chapter we propose to examine very briefly, the more important of the factors other than price, which affect the margin of profit available to the average paddy-grower in this Province. On a very narrow and merely literal interpretation of our terms of reference, the subject matter of this chapter is not perhaps strictly germane to our enquiry. But from the very beginning, we have felt it necessary to put a liberal construction on our terms of reference, and not to cripple our investigation by a too literal interpretation of them. The wisdom of the course we decided to pursue was amply demonstrated in course of our tours, when not only did a good many of the competent witnesses, whom we examined, warn us against the error of emphasizing the price element to the exclusion of all other factors, but the majority of the mofussil witnesses, including the representatives of growers, who appeared before us stressed the non-price factors, e.g., supply of irrigation water and manure, much more than the elements which impinged directly on the pricing processes. Nevertheless, the phrasing of our terms of reference precludes us from considering the non-price factors as thoroughly as we should have like to do. We shall, therefore, content ourselves with merely indicating the principal directions in which the margin of profit to the paddy-growers can be increased.

105. It will be convenient to discuss these non-price factors under the following heads:—

(1) Agricultural.

The principal way in which the income of the paddy-growers can be increased is by increasing the quality and yield of paddy. This can be best done by the provision of (a) improved seeds, (b) irrigation facilities, and (c) cheap but efficient manures. We shall briefly discuss these subjects one by one.

(a) *Seeds.*

106. One sure way of improving the income of the paddy-growers is to encourage them to use improved varieties of seeds, which yield not only an increased outturn of the crop, but also in some cases a better quality. The existing practice in this respect is almost as old as the hills. In the great majority of the cases, the cultivators either preserve their own seeds, or obtain their seeds-requirements from the village mahajans on loan, for which they have to pay interest, in kind, rarely less than 50 per cent. on the amount borrowed. Neither of these practices makes for good cultivation. The paddy-growers' seeds are almost always impure, and so are the village mahajans'. Besides, even if the seeds are originally pure, very soon they get intermixed and deteriorate in course of a few years. It is, therefore, no wonder that the use of these local seeds yield crops of paddy which are

not only poor in quality, but also in quantity. The following table will show the yield of rice per acre of land in the principal rice-growing countries of the world, and in the principal rice-growing provinces of India:—

Comparative statement showing yield in pounds of rice per acre in foreign countries in the year 1935.

Bulgaria	..	..	..	..	1,904
Egypt	..	..	..	..	3,179
Formosa	..	..	..	..	2,220
Indo-China	..	..	..	..	1,032
Italy	..	..	..	..	4,743
Japan	..	..	..	..	2,988
Java	..	..	..	..	1,322
Korea	..	..	..	..	1,759
Siam	..	..	..	..	1,398
Spain	..	..	..	..	5,542
United States of America	..	..	..	..	2,138
India	..	..	..	..	828
Bengal	..	..	..	..	884

It will appear from this table that the yield obtained in India is the lowest as compared with the other rice-growing tracts in the world.

107. It does not, of course, follow from this fact that poor seeds alone are responsible for the poor yield of the rice-crop in this province. As we shall endeavour to show in the following sub-sections of this chapter, cultural methods and practices are no less important than seeds in securing a heavy yield of the paddy crop and that the defects and drawbacks in the system of cultivation of paddy in this country account for much of the lowness of yield. Nevertheless, we are inclined to think that improved seeds will go far to increase the yield of the average crop of paddy in this country, and that one of the principles of departmental policy should be to make the supply of such seeds available to the paddy-growers.

108. It is unnecessary for the purposes of our present enquiry to discuss the work of the Agriculture Department in evolving improved strains of pedigreed seeds. We shall only observe that our Agriculture Department can be legitimately proud of its work along this line. This is not to say that the departmental investigations into this subject are not susceptible of any improvement. On the contrary, from all that we saw and heard of the technical work of the Department in course of a hurried visit to the Dacca Farm, and to some other mufassal research stations, we felt that there was very considerable scope for improvement in at least one aspect of departmental work, viz., the establishment of "pure lines", and "selection" of particular strains of "pure lines". There are so many different varieties of paddy in Bengal that, unless the isolation of "pure lines" is taken up in parts, i.e., by the establishment of a large number of sub-sections representing homogeneous areas, in regard to soil and climatic conditions, there is a real risk that the time and effort devoted to this

investigation may well result in confusion and failure. We have no reason to suspect that the "higher command" of our Agriculture Department are unaware of these traps and pitfalls in the path of the research worker engaged in this problem. But we considered it desirable to mention this (perhaps, an obvious) point, just to indicate the need for caution and circumspection, in a programme of work that can justify itself only by the results it will yield to the ordinary paddy-grower.

109. The work of the department does not consist in merely evolving improved strains of seed; it must also arrange for the supply of improved seeds to the paddy-growers. It is here that the departmental work has been hitherto most perfunctory and inadequate. Witness after witness told us in course of our tours in the mufassal that the great majority of the paddy-growers had never heard of improved seeds, and did not know where they could get them from. For this unsatisfactory state of things it would not be fair to blame the Department; hitherto, it has lacked both the organisation and staff necessary for a seed-supply-service that could meet the seed-requirements of the many millions of Bengal's paddy-growers. The institution of a comprehensive seed-supply service is one of the most urgent of our agricultural reforms. Although in recent years, the establishment of seed farms attached to Union Boards has done much to spread the use of improved seeds, we feel the rate of progress needs to be greatly accelerated. At present there are only 450 Union Boards farms, with only 2,100 acres under both Aus and Aman paddies. Even if account were taken of the khasmahal, Court of Wards and other private seed farms, the output of seeds from these farms would be trifling in comparison with the seed-requirements of Bengal's 20 million acres of paddy land. Needless to say it will take many years to set up a comprehensive organization for this purpose, and the pace of growth will be necessarily determined by the funds available for this purpose. Nevertheless, we feel that it is high time that a determined effort was made to bring the fruits of departmental researches to the door of the average paddy-grower. Even if the departmental varieties of Aus and Aman yield only a maund more per bigha than the local types, the contribution to the economic well-being of the paddy-growers that the use of these improved seeds will make will be enormous.

(b) *Manures.*

110. Next to improved seeds the most important requirements of the paddy-growers are manures and water. Writing over 40 years ago, Dr. Voelcker observed*, "Water and manure together represent, in brief, the raiyat's chief wants". The position in these respects has hardly altered to any large extent in all these intervening years. The representatives of paddy-growers, who appeared before us in course of our tours, again and again mentioned these as their principal needs. We were told that the practice of manuring the paddy fields had well-nigh disappeared, and that the application of manures

*Vide Report on the Improvement of Indian Agriculture, page 93.

except to high-grade agricultural crops was the exception rather than the rule. The principal reasons urged were the increasing shortage of manures, and the paddy-grower's inability to pay for them. At the prevailing level of prices, cultivation of paddy hardly left any margin of profit to the growers. The cultivators felt that, with prices ruling at this level, the use of manures would not be worth their cost. We were told that a higher level of prices was likely to lead to an automatic increase in the use of manures. While we agree that the use of manures is largely a matter of the paddy-grower's ability to pay for them, we believe nevertheless that there is much scope for propaganda and demonstration in this respect. In the first place, a large percentage of the paddy-growers appeared to us to be sceptical of the financial aspect of the question; they were not convinced that the investment in manures would yield them an adequate return on their money. This scepticism seems to us to be at the bottom of much of the present attitude of indifference to manures. This attitude could be removed only by such propaganda and demonstration, as would bring home to the cultivators the material benefits that would result from the application of manures.

111. Secondly, the preservation of the manures and the precise form in which they are used are capable of much improvement. Commenting on this subject, Dr. Voelcker noted, "The second point in which the cultivator does not make full use of what he has at hand is in the conservation of the ordinary manure from cattle. Excellent as in many respects his cultivation is, yet in his method of securing to advantage the droppings of his cattle, the raiyat is, I am sure, greatly at fault. This is, in fact, one of the comparatively few matters, which lie close to hand, in which he can be shown a better way."* This observation was confirmed by some representatives of paddy-growers at Rungpore, who told us that the best method of preservation and preparation of manures was all but unknown to the average paddy-growers in the mufassal. Here also demonstration and propaganda alone can improve the existing position.

112. Lastly, the preparation of cheap manures from leaves or farm-yard sweepings which hardly cost anything is essentially a question of demonstration and persuasion. The Royal Commission on agriculture in India which went into this subject at considerable length observed that there was great scope for an extension of the activities of the Agriculture Departments in India in the direction of instructing the cultivator in the better preservation of manure and the use of composts. We fully endorse this suggestion.

113. In paragraph 109 we pointed out that the use of manures was largely a question of the cultivator's ability to pay for them. Nevertheless, in all these different ways, which we have just enumerated, we believe the paddy-growers could increase the quality as well as the yield of their crops, without any substantial addition to their costs of cultivation. It should be noted that, although the primary use of manures is to increase the yield of crops, they do also improve their quality if, they are timely and properly applied, and thus directly affect their price.

*Vide Report ; *op cit* page 122.

(2) Irrigation and Drainage Facilities.

114. We now turn to the next great want of the paddy-growers, viz., an adequate supply of water for cultivation purposes. In course of our tours in the mufassal, we were impressed by the unanimity of demand in this respect. Not only was the demand voiced by the witnesses from Western Bengal districts, but also from the representatives of paddy-growers in several North-Bengal and East Bengal districts. From the evidence that we received, we had no doubt that a very substantial addition to the income of the paddy-growers could be assured, if he was placed in possession of a regular supply of water during the cultivation season. Even in areas, where the paddy crop is normally rain-fed, the weather experience of the last few years stresses the need for irrigation facilities in times of shortage or failure of rainfall. That there is much scope as well as need for irrigation facilities in Bengal will be apparent from the following table:—

Names of countries.					Proportion of area irrigated to total area sown.
					Per cent.
Punjab	..	..	..	..	54
North-West Frontier Province			..	..	44
Ajmere-Merwara		..	..	..	38
United Provinces		..	..	..	30
Delhi	..	..	..	..	29
Madras	..	..	..	..	28
Bihar and Orissa		..	..	..	21
Bombay	..	..	..	..	16
Assam	..	..	..	..	11
Burma	..	..	..	..	8
Bengal	..	..	..	..	7
Central Provinces and Berar			..	..	4
Coorg	..	..	..	..	3

The districts of Eastern Bengal, where normally there is scarcely any need for irrigation on an extensive scale, account largely for the low percentage of irrigated lands in Bengal as a whole. The percentage would show a considerable rise, if it were calculated on the basis of the area sown to crops in the districts of Western and Northern Bengal alone. Nevertheless the inadequacy of the irrigation facilities in Bengal is amply demonstrated by the above figures. It will be interesting to note that Birbhum, Burdwan, Bankura and Midnapore account for nearly 70 per cent. of the total irrigated lands in Bengal, and that paddy alone accounts for nearly 90 per cent. of the crops grown in the irrigated areas.

