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RICE MARKETS IN THE 1997-98 AMAN SEASON:

A RAPID APPRAISAL ANALYSIS

QUAZI SHAHABUDDIN

PAUL A. DOROSH

JUNE 1998

FMRSP Working Paper No. 1

FMRSP Bangladesh
Food Management & Research Support Project
Ministry of Food, Government of the People's Republic of Bangladesh

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This work was funded by the United States Agency for International Development (USAID)

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EXECUTIVE SUMMARY

Following the aman harvest in December 1997, instead of falling, both paddy and rice prices rose sharply amidst reports of large production shortfalls in various regions in Bangladesh. In order to assess the extent of the production shortfall, the market price situation, stock behavior, cross-border trade and other market conditions, a rapid appraisal was undertaken from 14 January to 23 January, 1998 in five selected districts: Bogra, Naogaon, Dinajpur, Mymensingh and Sherpur. A total of 88 persons were interviewed, including 23 government officials (from the Ministry of Food and the Ministry of Agriculture), 39 millers and traders, and 26 farmers.

Among the most important findings of the rapid appraisal were that most millers and traders expected little further increase in market prices and that cross-border trade flows (both formal and informal) were substantial. Farmers' reported losses varied widely, and were on average, much larger than then-current regional estimates, (or the final official estimates) implied.

The 1997/98 aman shortfall and this rapid appraisal suggest several lessons for future monitoring and assessment of rice production and market conditions in Bangladesh. First, there is a need for proper assessment of a potential production shortfall due to insufficient rain at the critical growth stages of paddy. Selective crop cuttings can help ascertain the magnitude of "chita" (empty husks). Second, there is a need for an early warning system to detect the probability of shortage of rainfall during the grain filling stage of paddy. Third, extreme caution should be used in interpreting farmers' estimates of production shortfalls. Assessments of short-term market conditions by millers and traders appear to be more reliable.

1. BACKGROUND

The market situation in 1997/98 aman season warrants special attention because of unusual price behavior of paddy and rice prices in December, 19997 and early January, 1998. Following the aman harvest in December, the market prices of both paddy and rice registered considerable increases (instead of declines) due to a reported shortfall in aman production in different regions in Bangladesh. This price rise caused understandable concern among policy makers and consumers in the country.[1] A rapid appraisal was, therefore, undertaken to assess the market situation with the following specific objectives in mind:

(a) How large is the production shortfall and what are the major reasons for this shortfall?

(b) What is the current price situation and more importantly, what are the expectations for future price movements over the next few months?

(c) What has been the role of stock behavior in recent and expected future price movements?

(d) What has been the impact of border trade with India on market supply and price of rice?

(e) What are the implications of such production, price and stock changes for government policy?

[1] Rice is the major staple food claiming more than 70 cent of the food budget of the poor; moreover, there was considerable apprehension of further seasonal price increases until the next boro harvest.

2. METHODOLOGY

The rapid appraisal took place from 14 January to 23 January, 1998 in five selected districts. The selection of districts was made in such a way so that they represented both surplus and deficit areas in the country. The survey covered three markets from Northwestern districts (Bogra, Naogaon and Dinajpur) and two from Northeastern districts (Mymensingh and Sherpur). A total of 88 persons were interviewed formally, including 23 government officials (from Ministry of Food and Ministry of Agriculture), 39 millers and traders, and 26 farmers. The set of questionnaires administered in the survey is included in Appendix 1.

3. MAJOR FINDINGS OF THE SURVEY

The rapid appraisal survey generated important information with respect to the extent of production shortfall and the reasons thereof, the current price situation, expected price movements, market arrivals of paddy, stock behavior of traders and millers, and cross border flows of paddy and rice. The analysis of these information provided significant insights into the rice market situation following the 1997/98 aman harvest. These are discussed below.

EXTENT OF PRODUCTION SHORTFALL

That there would be a shortfall in aman production in 1997/98 season compared to the both the production target of the DAE, Ministry of Agriculture (9.74 million ton) and the actual production of last year (9.55 million tons) was beyond any doubt. The extent of shortfall, however, remained uncertain in mid-January, 1998 and the official (BBS) estimates of aman production were not scheduled to be available before another few months or so. Our interviews with local officials of the Ministry of Agriculture yielded estimates of the production shortfall of 17.5, 8.4, and 8.0% in Dinajpur, Bogra and Mymensingh/Sherpur districts respectively (Table 1). The officials in Naogaon, however, reported an increase in aman harvest by 1.7% this year as compared to the last year. The average shortfall reported by officials in five districts surveyed is estimated to be 8.0%. This may be compared with the USAID estimate of production shortfall of 11.0% in 1997/98 aman production, with a breakdown of 11.4% for T. Aman and 7.0% for B. Aman respectively.[2] Individual farmers, traders and millers, however, typically reported larger production

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[2]The USAID Mission conducts periodic rapid appraisals to assess prospects of major foodgrain crops in the country. The figures of production shortfall are based on estimated area, yield and production figures, which in turn are based on field observation and discussion with farmers, government officials and other concerned people. (Bangladesh Crop Outlook by Food Security Team, USAID, January 14, 1998).