**Vide* Agricultural Statistics of India, Vol. I (1934-35), page IV.

115. For our present purpose, it is unnecessary for us to enter into the technical aspects of the problem of irrigation in Bengal. We understand that the Provincial Government is at present engaged in a contour survey of the entire irrigable area, and that statistics of the irrigation requirements of every district are now under compilation in the department. These are moves in the right direction, and are the essential preliminaries to any comprehensive scheme of irrigation in the Province. It is greatly to be regretted that there should have been so much delay in acting on the recommendations of the Royal Commission on Agriculture in India, which observed in 1928* "No general survey of the irrigation possibilities of Bengal has yet been made. The first duty of the new Irrigation Department would, therefore, be to formulate a general scheme for irrigation development based on a survey in such detail as would ensure ordered progress. This is a point of special importance in tracts, which, in the nature of things, do not lend themselves to large projects. . . . We have only two general suggestions to make:

- (a) The technical aspects of the schemes should be so designed as to meet the special requirements of the different parts of the province.
- (b) Secondly, the full costs of the schemes should not exceed the actuarial value of the normal risks of crop failure calculated over a number of years. The average paddy-grower is not yet familiar with the idea of insurance against a future risk. Consequently in a year of good rainfall, he is often reluctant to pay for water, which he does not require. Needless to say, this attitude does not fit in with the financial requirements of big irrigation projects, the annual charges on which must be borne irrespective of whether the off-take of water in any particular year is large or small. Propaganda alone can educate the cultivator in the value of insurance against failure of rains; but the annual cost of such insurance should be commensurate with the income of the cultivator from his land. If the average annual cost of an irrigation scheme exceeds the amount which can be reasonably expected to be realized from its beneficiaries, the scheme is no longer a financially practicable proposition and should as a rule be discarded.

116. While irrigation remains one of the primary needs of paddy cultivators in Western Bengal, and in some of the districts of Central and Northern Bengal, adequate drainage facilities have become an increasingly important concern of Eastern Bengal and of several districts in Central and Northern Bengal. The evil shows itself in extensive water-logging, wherever there is heavy and continuous rainfall or over-flooding of the affected areas. As there are events of almost annual occurrence, water-logging has also become an almost standing feature of the agricultural economy of these parts of Bengal. Numerous factors, in which the hand of man, no less than the hand of God, has played its part have contributed to the present deterioration in the natural drainage of this Province. And when it is further remembered that this process of deterioration has gone on for many years now, it is idle to pretend that this problem can be solved easily. We are fully aware of its complexities. Nevertheless, we desire to

*Vide Report of the Royal Commission on Agriculture in India, page 359.

emphasize the fact that it can be at least partially tackled if a beginning is made with local minor drainage schemes in the more important affected areas of this Province. At present Government have hardly any data in their possession to show the minor drainage requirements of this Province. A compilation of a complete list of all the possible minor drainage schemes seems to be the first step to take in this direction. When this has been done, Government should cause these schemes to be examined by their technical experts. Only schemes that are technically sound will deserve further consideration. The next step would be to examine the financial implications of these schemes. Government should evolve a suitable grants-in-aid policy in respect of these minor drainage schemes. The schemes which are technically approved, and can qualify for Government grants under the rules framed by Government for this purpose should be gradually taken up for execution under the supervision of the technical staff of the local bodies or of the Provincial Government. This is, in brief, the bare outline of the drainage policy that we commend to the Government for their acceptance. We need hardly add that the administrative and financial details will have to be carefully worked out, and the rate of progress will depend on the resources at our disposal. But the important thing that we desire to stress is that a beginning with this work can be made only if the Agriculture and Irrigation (Drainage) Departments of Government can work hand in hand. Governmental policy must effectively provide for this co-ordination.

117. The four items, which we have discussed in the foregoing paragraphs, viz., improved seeds, manures, irrigation and drainage facilities, should, in our opinion, form the basis of a short-period agricultural policy, which we strongly commend to the Provincial Government for its acceptance. We need hardly say that these items should, by no means, exhaust the activities of the Agriculture Department; we stress them merely because we desire to see the Department concentrate on items, which can yield demonstrable and substantial results in the short period. In course of our tours in the mufassal, we were impressed by the lack of contact between the activities of the departmental officers and the chief agricultural needs of the paddy-growers. Very often, the growers' representatives, whom we examined, expressed their disappointment of the work done by the departmental officers. We feel that much of the criticism is uninformed being based on ignorance of the manifold activities of the department. This is due largely to the extremely inadequate staff employed in the districts. The District Agricultural Officer, and the local demonstrators are the only propaganda officers through which the activities of the department can be brought to the door of the agriculturists. Even now all the districts have not got their District Agricultural Officers, and the number of agricultural demonstrators is pitifully small. A vigorous forward drive in agricultural policy, such as we contemplate, implies not merely a substantial increase in the strength of the existing staff but also considerable improvement in its quality. While all this is true, and the financial and administrative handicaps from which the Department has hitherto suffered must be admitted, we are inclined to ascribe the comparatively little impression which the departmental activities have hitherto made on the practice of agriculture in this country principally to the absence of a clear-cut policy of agricultural advancement, limited in range, and capable of execution within a limited period of time. More than

any other branch of Government, the work of the Agriculture Department is apt to be judged by the results which it can produce. In order that these results may be of substantial benefit to the agriculturists as a whole, it is necessary that they should not merely be easily demonstrable to them, but also meet their chief agricultural needs. We believe that the formulation of a short-period agricultural policy on the quadripartite basis of improved seeds, manure, water and drainage, will go far to satisfy the principal agricultural needs of the cultivators as a class, and of the paddy-growers, in particular.

(3) Transport.

118. In paragraph 81, we discussed the defects of the existing system of communications in rural areas. In this paragraph we propose to examine the question of railway and steamer freights, and their bearing on the movements of paddy and rice within the province and outside it. The following table will show the basic rates of freight over the Eastern Bengal Railway.

Freights over the Eastern Bengal Railway:—

At railway risk.

At owner's risk.

(From 1929 to 31st October 1935.)

1st class, i.e., mile.	“C-O” Schedule, i.e.—	Pie per md. per mile.
	For the first and up to 75 miles	·300
	For extra distances above 75 miles but not exceeding 400 miles to be added to the charge for 75 miles ..	·170
	For extra distances above 400 miles to be added to the charge for 400 miles ..	·100

(From 1st November 1935 to
31st December 1938).

	“C-N” Schedule, i.e.—	Pie per md. per mile.
	For the first and up to 75 miles	·333
	For extra distances above 75 miles but not exceeding 150 miles to be added to the charge for 75 miles ..	·200

*At railway risk.**At owner's risk.*(From 1st November 1935 to
31st December 1938).

	Pie per md. per mile.
"N-C" Schedule, i.e.—	
For extra distances above 150 miles but not exceeding 300 miles to be added to the charge for 300 miles ..	·170
For extra distances above 300 miles but not exceeding 400 miles to be added to the charge for 300 miles ..	·125
For extra distances above 400 miles to be added to the charge for 400 miles ..	·100

It will be interesting to compare the above rates with those charged over
the Bengal-Nagpur Railway :

Bengal-Nagpur Railway freight rates :—

From 1928 to 1938.

(C-H rates.)		Rates.
	Distance.	Pie per md.
A. Rice	1 to 300 miles	.. ·380
	+301 to 700 miles	.. ·130
	+701 and above	.. ·100

(plus an extra charge of 8 pies per md.).

From 1928 to 14th May 1934.

B. Paddy	.. {	1 to 300 miles	.. ·380
		+301 to 700 miles	.. ·130
		+701 and above	.. ·100
	From 14th May 1924 to 1938.		
	.. {	1 to 100 miles	.. ·380
		+101 to 300 miles	.. ·220
		+301 to 600 miles	.. ·130
		+601 and above	.. ·110

119. The striking feature of these basic rates of freight is their complete inelasticity. During the last ten years, not only did the freight rates fail to come down in sympathy with the fall in the general level of prices or in the price level of paddy and rice, but, since, 1935, the average rate of freight actually registered a slight increase. This feature of the railway freights is not peculiar to the rates for paddy and rice, but is an incident of railway rates policy, which has recently attracted considerable attention. Into the theories underlying the formulation of railway rates, we need not enter in this context. They may partly explain the curious phenomenon of the rigidity of these rates against a steadily falling level of commodity prices, but on any theory of railway rates this rigidity would be difficult to justify economically. As the Royal Commission on Agriculture observed, "Freight rates are ordinarily the heaviest single addition to prime cost of produce exported by rail from the area of production. In a competitive market they amount to a heavy charge on the gross price ultimately paid for the produce and, to the cultivator who is selling his commodity at a distance, they amount to a substantial proportion of the price he receives at the place of sale * * * we recommend a periodical revision of rates with a view to the adjustment of their incidence as between various sorts of produce, according to their relative ability to bear them * * *". At the time the Royal Commission reported (1928), agricultural prices were generally on the up-grade; and the fact that there had been no revision of freight rates since 1913, suggested the inference that the burden of transport was gradually becoming lighter. These circumstances, however, completely changed after the onset of the depression in 1929-30. The contention seems to be irrefutable that the high freight rates during the years of depression were an important factor in reducing the income of the agriculturists from their saleable surplus of agricultural produce. It is greatly to be regretted that the salutary recommendation of the Royal Commission on Agriculture about the periodical revision of freight rates was ignored during the worst depression that this country has experienced. The matter is of such great importance that we suggest that the Provincial Government should take it up with the authorities concerned at an early date.

120. It is true that the rigours of the inelastic basic rates have been considerably mitigated by the special concession rates granted to individuals or groups of individuals from certain selected stations. We received complaints from representatives of traders that these concession rates were generally allowed only to and from those stations which were served by a competitive means of transport and that similar concession rates for other places were not at all easy to obtain. We do not know the attitude of the railway administration in this respect. We can, however, readily appreciate that, from the point of view of railway finance, these concession rates can be justified only in the event of their bringing in such increased business to the railways as would compensate them for the loss of earnings involved in the grant of these concessions. While we feel that every case for a concession rate must satisfy this test, we are inclined to think that the adoption of a constructive rates policy will go far to develop business in centres, which at present seem hardly to deserve any special rates.

121. A grievance of a different type was brought to our notice at Bankura and Birbhum. At the former place complaint was made of the different freight policies pursued by the B.-N. Railway and B. D.

Railway. It appeared that, while the B. D. Railway which served the needs of the traders and merchants of the eastern part of the district, granted concession rates for the transport of paddy, B.-N. Railway granted no such concessions to the mills and Aratdari houses situated at Bankura or its neighbourhood. It is difficult for us to enquire into the merits of specific cases like this; the remedy of the aggrieved merchant lies obviously in representation to the Railway Rates Tribunal. But we would repeat the recommendation that we made in the previous paragraph. In our opinion it is high time for all the railway administrations either to revise their basic rates or to explore the possibilities of a substantial extension of the system of special rates.

122. From Bolpur we received complaints to the effect that the freight policy pursued by the E. I. Railway was making it more and more difficult for the upcountry mills to compete with the onrush of Burmese imports even in the upcountry markets. As an illustration of this policy, we were told that the freight rate from Calcutta to Chapra (Bihar) was the same as that from Bolpur to Chapra. The inevitable consequence of this rate policy was the gradual invasion of the upper Bihar markets by Burmese rice from Calcutta. We have not been able to verify the facts of this complaint, and are therefore unable to express any opinion on it. If, however, the facts are as they were stated to us, the case for early action to correct this anomaly is urgent. In this case too, an application to the Railway Rates Tribunal would perhaps be the best procedure to adopt. But it is not always easy for small mufassal merchants, with their limited resources, and limited knowledge of the practice and procedure prevailing in this tribunal, to try and seek redress from it. The mere fact that they do not resort to this method for the ventilation of their grievances should not prevent the railway administrations from examining these grievances, on their own, and giving relief to parties, where this is due.

123. Steamer freights are generally lower than railway freights for similar distances, but they also exhibit the same characteristics as the railway rates and call for similar comments. Except at points where the steamer services are subject to competition with railways, the freights continue to remain on the high side. Like the railway rates, generally speaking, they take no account of changes in the level of commodity prices. The following statement will show the steamer freights to and from some selected places:—

		Per md.	
		A.	p.
Bogabundar (Bakarganj) to Calcutta	..	4	6
" " " Chandpur	..	3	6
" " " Dacca	..	4	8
" " " Mirkadim	..	3	9
Khulna to Calcutta		4	0
Barisal to Calcutta	..	4	0
Narayanganj to Calcutta	..	3	6
Dacca to Calcutta	..	3	6
Mirkadim to Calcutta	..	3	6
Chandpur to Calcutta	..	4	0
Narsingdi to Calcutta	..	4	0
Bhairab to Calcutta	..	4	0

The incidence of the freights on the price per maund can be easily calculated.

The following statement will show the rates of steamer freights in Western Bengal:—

<i>Ex</i> following stations to Calcutta.	Freight rate.	Mileage.	Freight rate per cent. of wholesale price.
	Per 100 mds.		
	Rs. a.		
Nadia ..	7 8	79	2.14
Kalna ..	6 8	64	1.86
Santipur ..	6 4	58	1.80
Doodcomra (Midnapore)	9 0	83	2.60
Bakshihat (Howrah) ..	9 0	82	2.60
Jorabaj (Howrah) ..	5 8	44	1.60
Jum-Jhumi (Howrah) ..	6 8	54	1.86
Falta (24 Parganas) ..	4 8	36	1.30
Shibganj (Howrah) ..	4 12	39	1.40
Katwa ..	10 0	130	2.9

The incidence of the freight rates will be noticed from the last column of the above table. There are many factors affecting this incidence, but it is unnecessary for the limited purpose of this chapter to examine them.

124. It is only the case of transport by boats that has fallen with the decline in the level of commodity prices. They remain the cheapest method of transport not only relatively but also absolutely. The following are some typical figures:—

Barisal to Calcutta ..	1 anna per md.
Bogabundar (Bakarganj) to Chandpur	2 annas to 2 annas 6 pies per md.
Bogabundar (Bakarganj) to Dacca	3 annas per md.

CHAPTER IX.

STATISTICS IN RELATION TO PRICE-POLICY.

125. In this chapter, we propose to devote a few paragraphs to another subject of very great importance, which has a close bearing on the price-policy with regard to paddy and rice that we have advocated in Chapters IV and V of our report. We refer to the improvement of the statistics relating to the production and trade in paddy and rice. Important as is the collection of reliable statistics for all articles of trade and commerce, it is particularly so in the case of a principal food crop like rice. Not only is it essential for us to know the statistical position with regard to our food-supply, but the existence of reasonably accurate statistics on this subject can alone form the basis of food-planning on an extensive scale, which has become more and more urgent of late, in view of our rapidly increasing population. Moreover, in any food-policy that we may formulate, we shall constantly require the guiding light of reliable statistics to lead us along the right path. From all these different considerations, we have thought it advisable to devote the following paragraphs to an examination of the position in this respect, and to suggest improvements where these are called for.

126. The relevant crop statistics can be divided into two classes—(a) production statistics and (b) trade statistics. As we shall find presently, defective as are the existing trade statistics, they compare very favourably with the production statistics, where we believe the greatest improvement is called for.

127. The statistics of production are contained in a number of reports and returns, some of which are published by the Government of India (Department of Commercial Intelligence and Statistics) and some by the Provincial Governments (Department of Agriculture). It is not to be thought that the Central and Provincial publications are based on materials collected independently of each other. More often than not, the Central publications incorporate materials already collected in the Provincial Reports, and almost invariably the original statistics are collected and compiled by the Provincial Departments of Agriculture through the Revenue or Police staff in the districts. Hence the real responsibility for the accuracy of the production statistics ultimately rests on the work of collection and compilation in the Provinces. The need for a competent and adequate organization for the collection of these statistics can thus be readily appreciated.

128. The defects and deficiencies of the existing statistics of agricultural production have been energetically debated for well over two decades now. In recent years, the Royal Commission on Agriculture in India* and Dr. A. L. Bowley and Mr. D. H. Robertson† in their report to the Government of India have again commented on the defects and weaknesses of the statistics of production in our Province. No useful purpose would be served by our recapitulating at any length the comments of these experts and competent critics. It will suffice for our present purpose if we merely indicate the principal directions in which reform is called for.

*Vide pages 604-609, Report of the Royal Commission on Agriculture (1928).

†Vide pages 35-39, "Report on a Scheme for an Economic Census of India (1934)".

129. The existing classification of the area of each district into the usual categories of (a) forests, (b) net available area for cultivation, (c) cultivable waste other than fallow, (d) current fallows and (e) net cultivated area leaves a good deal to be desired. From the point of view of crop-planning against our rapidly increasing population not only does this classification require to be revised at an early date, but the statistics under these different heads call for careful re-examination, on the basis of a well-planned agricultural survey of each district, which is overdue. The Royal Commission of Agriculture laid very great stress on this aspect of our agricultural statistics, and permitted themselves of this decisive observation, "In many parts of India, the pressure of the rural population on the cultivated land is steadily increasing, and both Government and public should be in a position to know, with greater exactitude than they do at present, the area of land in each province, which is in reality suitable for new cultivation."

130. For our present purpose, however, we are more immediately concerned with the statistics of crop areas, and crop yields. It is here that the agricultural statistics of the Province are mostly at fault. The Royal Commission of Agriculture described the returns of crop areas "as mere guesses, and not infrequently demonstrably absurd guesses," while Dr. Bowley and Mr. Robertson observed, "The outstanding need for all-India statistics is a new system of recording the area under the Permanent Settlement.....In the permanent settlement areas, where there is not the same detailed revenue organization as in the rest of British India, the annual statistics of area are generally admitted to be almost worthless, except for jute, tea and possibly sugarcane....." If the character of the reporting agency and the method of reporting are remembered, it is not to be wondered that the area figures should be so often so grossly out. Under Rule 5 of the "Rules for the Preparation of Crop Reports in Bengal," the agency, which is to do this work is—

- (a) preferably a khas mahal tahsildar,
- (b) next, a Circle Officer, "who has been appointed to a circle as a permanent measure";
- (c) failing the above, the Thana Officer; but
- (d) in addition, either a Kanungo or a District Agricultural Officer may be employed to make an estimate.

While the function of the abovementioned primary reporting agencies is to collect the basic data by personal observation, the district officer is free "to reject or amend the reports in the light of his own knowledge or experience" or to revise them in the light of "his information from sources" other than "police, e.g., non-official agricultural correspondents and officers of the Agriculture Department." The net effect of all these provisions is to reduce the calculation of the crop area to an entirely subjective estimate—an estimate not of informed observers permanently resident in the locality, but of casual visitors or of itinerant officers, who are required by the rules to sleep only a reasonable number of nights out every month.

131. Not only the crop area but the normal figures are also far from accurate. In this province, the normal yields are calculated on the basis of crop-cutting experiments conducted under the guidance of circle officers. The principal defect of the present system is the selection of a field of "average crop", by mere looking at it! A secondary

objection is the extremely small number of crop-cutting experiments conducted by the circle officers. Between these two evils, it is no surprise that these experiments do not yield satisfactory results.

132. Lastly, there is that most elusive item of estimation, viz., evaluation of the seasonal condition factor. The Royal Commission on Agriculture remarked, "the estimate is a visual one, and of all the three factors which enter into the estimate of crop yield, is that which is the most difficult to arrive at satisfactorily." At present, for this "most difficult" aspect of the estimation of crop yield we have to rely primarily on the visual impression of a President, Union Board or perhaps of a chowkidar!

133. Enough has been said to expose the sources of error in the present method of computation of crop yields in our province. The remedies which the Royal Commission on Agriculture and Dr. Bowley and Mr. Robertson suggested were (a) the improvement of the existing method of calculation of the crop area by the adoption of a system similar to that of jute schedules, and (b) randomised crop-cutting experiments on an extensive scale. As regards the calculation of the paddy area with the help of paddy scheduled, on lines similar to the compilation of the acreage under jute, we have had the advantage of discussing the administrative and organizational side of the question with Presidents and members of Union Boards on the one hand, and the district officers on the other. While all of them generally agreed that the existing machinery of the Union Boards could no doubt be employed on the compilation of the paddy scheduled in the same way as jute schedules are now prepared, almost all of them were equally sceptical of the quality of the returns that were to be submitted. To those of us, who have had practical acquaintance with the methods adopted in the preparation of the jute schedules, the prospects of collection of reasonably accurate paddy statistics by a similar method seem to be extremely remote. As the acreage under paddy in this Province is several times that under jute, there is a real risk that the percentage errors in the paddy schedules might exceed those in the jute schedules by several times. The method of the direct collection and compilation of *mauzawar* jute statistics, with the help of jute schedules, is already recognised to have failed to elicit substantially correct figures; we have no reasons to believe that they will yield any better results in the case of an extensive crop like paddy.

134. In our view, the application of the sampling technique offers much better prospects of reasonably satisfactory results, both for the estimation of the crop area, and the ascertainment of the normal yield by means of crop-cutting experiments. We understand that this method has been under examination and trial since 1937. At present, an exploratory survey, based on this technique is being carried out in a number of jute-growing districts in this Province. The delay in the sowing of jute due to the abnormally late rains of this year appears to have arrested the progress of this survey; but before long its results are likely to be available for the consideration of Government. Last year similar experiments were carried on extensively on the paddy crop in the districts of Burdwan, Hooghly and Howrah. We understand as many as 9,000 samples, with 260,000 sub-samples representing different types of soil and the principal relevant agricultural characteristics were investigated by the survey party in charge of this work.

The results are still under examination. In view of the wealth of materials collected by this sampling survey, we need hardly stress the necessity of the most careful and detailed analysis of these data. These experiments on Jute and Paddy should, before long, enable the Statisticians to decide on the most appropriate sampling technique applicable to the conditions of cultivation in this Province. As soon as the technical aspects of this method have been satisfactorily worked out, and its dependability has been convincingly demonstrated, we suggest that Government should seriously consider the possibility of its use in the collection of statistics for paddy and the other principal crops of this province. Some time ago, when, for the first time, the sampling method was being tried for the ascertainment of the acreage under jute, we were told that Professor P. C. Mahalanobis, the Statistician in charge of this work, suggested to Government that the scope of the work should be enlarged to include not only crop-cutting experiments on jute and paddy, but also the estimation of the total area under paddy and other crops. We greatly regret that this scheme of joint action with the Indian Central Jute Committee did not materialize. The experience gained as a result of this exploratory survey would have been of inestimable value to the detailed working out of the sampling method in its application to the agricultural conditions of this Province. We desire to emphasize our conviction that it is in the evolution of a satisfactory technique of sampling that we see the possibility of the extended use of statistical methods to agricultural problems at a cost that would not be too heavy for the limited resources of our Provincial Government to bear. As Professor R. A. Fisher, the famous English Statistician observed in his memorandum submitted to His Excellency the Viceroy in 1938:—
 "In the economic aspects of agriculture, the most obvious line of progress now suggested is the development of the sampling method..... this method is capable *at very trifling expense*, of ascertaining with more than the necessary precision, such facts as the actual yield in a district or province, of any chosen agricultural crop." Before we pass on to discuss the possibilities of developing this technique, we feel a few words are necessary on the third factor in crop estimation, viz., the seasonal condition.