Table 1 — Extent of Production Shortfall, Aman Rice 1997-98 (as Reported by Farmers and Other Respondents)

District	Shortfall (in %) as reported by					USAID Estimates (T. Aman)
	farmers	traders	millers	officials	All	
Dinajpur	-35.4	-32.1	-28.0	-17.5	-30.9	-13.8
Naogaon	-34.7	-27.5	-38.3	1.7	-28.9	-16.8
Bogra	-28.3	-25.0	-34.4	-8.4	-27.3	-9.8
Mymensingh/Sherpur	-46.2	-44.2	-48.3	-8.0	-37.5	-12.3
Average (weighted)	-35.7	-33.6	-25.6	-8.0	-31.6	-13.2

Source: Rapid Market Appraisal, FMRSP-IFPRI & BIDS, January 14-23, 1998.
Note: The average figure of the USAID estimates in Table 1 is of the five districts only. The estimate for the Bangladesh as a whole is -11.4 percent.

shortfalls in all survey areas (ranging, on an average, between 27.3% in Bogra to 37.5% in Mymensingh/Sherpur districts). It was very difficult to assess to what extent these individual observations were indicative of the total production shortfall in the country. For various reasons, farmers often tend to overstate the production loss due to natural calamities.[3] It may be emphasized here that the 1996/97 aman harvest was a bumper harvest and the level of production was much above what the trend would indicate (see Figure 1). Hence, a production shortfall of 10 percent compared to 1996/97 would represent a decline of only about 6 percent relative to the average level of production attained during the last five years.

The decline in aman production in 1997/98 was due to loss of yield because of inadequate rainfall in late October and early November, 1997 during the grain-filling (flowering) stage resulting in no kernel paddy/ empty husks (chita) in the harvested

[3]Among major reasons for the farmers to overstate their production loss due to natural calamities such as drought, floods and cyclones are the hope of receiving more direct relief from the government, and the possibility of obtaining exemptions, or at least some rebate on interest, on loans they have taken from the Bangladesh Krishi Bank. The greater is the loss reported, the higher is the chance that the farmers can establish their claim on such facilities.

Table 2 — Extent of Yield Loss, Aman Rice 1997-98 (as Reported by Farmers)

District	Number of Farmers	Average Yield (MT/ha) Aman 1996-97	Aman 1997-98	Decline in Yield (%)	USAID Estimates (T. Aman)
Dinajpur	6	2.94	2.19	-25.5	-16.2
Naogaon	3	3.82	2.25	-41.1	-16.8
Bogra	4	2.59	1.98	-23.6	-9.8
Mymensingh/ Sherpur	3	2.46	1.55	-37.0	-12.3
Total	16	-	-	-	-
Average (weighted)		2.93	2.03	-30.7	-13.8

Source: Rapid Market Appraisal, FMRSP-IFPRI & BIDS, January 14-23, 1998.
Notes: The average figure of USAID estimates in Table 2 is those of the five districts only. The estimate for the Bangladesh as a whole is -11.3%.
For reasons mentioned earlier, these estimates of yield loss reported by the farmers appeared to be much higher than what the situation would actually indicate.

paddy.[4] The USAID rapid appraisal estimated this yield loss for the country as a whole to be 11.3%. Our estimates in the survey areas vary from as high as 41.10 percent in Naogaon to 23.55 percent in Bogra, with an average yield loss of 30.70 percent in the five districts surveyed (Table 2).

CURRENT PRICE SITUATION AND EXPECTED PRICE MOVEMENT

As mentioned earlier, both paddy and rice prices increased as a result of the reduced harvest, actual aman harvest being much lower than what was expected. Delayed processing of paddy caused by cloudy/foggy weather during the month of November and December also contributed towards a decline in market supply of rice during the period.[5] Paddy prices in Dinajpur, a major surplus region, rose 18.4 percent between October, 1997 and the end of December, 1997. Wholesale prices of coarse rice in Dhaka likewise

[4]Lesser use of fertilizers (95000 metric tons less compared to the last year) and pest infestation in some areas are additional factors that contributed to the aman production shortfall in 1997/98.