135. As we pointed out in paragraph 132 the estimation of the seasonal condition factor is now essentially a matter of "eye inspection". The weaknesses of this method are obvious. Unfortunately, no other objective method has yet been devised in this country for the measurement of this factor, that can replace the existing method. Even in the more advanced countries of the world, attempts to arrive at objective estimates of the seasonal condition factor are of comparatively recent origin. For example, in Great Britain, the well-known crop-weather scheme, which purports to investigate systematically the influence of weather on the quality of crops, was inaugurated only a little over a decade ago, after the Agricultural Meteorological Committee had reported in 1924. The technique underlying this scheme is still in a state of flux. In the earlier periods of the development of the science of Agricultural Meteorology emphasis was laid almost exclusively on the correlation between yield and meteorological factors, of which rainfall was by far the most important. The pioneer work of Lawes and Gilbert on wheat yield and winter rainfall, and the later work of Napier Shaw and R. H. Hooker, of Allen in Sweden, and of Walter in Mauritius, and lastly of R. A. Fisher on the influence

of rainfall on the yield of wheat at Rothamstead—were all based on the assumed existence of a precise ascertainable correlation between crop yields and meteorological factors. Jacob's pioneer work in this country also followed this traditional line. Later researches have, however, tended to show that a more fruitful line of enquiry perhaps lies along efforts to establish a correlation between crop yields and the "measurable characteristics" of the growing crop before the harvest. In any case, *a priori*, this method offers much better prospects of crop forecasting over a whole country as distinct from a district or locality, because it eliminates many important sources of variation in the acreage yield of a country, e.g., changes in agricultural technique or in the quality of land on which the crop is grown. In this country, where the study of this subject is still in its infancy, perhaps both these methods will have to be tried for a good many more years before their relative efficiency can be determined. We understand that the Agricultural Meteorological Section of the Meteorological Office at Poona has been engaged in investigations into this subject for the last five years. In view of the wide variations in climatic and meteorological conditions in the different parts of this sub-continent, we suggest that the work of the Poona office should be supplemented by similar investigations in our Province as well. Whatever be the exact nature of the investigations carried out in this province, a reliable objective estimation of the seasonal condition factor can be based only on intensive studies on small areas well distributed over it. We recommend that it should be an important function of the Agriculture Department of this Province to undertake the studies at the selected experimental stations. But the complex nature of the investigation demands that, at their initial stages, the Agriculture Department should receive adequate and competent statistical assistance for this very important but intriguing work. If the establishment of the provincial bureau of statistics that we contemplate is not unduly delayed, it should be possible for our Agriculture Department to undertake this work of far-reaching importance in the near future. In selecting the experimental stations, where these field investigations should be carried on, care should be taken to see that they cover all the different agriculturally heterogeneous regions in this Province, so that the average result may be representative of the Province as a whole. Here too, the sampling method may be brought to our aid. To the possibilities of its development we shall now turn in the following paragraph.

136. If this technique has to be increasingly applied to the statistical problems of agriculture, it is of the utmost importance that the department should possess competent statistical guidance not merely in the application of this method, but also in its continuous improvement and gradual perfection. To quote Professor Fisher again,—“Details of the technique required for Indian conditions must be worked out thoroughly, for a mere imitation of the English procedure might easily encounter special obstacles. Here again I emphasize the need for training men.....The immediate danger here is the undertaking of such surveys by persons having little acquaintance with modern statistical methods, or with the economic planning of such enquiries.....” It is no disparagement of our Agriculture Department to say that it has hitherto lacked such statistical talent in its personnel; indeed, the need for it was hardly realized until recently. We understand that the Department has recently moved Government for the services of a qualified Statistician

to be attached to it. While the proposal is in accordance with the recommendations of the Royal Commission on Agriculture, we feel that the time is now ripe for the inauguration of a statistical service of much more extended scope, which will serve the needs of not only the Agriculture Department, but also of the other "nation-building" departments, which have of late frequently requisitioned the services of the statistical laboratory attached to the Presidency College, Calcutta. The Royal Commission contemplated that "the main concern of these officers (Statistical assistants attached to the Departments of Agriculture) would be the compilation of crop forecasts with statistics of agricultural production, with the technique and supervision of crop-cutting experiments, and with the collection of statistics regarding prices". The recent developments in statistical methods and techniques, to which we have already alluded, would require investigation and experimentation of an extensive scale to adapt them to the special conditions of this province. Besides, several other departments of Government, e.g., the Departments of Industries, Land Revenue and Irrigation and Drainage, have special problems of their own, which can be tackled only by the application of appropriate statistical methods with which a merely agricultural Statistician may not be always intimately acquainted. Hitherto these departments along with the Agriculture Department have to depend on such services as they could get from the pioneer statistical organization established at the Presidency College, Calcutta. While we recognize that the Presidency College Statistical Laboratory has ungrudgingly rendered all possible assistance to the different departments of our Government, we feel that the increasing volume and the complicated nature of the statistical work that Government, in the various departments, is now being called upon to undertake requires a special Government organization for this purpose. Accordingly, we recommend the establishment of a Provincial Bureau of Statistics, under the direction and control of a first-rate Statistician. The Bureau will have different sections attached to it according to the variety and volume of the statistical work entrusted to it. One of the most important of these sections will be that relating to Agricultural Statistics, but the other sections will have also plenty of work to do, e.g., in connection with health and vital statistics, industrial statistics, revenue statistics, irrigation statistics. It will not be enough to organize an adequate and competent statistical staff at the Provincial headquarters; by and by it will be also necessary to train up the field staff required for the collection of the primary data from the mufassal districts. Some of our members thought that the field work could be entrusted to the local Union Boards, if by a suitable amendment of the Bengal Village Self-Government Act, 1919, it was made a statutory duty of these Boards to collect such statistics as Government might direct from time to time. It was further suggested that failure to comply with this statutory duty might be made punishable under the law, and, that small fixed grants might be made to the Union Boards for the duty now proposed to be statutorily imposed on them. We refrain from expressing any opinion on this suggestion. When the Provincial Bureau of Statistics is established, it will naturally be one of its first duties to consider this suggestion along with others about recruiting its field staff. But all this will take some time, and until it has a field staff of its own, the Bureau will have to depend for the collection of its data on the existing administrative and departmental staff already engaged in this work in the mufassal.

Needless to say, all these details about organization of the Bureau, and its interrelations with different departments of Government will have to be worked out carefully and in detail. We, in this Committee, do not feel called upon to enter into these administrative questions at this stage. All that we are anxious to do is to impress upon the Government the growing need for and the increasing importance of harnessing statistical studies to the all-round development of agriculture in our province. Ten years ago, the Royal Commission on Agriculture stressed the need for statistical research as an aid to the formulation of social policies which will bear repetition even now. They observed:—"The whole basis of statistics in India urgently requires broadening. It should rest not on the work of a few Government officials, however able, but on the support of the informed public, through them, on the recognition by the legislatures and by the general public that modern statistical methods are in a position, to make an indispensable contribution to the successful development of scientific agriculture and social administration." We strongly endorse every word of this weighty observation.

137. We have hitherto confined ourselves to crop forecasts, and the methods of improving them. As things stand at present, they are the least developed and dependable of all the agricultural statistics in this Province. Statistics relating to the trade in agricultural produce are generally less vitiated by subjective elements, which play such a large part in the preparation of crop estimates, and are therefore more reliable than the production statistics. Nevertheless, even here, the room for improvement is considerable. Not only are the statistics of intra-provincial movements of paddy and other crops non-existent, but those of inter-provincial movements are also incomplete and defective. So far as the former are concerned, we recommend that, as soon as the Provincial Statistical organization that we have suggested is established, one of its earlier duties should be to explore the possibilities of obtaining reliable statistics of the movement of paddy from one district to another. In paragraph 29 of our report, we adverted to the present state of our ignorance on this subject. In course of our tours in the mufassal, we had the opportunity of discussing this matter with several Collectors of districts. We agree with them that under the existing system of compilation of statistics, even if these figures could be collected through the usual channels, they would be far from reliable. And any attempt to obtain reasonably accurate figures through the usual administrative channels would involve costs which would be hardly commensurate with their immediate usefulness. We were told by the Collectors, whom we consulted on this subject, that at present the only utility of the statistics was to indicate the extent of the dependence of any one district on others for its food-supply. As this knowledge was now generally of very little practical use to the district officers except in times of scarcity of failures of crops, there was a general tendency to undertake the usefulness of these statistics in normal times. We consider it unfortunate that there should be such lack of appreciation of the utility of these statistics. Even without any scarcity of famine, they seem to us to have a good deal of use. As the Royal Commission on Agriculture pointed out, these statistics furnish a valuable independent check on the present method of compiling statistics of agricultural production from the factors of areas sown, standard outturn, and condition estimate; and that, generally speaking, no detailed analysis of the marketing situation in

a Province can have any pretension to completeness without an adequate knowledge of the intra-provincial movements of food grains. Unfortunately, the use of inter-district statistics for these purposes has been hitherto completely ignored in our province. In order that they may be used for all these purposes in future, and, in any case, having regard to their ultimate importance in any scheme of food or crop-planning that Government may have to initiate in the not too distant future—if the present trend in the growth of our population is maintained—we consider that the possibilities of the collection of such statistics at a reasonable cost should be explored by the Provincial Bureau of statistics when it is set up.

138. The inter-provincial trade statistics stand on a different footing. They are mostly compiled by the Government of India, except that the annual returns of rail and river-borne trade are compiled by the Provincial Governments and are later on consolidated into returns for the whole of India. As at present compiled, the omission of road-borne trade and the trade carried by country-boats from these returns detracts somewhat from their value. We are unable to say whether this omission can be corrected at a reasonable cost. There is a considerable volume of trade in paddy and rice which is now brought into this Province by country boats from Assam, and passes out of the Province by the same means of transport. Similarly, most of the road-borne trade is from Bengal into Bihar. This will be a fit subject for investigation by the Bureau of Statistics. Apart from this minor suggestion, our only other comment on the trade statistics is about their comparative inaccessibility. The principal statistics of production and trade relating to paddy and rice, and also to all other crops lie scattered in a dozen publications, some central and some provincial. In order to stimulate interest in statistical studies relating to our food crop and other agricultural produce, as well as to facilitate the appreciation of the usefulness and importance of statistical methods by the legislatures and the general public, we consider it very desirable that the main statistical facts with regard to our agriculture should be readily available to all those who may seek them in a handy omnibus volume.

139. In all these directions we need hardly note that the Provincial Bureau of Statistics that we have suggested must work in full co-operation with the Department of Commercial Intelligence and Statistics. Such co-operation is necessary not merely because, under the existing allocation of functions, the collection of these statistics is as much the function of the Central as of the Provincial Governments, but also because we feel that the proposed Provincial Bureau should have the benefit of the advice and guidance of the older body, which has had already considerable experience in this field of work. Its advice will be particularly necessary as regards the constitution and organization of the Bureau. We suggest that Government should at once appoint a small technical Committee, on which the Department of Commercial Intelligence and Statistics should also be represented, to go into this question of the establishment of the Provincial Bureau of Statistics. This is a subject in which Government must have the best available expert and technical advice before they can proceed very far.

CHAPTER X.

SUMMARY.

In this chapter we summarize our principal findings and recommendations:—

Chapter I.

Introductory.

Chapter II.

(1) In this chapter we examine the acreage and yield of paddy in the principal paddy-growing countries of the world, and compare them with similar figures for India. The main conclusions which emerge have been detailed in paragraph 10.

(2) The acreage figures of the different provinces of India are then compared. As a result of this comparative study it is found that Bengal is by far the most important paddy-growing province in India both in regard to acreage and yield. The detailed conclusions of this comparative study are summarized in paragraph 14.

(3) The position of rice cultivation with that of jute is discussed in general terms, and the comparative importance of these two principal crops of Bengal is assessed. (Paragraphs 15 and 16.)

(4) Lastly, the position of rice cultivation in the different districts of Bengal is examined. (Paragraph 17.)

(5) The position of the rice-milling industry is next examined, and it is found that the principal centres of the milling industry are, Calcutta, Dinajpur (Hili), Bankura, Birbhum and Midnapore. (Paragraph 18.)

Chapter III.

(6) After a rapid survey of the world trade (both import and export trade) in India, we find that India has now sunk to a very low position in the list of export countries and has occupied a very high position in the list of import countries, with the result that India *proper* is, on balance, an Import country. (Paragraphs 20-22.)

(7) After a detailed analysis of the trade in paddy and rice between Bengal and other countries, including the neighbouring sister provinces of India, we find that out of the five years for which we collected statistics, viz., from 1933-34 to 1937-38, Bengal had a surplus trade balance in two years, and a deficit balance in three others. (Paragraphs 25-27.)

(8) It is, however, found that both her imports and exports constitute a small percentage of her annual production. (Paragraph 28.)

(9) In particular, it is found that the volume of Burmese imports into Bengal varied between 2 and 10 per cent. of her annual production, during the five years under examination. On an average it was 4 per cent. of her annual production. (Paragraph 28.)

(10) The absence of any reliable statistics of intra-provincial movements of paddy and rice is found to be a serious handicap to the examination of the position of the individual districts in regard to their food supply. Nevertheless, a tentative classification is essayed. (Paragraph 29.)

Chapter IV.

(11) A preliminary survey of the course of rice prices, and the causes of the fall in the prices since 1929-30 is undertaken. At the end of it, it is pointed out that it is the disparity in the fall of rice prices as compared with the prices of other agricultural commodities that constitutes the crux of the problem of prices in respect of paddy and rice. (Paragraphs 32-36.)

(12) Some general considerations bearing on the price-policy with regard to a food crop like rice are discussed, and the effects of different price-movements on the different economic groups are studied in detail. The main conclusions which emerge from this study are that although a rise in the price of paddy would probably benefit the majority of the paddy-growers of this province, a rapid and excessive rise was undesirable. In the interests of the ordered development of our economic life it was necessary that our price-policy with regard to paddy should be such as to harmonise the different economic interests in this province. (Paragraphs 36-43.)

(13) It is argued that, in practice, this objective would be achieved if the prevailing price could be raised just enough to bring it closer to the price of "all commodities" and into line with the price of other agricultural commodities. More definitely, it is suggested that if the price of paddy were to approximate to Rs. 2-8 per maund, the objective of a proper price policy would be reached.

Chapter V.

In this chapter, an attempt is made to analyse the various factors which affect the pricing-process, viz., (i) domestic demand, (ii) foreign demand, i.e., exports, (iii) domestic supply and (iv) foreign supply, i.e., imports.

(14) Basing our argument on the formula that domestic demand—domestic production—net exports, we find that there has been no fall in domestic demand during the years under examination. (Paragraph 47.)

(15) As regards exports, we find that foreign exports have been steadily falling during the last twenty years. (Paragraph 49.)

(16) Exports to maritime provinces, Orissa and Madras also show a similar fall. (Paragraph 50.)

(17) In the absence of reliable statistics of rail and river-borne trade, it is not possible to ascertain whether exports to other inland provinces have increased or not. (Paragraph 51.)

(18) The conclusion is, therefore, reached that the fall in exports was one of the factors which contributed to the fall in rice-prices. (Paragraph 52.)

(19) As regards domestic production, we are unable to establish any correlation between variation in it and those in the price of rice. (Paragraphs 53-54.)

(20) The conditions of foreign supply are then examined. After a detailed analysis of relevant statistics, we find that there has been no excessive imports of paddy and rice from the other provinces of India. (Paragraphs 56-57.)

(21) A similar examination of statistics of imports from Burma discloses a steady upward trend. From this fact as well as from other statistics relating to the Burmese trade in paddy and rice, we conclude that it is the huge rice surpluses of Burma, which have been acting as a constant drag on our domestic prices. (Paragraphs 61-64.)

(22) Against the background of the above analysis, we recommend that attempts should be made to increase the export trade. Grading of quality rice for the export market and the establishment of a central organization for the export trade are suggested. (Paragraphs 67 and 68.)

(23) Remission of the export duty on rice is recommended if budgetary conditions permit it. (Paragraph 66.)

(24) Control over the Burmese imports is recommended. It is suggested that this control should take the form of:—

- (a) a free import quota calculated in the manner indicated in paragraph 71.
- (b) a duty on imports in excess of the prescribed quota. (Paragraphs 69-71.)

Chapter VI.

(25) The existing organisation of the paddy and rice market is described in detail. (Paragraphs 73-74.)

(26) We classify the defects and deficiencies of the existing market into (a) those that merely impede the competitive processes and (b) those that prevent competitive bargaining between buyers and sellers on an equal plane. (Paragraph 72.)

(27) As regards the defects of the former type, we suggest the following reforms:—

- (a) Standardisation of weights and measures. (Paragraphs 76-77.)
- (b) Measures to reduce the illegal deductions and allowances. (Paragraphs 78 and 79.)
- (c) Application of the procedure of the Agricultural Produce (Grading and Marking) Act of 1937 to selected varieties of paddy in selected paddy-growing areas. (Paragraph 80.)
- (d) Improvement of rural communications. (Paragraph 81.)

(28) We examine the problems connected with regulated markets at some length and recommend their establishment in selected centres on an experimental basis. (Paragraphs 82-85.)

(29) Having examined the "frictional causes", which impede the working of competitive processes to the disadvantage of growers of paddy, we proceed to examine the methods by which the bargaining strength of the growers of paddy can be increased. This leads us to a consideration of the use and utility of co-operative marketing organisation. (Paragraph 86-87.)

(30) We find that the regular and predictable character of the seasonable fluctuations in the price of paddy is a factor that favours the establishment of co-operative societies. (Paragraphs 91 and 92.)

(31) The difficulties in the way of the successful working of such co-operative societies primarily concern their management and finance. (Paragraph 93.)

(32) A scheme of organisation by which these difficulties of management can be obviated is considered. We recommend the adoption of such a scheme on an experimental basis. (Paragraph 94.)

(33) While we are of opinion that the financing of such a scheme should ordinarily be the responsibility of the local Central Co-operative Bank, we recommend that in suitable cases, Government should offer necessary financial assistance to a well thought out scheme. (Paragraph 95.)

Chapter VII.

(34) In this chapter, we consider the more fundamental of the problems connected with a policy of fixation of a minimum price for paddy. We find that chief difficulties in the way of fixation of minimum price are:—

- (a) The formulation of minimum price. (Paragraph 97.)
- (b) The basis of price-fixation. (Paragraph 98.)
- (c) The existence of numerous varieties of paddy—should one minimum price be fixed or a table of minima. (Paragraph 99.)
- (d) the difficulties of the administration and control of a minimum scheme. (Paragraph 100.)

(35) We then proceed to examine the other concomitants of a policy of price-fixation, i.e., the measures that will be consequently necessary to make a scheme of price-fixation successful. (Paragraph 101.)

(36) Some fundamental questions of principle regarding the fixation of a minimum price are raised and discussed. It is contended that the policy of a minimum price for a food crop is not a socially adequate or appropriate policy. A comprehensive price policy for a food crop implies the fixation of an upper as well as a lower limit. (Paragraph 102.)

(37) A brief reference is made to the Japanese policy in this respect. (Paragraph 103 and Annexure.)

Chapter VIII.

In this chapter, we consider some of the non-price factors that effect the income of the paddy-growers.

(38) We find that the more important of these factors are all agricultural, viz.—

(a) The need for improved seeds.

(b) The need for irrigation facilities.

(c) The need for cheap but efficient manures. (Paragraph 105.)

(39) We consider that the yield of the paddy crop could be very considerably increased if the paddy-growers could be supplied with improved seeds. (Paragraph 106.)

(40) We recommend the inauguration of a comprehensive seed-supply-service at a very early date. (Paragraph 109.)

(41) As regards manures, we find that while it is true that it is the inability of the cultivators to pay for them that accounts largely for their failure to use manures, there are several ways in which the use of manures can be secured to the paddy-growers without much cost. (Paragraphs 110-112.)

Accordingly we suggest that propaganda for the popularization of such common manures as are readily available should be undertaken by the Agriculture Department.

(42) We emphasize the need for the formulation of a scheme for the extension of irrigation facilities to the paddy-growing districts of Western Bengal. Some considerations bearing on this subject are discussed. (Paragraphs 114-115.)

(43) On the tripartite basis of supply of improved seeds, use of manures and provision of irrigation facilities, we recommend the formulation of a short-period agricultural programme for the benefit of the paddy-growers of this Province. (Paragraph 116.)

(44) Having considered the level of railway freights, we find that their remarkable inelasticity has been an important factor in reducing the share of profits occurring to the paddy-growers. (Paragraph 119.)

(45) We strongly recommend the extension of the system of special rates, wherever this is possible. (Paragraph 121.)

(46) An examination of the prevailing level of steamer freights leads to the same conclusion as in the case of railway freights. (Paragraph 123.)

Chapter IX.

(47) The principal defects and deficiencies in the existing system of compilation of Agricultural statistics are discussed at some length, and the need for more reliable statistics of crop area and crop yield is emphasized. (Paragraphs 127-128.)

(48) The more important of the problems underlying accurate crop-forecasting are discussed in detail. (Paragraphs 130-132.)

(49) The application of the method of random sampling to the determination of the area under paddy, and the yield of paddy is recommended. (Paragraph 134.)

(50) The relative advantages and drawbacks of this technique as compared with the other traditional methods are discussed. (Paragraph 134.)

(51) The necessity for the evolution of an appropriate technique for this country is suggested. (Paragraph 136.)

(52) As a first step towards this, we recommend that the Provincial Government should establish a Bureau of Statistics. Agricultural statistics should form one of the most important branches of this Bureau. (Paragraph 136.)

(53) An outline of the organization of the proposed Bureau is given, and the need for developing an appropriate field staff is stressed. (Paragraph 136.)

(54) The shortcomings of the existing trade statistics are next considered. We find that the statistics of inter-district movements of paddy and rice are capable of considerable use in a scheme of crop-planning on an extensive scale, if they can be collected at a reasonable cost. Consequently we recommend that the Provincial Bureau of Statistics should explore the possibilities in this direction as soon as it is set up. (Paragraph 137.)

(55) We find that the omission of road and country-borne traffic from the statistics of inter-provincial movements of paddy and rice detract from their value, but we are unable to devise any methods whereby the statistics of road and country-borne traffic can be collected at a reasonable cost. (Paragraph 138.)

(56) Lastly, we suggest that from its very start the Provincial Bureau of Statistics should endeavour to work in the closest co-operation with the Department of Commercial Intelligence and Statistics. (Paragraph 139.)

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*These members dissent from the recommendation made in paragraph 69, viz., that there should be a free quota for Burmese imports. They hold that a duty should be imposed on all imports of paddy and rice from Burma. A note to this effect by Khan Sahib Syed Mohammad Afzal is printed elsewhere.

†Subject to a supplementary note, printed elsewhere.

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SUPPLEMENTARY NOTE

by

Mr. Amrita Lal Mandal, M.L.A.

I generally agree with the conclusions formulated in the Report, but I feel that on certain points adequate emphasis has not been laid and on certain issues more elucidation is necessary in order to present the problem in its proper perspective. Our task was "to investigate the problem of improving the price of paddy and rice as affecting the Province and to make recommendations in the matter". Now this problem may be considered from three standpoints—

- (a) Is a rise in the price of rice and paddy desirable? If so, to what extent?
- (b) What are the best methods of securing this rise in price? Should any artificial methods of control of any kind be employed to bring about this rise in price?
- (c) Is the fixation of a minimum price of rice and paddy desirable?

2. All these questions in their various aspects have been discussed in the Report and a mass of statistical data has been brought together in order to support the conclusions reached. But I feel that the very fact that our terms of reference related to the problem of improving the price of paddy and rice has greatly influenced the considerations leading to the conclusions finally formulated. I would, therefore, mention a few points which will make no difference in the substance of what has been said but in the emphasis that has been laid on the various arguments.

3. As regards (a), I should emphasise that the problem of bringing about a rise in the price of paddy and rice is not a problem as such. Rice is predominantly a consumption commodity and since it is the staple food crop for the vast majority of the people in the Province, its commercial importance is only of secondary consideration. It is true that those who produce surplus paddy or those who trade in paddy or rice would stand to gain in the case of a rising price level but to those who do not produce a saleable surplus but have to purchase the commodity for their consumption, a rise in price will mean a great economic hardship. And since the percentage of people who form this group is fairly large, the question of bringing about a rise in price does not appear to be at all urgent. It should be remembered that paddy being a food crop, its price varies with the amount of money in circulation or in other words, as soon as more purchasing power flows into the hands of the people, the level of paddy prices is bound to rise. In view of this economic fact it is not necessary that the price of rice should be raised by artificial methods. Thus the question as to what extent a rise in rice prices would be desirable cannot be answered in a categorical way. I should suggest, therefore, that the prices of rice and paddy should be allowed to be regulated by the free interplay of demand and supply, assuming at the same time that the handicaps, such as unsatisfactory marketing arrangements, exploitation by middlemen, dishonest practices like false weights and measures, lack of irrigation, etc., are removed by consistent efforts.

4. As to the extent to which a rise in paddy prices would be desirable, it has been suggested in the Report (paragraph 43) that "this price level will be substantially reached if the price of rice can be raised to the price parity of other agricultural commodities". I consider that even this level, if it were reached either by natural forces or by planned measures, will be much too high. An analysis of the composition of the price indices will make the point clear.

Price Indices.

(Base 19th = 100.)

Year.		Ballam rice No. I.	Table rice.	Cereals.	Pulses.	Raw Jute.	Raw cotton.	All com- modi- ties.
1928	..	141	136	133	157	100	167	145
1929	..	114	125	125	152	95	146	141
1930	..	105	111	120	119	63	91	116
1931	..	71	92	76	89	49	83	96
1932	..	58	69	68	92	45	92	91
1933	..	57	74	66	84	41	80	87
1934	..	63	63	69	84	39	73	89
1935	..	62	77	75	85	50	78	91
1936	..	71	91	79	77	50	89	91
1937	..	67	71	77	89	56	89	92
1938	..	69	69	72	88	48	67	95

It may be pointed out that the composite price index for all commodities is not truly representative of Bengal's economic conditions for it may have been unduly influenced by the high level of prices prevailing in the cases of raw cotton and pulses which are not of much economic significance in Bengal. Hence to aim at pushing the price of rice to the price parity of all agricultural commodities would not be desirable.

5. The considerations urged in the foregoing paragraphs would speak against the employment of any artificial methods of raising the price of rice and also the fixation of a minimum price. The general difficulties which stand in the way of fixing a minimum price for rice or paddy have been exhaustively dealt with in the Report and I have nothing to add to them. But my object in appending this note is that so far as the price of rice is concerned, we need not take any direct steps which may have the effect of exercising an artificial influence on the level of prices of rice and paddy. As I am anxious to safeguard the interest of consumers who constitute the bulk of the population, I should emphasise that undue interference with the price of rice and paddy would be injurious to the economic welfare of the masses. I would suggest that instead of tackling the problem of raising the price of rice as such, we should take appropriate steps for the raising of the price of raw jute by the elimination of middlemen and other agencies which swallow the profits which the cultivators should get. The Government of Bengal have already undertaken certain measures for fixing the price of manufactured jute but what I feel is that they

should fix the minimum price for raw jute as well. If they fix the price of raw jute somewhere between Rs. 10 and Rs. 12 per maund, I have no doubt that the purchasing power of the masses will rise and with it the rise in the price of rice also will occur automatically. In fact, the fall of jute prices has invariably synchronized with the fall of prices of jute and paddy. The following figures may be interesting in this connexion :—

	Harvest prices of jute per maund.	Price index (1914—100).	
		Balam rice No. 1.	Table rice.
	Rs. a.		
1928-29	.. 9 0	141	136
1929-30	.. 8 0	114	125
1930-31	.. 3 9	105	111
1931-32	.. 4 4	71	92
1932-33	.. 3 4	58	69
1933-34	.. 3 8	57	74

6. It may, therefore, be expected that if the price of raw jute rises, the price of rice also will rise. The districts of Western Bengal grow mainly rice and it may be contended that a higher price of jute will not raise the price of rice also in those districts. But it should be remembered that if more money comes into the province and circulates among the masses, there is no reason why the benefit will not percolate to the West Bengal Districts as well. Besides if the level of rice prices in East Bengal rises, it is but only natural that the prices of rice and paddy in West Bengal also will rise in a sympathetic manner.

7. At the same time emphasis should be placed on the need for taking adequate steps for the removal of the handicaps which stand in the way of a free interplay of economic forces in the determination of the price of rice. I mean the lack of adequate facilities for irrigation, transport, storage, supply of suitable seeds and manures, etc. There is a general complaint that the departments of Irrigation and Agriculture have not as yet done much in the matter of improving the yield of paddy in Bengal. The Irrigation Department, as it seems, does not pay adequate attention to the improvement of rural waterways while the Agricultural Department's supply of seeds and manures is extremely unsatisfactory and inefficient. What is required in the circumstances, is a close collaboration of efforts between the two departments for the improvement of the soil and thereby the yield and quality of paddy.

8. On the question of storage facilities I agree that attempts ought to be made to organize sales societies on co-operative lines, but as the co-operative movement has not been a success in this country, efforts should also be made to organise warehouses through non-official agencies. I mean to suggest that the zemindars and other well-to-do persons in the mofussil areas should come forward to organise warehouses and if Government encourages their efforts, there is no reason why their services may not be utilised for the good of the rice-growers. We are passing through such hard times that all sections of the society should be induced to co-operate in the work of economic betterment of the masses whose welfare should be our primary concern.

9. In this connexion, I would refer to the question of regulated markets which constitute a suitable method of eliminating middlemen and all unjust practices harmful to the rice-growers. The Government have already under their consideration a Bill for the institution of regulated markets in the province in respect of several commodities. While in principle the idea of such organisations should be supported, I feel that in the existing state of things, the working of the marketing committees which would be set up to manage the affairs of regulated markets are not likely to be quite efficient and satisfactory. This pessimism seems to be corroborated by the standard of administration that the Union Boards and Debt Conciliation Boards in the province have set up. Apart from this consideration, I would mention here that if in respect of paddy and rice, regulated markets were set up, the poor people in the interior villages would be subjected to great disadvantages, for within the areas specified by notification no transactions would be permitted unless the commodities were brought into the market place. The poor widows and other poor people who can now dispose of their surplus paddy in the village may not be in a position to come all the way to the market. This will mean a great hardship on them.

10. In conclusion, I would again lay emphasis on the fact that the regulation of the price of rice by artificial methods is not desirable either from the standpoint of the consumers or from the view-point of the necessity for ensuring economic self-sufficiency with regard to the supply of this staple food. I consider that the price of rice and paddy should be left as far as possible to the interaction of normal economic forces while at the same time steps ought to be taken for the removal of those factors which might tend to affect the level of prices in an undue manner.

Minute of Dissent by Khan Sahib Syed Mahammed Afzal, M.L.A., and member, Paddy and Rice Committee of the Government of Bengal.

I sign the report subject to this note of dissent. One of the objects which led the Government to the constitution of the Committee is how to ameliorate the condition of the cultivators of Bengal by bringing proper price of paddy and rice to their pockets. We all know, as everybody should know, that the economic structure of a country mainly depends upon the well-being of the peasantry, the backbone of the country. This Committee have examined many witnesses and inquired into the prevailing conditions of the Province, and materials have come before it justifying the conclusion that Bengal produces such a quantity of paddy as will be sufficient for the consumption of the people of this Province plus seeds required for the purpose of cultivation. But we have noticed with pain and regret that the price of each maund of paddy is not such as would cover the cost of its production, namely, capital, labour and rent. Here a question may pertinently be asked: "What is the reason for not fetching adequate price of rice to the agriculturists of Bengal, who toil from morning to evening with sweat on their brow, getting scarcely time to take their meals in proper hour? Will the fixing of minimum price of paddy and rice by the Government give reasonable price to the cultivators?" The reason for not giving adequate price to the cultivators appear to be the import of Burma rice into Bengal making the supply of rice greater than the demand of the Province resulting in the inevitable fall in the price of rice. No doubt the fixing of minimum price of paddy will go a long way to bring proper prices to the cultivators. But many difficulties will present themselves in the way of immediate fixation of minimum price as a good amount of preliminaries, such as, gradation, etc., is to be gone into, before such fixing of price. Considering these difficulties it should be the look-out of the Committee to suggest some other method which will solve the problem immediately. I am strongly of opinion that a duty on import of Burma rice should be imposed which will undoubtedly place Burma rice in a disadvantageous position in the Bengal market with the consequent advantage to the Bengal cultivators to demand higher prices for rice produced by them. If the Bengal cultivators get better prices for the paddy they produce and thus get a margin over the cost of production of rice, it is likely to bring a silver smile in their faces for consequent improvement of their economic condition of life. If they get better prices the Bengal labourers also whose services are utilised by the cultivators in the work in connection with cultivators will get higher wages and the landlords of Bengal will have speedy realisation of rent. When the peasantry of Bengal will find that the cultivation of paddy is yielding better margin than that of jute which in spite of its many handicaps and drawbacks is giving a comparatively higher profit, they will naturally increase the paddy cultivation and will use better skill, capital and labour with the consequent decrease of jute cultivation for the restriction of which the Government is giving serious thought and better attention. By this method when a Bengal cultivator is expected to be placed in a better economic condition of life, resulting in the increase of wages of the labourers and speedy realisation by the landlords of rent and the swelling of the pockets of the professional men, there is likelihood that the rich men with no land will be a bit hit for their giving a higher price for the rice they

purchase, but on the whole the result will be salutary for the Province of Bengal and it will lead to the proper distribution of wealth in the Province. I strongly disapprove the idea of the imposition of import duty on the Burma rice keeping one lakh tons of Burma rice outside the clutches of such duty as it will lead to the unavoidable frustration of the object for which such duty is imposed. For, if one lakh tons of Burma rice be exempted from import duty that amount of paddy will create oversupply of the demand in the Bengal market with the consequent fall of price. Considering this point of view there should be unqualified imposition of import duty on Burma rice there being no such exemption in case of any quantity of such rice. I also recommend that some sort of tax should be levied on paddy-husking machines giving advantage to the poor and helpless women who live on this scanty profit they get by husking paddy in the crude rural methods.

MINORITY REPORT.

Report by Maulvi Asimuddin Ahmed.

I regret that I cannot fully subscribe to the recommendation, drafted for the Committee. On a perusal of the general observation under various heads it will appear that the irresistible conclusions will be otherwise than the draft recommendations. I do not, however, agree with all the observation made in the report but it is not necessary to indicate my difficulties item by item. I, therefore, give below my views about some of the reasons that are necessary to achieve the object we have in view:—

1. A minimum price of paddy and rice should be fixed.

The helpless and the illiterate agriculturist of Bengal should no longer be allowed to depend on uncertain condition in every respects. The uncertainties everywhere around him have sapped the very foundation of life of an agriculturist. A fixed and stable price of paddy will give the agriculturist a certain and fixed data to start his life. This will give him faith and hope in the struggle of life. I also think that this will be a benefit of both to buyer and grower.

I have not entered into any discussion about the control and management of a minimum price of paddy and rice. Once the principle is accepted, I think there will be no difficulty in working up the methods, means and the machinery for the control and the management of such price. I wish to emphasize that the prosperity of the agriculturist will ultimately bring about prosperity of all sections of the people. No difficulties, therefore, should stand in our way in achieving what I should like to characterise as the foundation of the country's prosperity.

2. The weights and measures should be standardised throughout Bengal. Weights should be on the basis of—

80 tolas = 1 seer and 40 seers = 1 maund.

This is a necessary corollary to the introduction of the principle of minimum price.

3. In order to increase and improve the growth of paddy, greater facilities of irrigation and drainage throughout Bengal should be provided.

4. A duty should be imposed on all rice and paddy imported from Burma. During discussions in the Committee meeting it was argued that the quota of rice that will be necessary for our own use should be exempted from duty. But it will appear that it is not easy, nay, it is not possible at all to find out our exact need. A provision for exemption in these circumstances will simply open up opportunities for misuse of the provision and will ultimately lead to the failure of the whole attempt to restrict the import of rice from other countries.

5. Arrangement should be made through the Co-operative Department to stock paddy during the harvest time.

Appendices.

APPENDIX I.

Questionnaire.

Statistics of supply, demand and stocks.

1. (a) Do you consider the present method of estimating the annual outturn of paddy on the basis of acreage under the crop and yield per acre satisfactory?

(b) If not, why not? What are the principal defects in the present method of compilation?

(c) Do you consider that these defects can be remedied (i) without any substantial changes in the existing administrative machinery, and (ii) without any substantial increase in costs? If so, please give an outline of your modified scheme.

(d) If your answer to question 1 (c) is in the negative what alternative method of compilation would you propose? What would be the costs of this alternative scheme and what kind of organisation will be necessary for this purpose?

(e) Do you think an indirect method of compilation, say by the method of random sampling, would yield satisfactory results, in the case of a crop like paddy?

2. (a) Do you consider it is feasible to compile fairly accurate statistics of inter-district movements of paddy and rice at a reasonable cost? If so, please describe your scheme briefly.

(b) To what practical purposes would you put such statistics?

3. (a) Do you consider it necessary to obtain accurate statistics of (1) the outturn of and area under paddy, and (2) the effective demand for paddy and rice district by district?

(b) How would you compile such statistics? (i) What would be the nature of organisation necessary for this purpose, and (ii) the costs of maintaining such an organisation?

4. (1) Do you consider that the existing statistics of imports and exports of paddy and rice into and from this province, from and to other provinces of British India (without Burma) are reasonably accurate?

(2) If not, do you think it is feasible to obtain accurate statistics on this point? How would you compile them? Do you think the cost of compilation of such statistics would be justified by the uses to which they might be put?

5. (a) Do you consider it is possible to obtain fairly accurate statistics of stocks of paddy and rice in hand in any particular year?

(b) If so, how would you compile them?

(c) Do you consider legislation necessary for this purpose?

6. (a) On the basis of your statistical knowledge, do you find that Bengal produces (a) paddy, and (b) rice in deficit of her requirements every year or in any particular year?

(b) If so, how is this deficit met?

(c) Do you think this deficit could be met by increased production? Is it desirable to take necessary steps towards this end? If so, what are the steps you would propose?

7. (a) Is there any correlation between the prices of paddy and rice (i) from year to year, or (ii) over series of years?

(b) If so, what is the nature and extent of such correlation?

(c) Are there any factors, which specially affect the prices of either of these commodities?

8. Is there any correlation between the prices of paddy and those of other agricultural staples? If so, what is the nature of such correlation?

9. (a) Have the prices of paddy and rice been steadily falling during the last three or four years, say since 1934?

(b) If not, how have prices fluctuated during these years? Could you illustrate your answer by figures for some standard varieties of paddy and rice?

(c) If there has been a fall, in any *particular* year since 1934, what has been the special factors responsible for it?

10. (a) If your answer to (a) is in the affirmative, do you think this steady fall is the result of some temporary adverse factors, or is due to reasons of a more permanent character?

(b) If you accept the former explanation, please enumerate the adverse factors that in your opinion have depressed price during the last few years.

(c) If you accept the latter view, what are these permanent adverse factors?

11. (a) Which of these factors are in your opinion (i) of an international character, and (ii) which are amenable to control by the Government of India or the Government of the Province?

(b) Can you express any opinion as to the extent to which these two sets of factors have severally depressed prices?

12. (a) Is the fall in prices due to a disproportionate increase in supply? Has production increased during the last few years? If so, to what extent?

(b) If local production has not increased, has foreign supply, by way of imports, increased? If so, to what extent? What are the countries from which imports have thus increased? Do you consider this increase to be permanent?

(c) (i) Can you correlate the fall in prices during the last few years to increase in foreign supply by way of imports?

(ii) If not, what is the precise nature of the influence exerted by foreign supplies on local prices?

13. Is the fall in prices due to a shrinkage in (i) local, or (ii) foreign demand? If so, to what extent has such demand fallen during

the last few years? What are the causes of this fall? Is this fall due to temporary reasons or to factors of a more permanent character?

14. (a) Do you consider that the present export duty on rice has affected foreign demand for this commodity?

(b) Has the export duty affected the price paid for paddy to the cultivators?

(c) What in your opinion is the incidence of this export duty?

Minimum price and improvement of price.

15. (a) What is the average yield of paddy per acre in different districts of Bengal?

(b) What is the approximate average cost of production per maund (80 tolas=1 seer; 40 seers=1 maund)?

(c) How do you calculate this?

16. What do you consider to be a fair profit to the cultivator? What do you mean by an economic price for this crop?

17. Can the margin of cultivator's profit be increased? If so, by what means?

18. Can a better outturn be obtained by more improved methods of cultivation?

19. (a) Do you consider it *advisable* to fix minimum prices for paddy and rice?

(b) On what basis should it be fixed?

(c) For what period should it be fixed?

20. What essential conditions must be fulfilled before any such scheme can be made practicable?

21. How do you propose to maintain a minimum price?

22. What organisation do you propose to implement such a policy?

23. What financial implications would such a policy involve? How would you meet them?

24. What is the average difference between the price paid to the cultivator and the price paid by the miller or exporter who ships paddy and rice to foreign markets?

25. Could this difference be reduced by the exclusion of some middlemen?

26. (a) To what extent do cultivators pledge their crops before harvest?

(b) Does it affect the price obtained by the cultivator for this crop?

27. To what extent do different standards of weights and measures affect the price obtained by the cultivator for his crop?

Marketing.

Inland Market.

28. (a) What are the present systems of sale by producing cultivators?

(b) Do you consider these systems to be satisfactory?

(c) If not, what are their principal defects?

29. Are there any marketing customs or allowances in cash or kind which would affect the price obtained by producers?

30. (a) Do you consider that uniform weights and measures should be fixed? If so, what basic weights and measures would you suggest?

(b) Are there any practical difficulties in the way of enforcement of such weights? How would you meet them?

31. (a) What is the present system of grading paddy and rice?

(b) Do you think that standardization of grades should be enforced?

(c) What authority should determine the standard grades? Government or Trade Committee or a Statutory Body?

(d) How could paddy and rice be assorted according to such standard grades in the mufassal? Could any simple tests be adopted? How would you settle disputes, if any, on this subject?

32. (a) Do prices prevailing in the Calcutta Wholesale Paddy and Rice market affect prices paid to the cultivators?

(b) If so, how and to what extent?

(c) Do producing cultivators have any means of knowing these prices and the movements that occur?

(d) If not, how do you consider information as to wholesale prices should be conveyed to producers?

Regulated Markets.

33. (a) Do you consider that the establishment of regulated markets is desirable?

(b) What should be the area over which such markets should operate?

(c) What authority should select the sites of such markets?

(d) How should the marketing committee be constituted?

(e) How would such a market be financed?

(f) Are such markets likely to attract buyers and sellers? Will it be necessary to prohibit dealings outside such markets? If so, how could such prohibition be effectively enforced?

Co-operative Sale Societies.

34. (a) Could Co-operative Sale Societies improve the existing system of marketing?

(b) What are the conditions necessary for the success of such societies? Do you think it would be advisable and practicable to secure the fulfilment of all or some of these conditions by legislation?

(c) (i) What would be the type of organisation you would propose for such societies?

(ii) Would there be any difficulty in financing these societies? If so, how would you solve them?

(d) Do you think Co-operative Sale Societies are more likely to succeed if they operate through regulated markets? If so, what would be respective duties and functions of Co-operative Sale Societies and the regulated markets?

Communications.

35. (a) Do the existing means of communication in the mufassal hamper marketing to any substantial extent?

(b) Are the charges for conveyance of paddy and rice from the mufassal to the wholesale markets by (i) road, (ii) railways, (iii) steamers, and (iv) country-boats excessive? What percentage do they constitute of the wholesale price? (Maximum and minimum figures would do, if you are not in a position to supply typical figures.)

Foreign Marketing.

36. (a) What are the principal grades and varieties of paddy and rice exported to and imported from other provinces of India and from other foreign countries?

(b) What are the terms on which paddy and rice are exported to and imported from (i) other Indian provinces, (ii) foreign countries?

(c) Are there any fixed standards of quality on which business is done for export or import? Who fixes those standards? Do the standards vary from year to year?

(d) What improvements would you suggest in the methods adopted at present in the export and import trade?

37. (a) Do you consider that transport charges to (i) other provinces, and (ii) foreign countries affect the export trade to any substantial extent?

(b) Could you give typical figures to show the proportion which such charges to export prices?

(c) Could you supply *comparable* figures to show the charges, on this account, from other Indian ports, Burmese ports or from other competing foreign ports to the export markets?

38. (a) Do you consider the establishment of a Central Organization for the regulation and improvement of the foreign trade in paddy and rice (i) desirable, and (ii) practicable?

(b) If so, please give an outline of the organisation you would propose.

(c) In what directions, if any, could such an organization improve the foreign trade?

APPENDIX II.

List of witnesses examined in the mufassal.

Date.

1. Bankura, 4th February 1939.
 - I.—Officials—
 - (a) District Magistrate.
 - (b) Senior Deputy Collector.
 - II.—Local Opinion—
 - (a) Secretary, Central Co-operative Bank.
 - (b) Rai Bahadur S. K. Saha, M.L.C.
 - III.—5 representatives of middlemen and merchants.
 - IV.—3 representatives of growers.
2. Barisal, 8th December 1938.
 - I.—Officials—
 - (a) Khas Mahal Officer.
 - (b) Assistant Registrar of Co-operative Societies.
 - II.—Local Opinion—Chairman, District Board.
 - III.—3 representatives of middlemen and merchants.
 - IV.—4 representatives of growers.
3. Bogra, 30th November 1938.
 - II.—Local Opinion—6 representatives including Chairman, District Board and Secretaries, District Agricultural Association and Union Board Associations.
 - III.—3 representatives of middlemen and merchants.
 - IV.—6 representatives of growers.
4. Burdwan, 9th February 1939.
 - I.—Official—District Magistrate.
 - II.—Local Opinion—
 - (a) Secretary, Central Co-operative Bank.
 - (b) Secretary, Union Board Association.
 - (c) Chairman, District Board.
 - III.—4 representatives of middlemen and merchants.
 - IV.—6 representatives of growers.

5. Comilla, 14th January 1939. I.—Officials—
 (a) Subdivisional Officer, Sadar.
 (b) District Agricultural Officer.
 II.—Local Opinion—
 (a) Secretary, Union Board Association.
 (b) Secretary, Central Co-operative Bank, Chandpur.
 (c) Vice-Chairman, Tippera Raj Central Co-operative Bank.
 (d) Director, Comilla Central Bank.
 III.—6 representatives of middlemen and merchants.
 IV.—8 representatives of growers.
6. Dacca, 10th December 1938. I.—Officials—
 (a) Deputy Director of Agriculture, Eastern Circle.
 (b) Chief Superintendent, Dacca Farm.
 (c) Economic Botanist.
 (d) Second Economic Botanist.
 (e) Senior Deputy Collector.
 II.—Local Opinion—
 (a) President of the Bar Association.
 (b) Dr. H. L. Dey of the local University.
 III.—4 representatives of middlemen and merchants.
 IV.—4 representatives of growers.
7. Dinajpur, 4th December 1938. II.—Local Opinion—
 (a) Honorary Secretary, Central Bank.
 (b) Chairman, District Board.
 (c) Manager, Dinajpur Raj.
 III and IV.—6 representatives of growers, middlemen and merchants.
8. Hili, 1st December 1938. I.—Official—Circle Officer.
 II.—Local Opinion—
 (a) Secretary, Balurghat Central Co-operative Bank.
 (b) 4 members of the District Board.
 III.—11 representatives of middlemen and merchants.
 IV.—5 representatives of growers.

9. Jessore, 27th January 1939. I.—Officials—
 (a) District Officer.
 (b) District Agricultural Officer.
 II.—Local Opinion—
 (a) President of the Bar Association.
 (b) Deputy Secretary of the Central Co-operative Bank.
 III.—7 representatives of middlemen and merchants.
 IV.—9 representatives of growers.
10. Kishoreganj, 13th January 1939. I.—Officials—
 (a) Circle Officer.
 (b) Debt Settlement Officer.
 II.—Local Opinion—
 (a) Secretary, Union Board Association.
 (b) Secretary, Co-operative Bank.
 (c) President, Union Board, Hoglekandi and Chairman, Debt Settlement Board.
 (d) Babu Bepin Ch. Roy, Pleader.
 III.—1 middlemen and merchants' representative.
 IV.—3 representatives of growers.
11. Krishnagar, 30th January 1939. I.—Officials—
 (a) District Officer.
 (b) District Agricultural Officer.
 II.—Local Opinion—
 (a) President, Bar Association.
 (b) Secretary, Central Co-operative Bank.
 III.—6 representatives of middlemen and merchants.
 IV.—5 representatives of growers.
12. Malda, 1st March 1939. I.—Officials—
 (a) District Officer.
 (b) Settlement Officer, Barind.
 (c) Khas Mahal Officer.
 II.—Local Opinion—One representative.
 III.—6 representatives of middlemen and merchants.
 IV.—7 representatives of growers.

13. Midnapore, 5th February 1939. I.—Officials—
 (a) District Officer.
 (b) District Agricultural Officer.
 II.—Local Opinion—
 (a) Chairman, District Board.
 (b) Secretary, Central Co-operative Bank.
 III.—4 representatives of middlemen and merchants.
 IV.—4 representatives of growers.
14. Mymensingh, 11th January 1939. I.—Official—District Magistrate.
 II.—Local Opinion—
 (a) Chairman, District Board.
 (b) Secretary, Union Board Association.
 III.—2 representatives of middlemen and merchants.
 IV.—3 representatives of growers.
15. Rangpur, 3rd December 1938. I.—Official—District Agricultural Officer.
 II.—Local Opinion—
 (a) Vice-Chairman, District Board.
 (b) Secretaries—
 (1) Agricultural Association.
 (2) Union Boards Association.
 (3) Gaibandha Agricultural Association.
 III.—3 representatives of millowners and merchants.
 IV.—8 representatives of growers.
16. Sirajganj, 10th January 1939. I.—Officials—
 (a) Circle Officer, Ullapara.
 (b) Inspector of Co-operative Societies.
 (c) District Agricultural Officer.
 II.—Local Opinion—
 President—
 (a) Tarash Union Board.
 (b) Durgapur Union Board.
 (c) Vice-President, Central Co-operative Bank.
 III.—4 representatives of middlemen and merchants.
 IV.—2 representatives of growers.

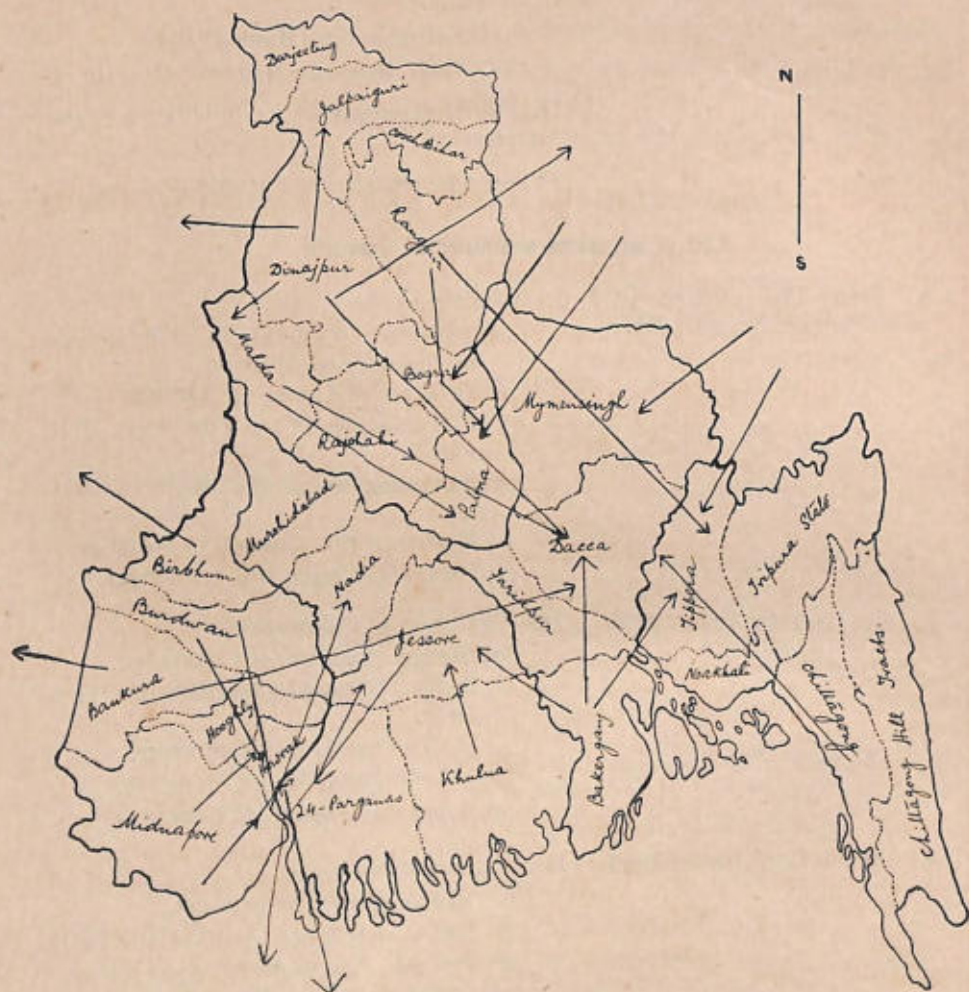
17. Suri, 11th February 1939
- I.—Official—District Magistrate.
 - II.—Local Opinion—
 - (a) President of the Bar Association.
 - (b) Secretary, Local Central Co-operative Bank.
 - (c) Chairman, Suri Municipality.
 - (d) Khan Bahadur Madasar Hossain.
 - III.—4 representatives of middlemen and merchants.
 - IV.—4 representatives of growers.

List of witnesses examined at Calcutta.

1. From 17th August 1939 to 21st August 1939
 - I.—Officials—
 - (a) Director General of Commercial Intelligence and Statistics.
 - (b) Collector of Customs, Calcutta.
 - (c) Commissioner of the Presidency Division.
 - (d) Commissioner of the Burdwan Division.
 - (e) Registrar of Co-operative Societies.
 - (f) Senior Marketing Officer, Bengal.
 - II.—Chambers of Commerce—
 - (a) Bengal Chamber of Commerce.
 - (b) Bengal National Chamber of Commerce.
 - (c) Indian Chamber of Commerce.
 - (d) Muslim Chamber of Commerce.
 - (e) Marwari Chamber of Commerce.
2. On the 18th August 1939
 - II.—Chambers of Commerce—
 - (a) Bengal Chamber of Commerce.
 - (b) Bengal National Chamber of Commerce.
 - (c) Indian Chamber of Commerce.
 - (d) Muslim Chamber of Commerce.
 - (e) Marwari Chamber of Commerce.
3. On the 19th August 1939
 - III.—Associations, etc.—
 - (a) British Indian Association.
 - (b) Paddy Merchants' Association Chetla.
 - (c) Hooghly Landholders' Association.
 - (d) North Calcutta Rice Mills Association.
 - (e) Sunderban Landholders' Association.
4. On the 21st August 1939
 - (f) Central Co-operative Paddy Sale Society.
 - (g) Calcutta Rice Merchants' Association.
 - (h) Rice Mills and Paddy Association.
 - (i) Mr. Amulyadhan Addy (Chetla).
 - (j) Mr. Faizulla Gangjee.

APPENDIX III.

A map of Bengal, showing the inter-district movements of rice over a number of years.



N. B.—The arrow marks show the direction of the movements—only the predominant trends have been shown.



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