[5]The local UP election during this period may have been partly responsible for delayed processing of paddy in many areas.

rose by 30.2 percent (from Tk. 9.4/kg to Tk. 12.30/kg) during the same period. These price increases are in sharp contrast to the seasonal movement in prices - in particular, to the expected fall in market prices following aman harvest in a normal year (See Figure 2). A comparison of monthly prices of rice showing the seasonal movement in prices in 1995/96 and 1997/98 in the five districts surveyed also highlights the unusual sharp increase in rice prices in 1997/98 aman season (Figures 1A-1B to 4A-4B in Appendix 2).

Paddy prices in Dinajpur in December 1997 were 31.6 percent higher than in December, 1996 and rice prices in Dhaka in December, 1997 were 29.7 percent higher than what were twelve months earlier. A comparison of prices of aman paddy between the current and the last season in our survey also reported similar figures (Table 3). The paddy prices, on average, increased by 28.3 percent this season as compared to the last season. For Bangladesh as a whole (national average of coarse rice and paddy prices), this figure was 15.6 for rice and 13.6 percent for paddy. It should be emphasized here that this is partly a reflection of the bumper aman harvest in the last season (1996/97), when the price of rice registered a decline by 20.9 percent as compared to the previous season (1995/96).

Table 3 — A Comparison of Price of Aman Paddy (Current Season vs. Last Season)

District	Sample Size	Aman 1996-97 (Tk/MT)	Aman 1997-98 (Tk/MT)	Increase (%)
Dinajpur	20	5081	6374	25.4
Naogaon	17	5089	6526	28.2
Bogra	16	5141	6481	26.1
Mymensingh/Sherpur	17	5688	7607	33.7
Average (weighted)		5244	6735	28.4

Source: Rapid Market Appraisal, FMRSP-IFPRI & BIDS, January 14-23, 1998.
Note: Average prices of December, 1997 and January, 1998 represent the price of paddy in Aman, 1996/97 and Aman, 1997/98 respectively.

Table 4 — Price Expectations of Traders and Millers

District	Sample Size	Current Price (Tk/kg)	Expected end-January Price (Tk/kg)	Expected end-January Price (% change)	Expected Pre-Boro Price (Tk/kg)	Expected Pre-Boro Price (% change)
PADDY						
Bogra	6	7.10	7.22	1.7	8.05	13.4
			(7.55)	(6.3)	(9.01)	(26.9)
Dinajpur	9	7.40	8.07	9.0	8.65	16.9
			(7.95)	(7.4)	(10.00)	(35.14)
Mymensingh/Sherpur	8	8.30	8.83	6.4	9.56	15.2
			(8.93)	(7.5)	(10.12)	(21.90
Naogaon	7	6.90	7.33	6.3	7.39	7.1
			(7.15)	(3.6)	(7.95)	(15.2)
Sample Average		**7.40**	**7.84**	**5.9**	**8.37**	**13.1**
			(7.89)	**(6.2)**	**(9.27)**	**(24.8)**
RICE						
Bogra	6	11.60	11.55	-0.4	12.56	8.3
			(12.80)	(10.3)	(14.40)	(24.1)
Dinajpur	10	12.10	12.77	5.5	13.26	9.6
			(11.75)	(-2.9)	(13.17)	(8.8)
Mymensingh/Sherpur	7	13.10	13.69	4.5	14.55	11.1
			(14.12)	(7.8)	(15.80)	(20.6)
Naogaon	7	11.20	11.70	4.5	12.22	9.1
			(11.50)	(2.7)	(13.80)	(23.2)
Sample Average		**12.00**	**12.42**	**3.5**	**13.14**	**9.5**
			(12.54)	**(4.5)**	**(14.29)**	**(19.2)**

Source: FMRSP Rapid Appraisal Survey, January, 1998.
Note: The figures in parenthesis indicate the actual prices during the respective periods.

From a policy perspective, however, it was important to assess the expected movement of prices over the ensuing few months until boro would be harvested. Thus, the rapid appraisal included questions on market expectations of traders and millers in the five districts surveyed. As shown in Table 4, traders and rice millers in the five districts expected prices of both paddy and rice to increase, on an average, by 13.1 and 9.5 percent respectively between the time of the survey and the boro harvest in April. There was relatively little difference in expectations of price movements across districts, especially for rice. These price increases were well within the range dictated by seasonal patterns, indicating that the markets were stable and therefore, should not cause any undue alarm among the concerned policy makers. It should be emphasized here, however, that these expectations were implicitly based on the assumption that private cross border trade with India remained unhindered which, as we discuss below, played an important role in augmenting the domestic supply of rice in the markets, and thereby stabilizing rice prices.

Table 4 also presents a comparison of the price expectations of traders and millers with the actual changes in prices during end-January and pre-Boro harvest periods. For the end-January period, the traders and millers generally understated the price increase for both paddy and rice. The differences are not pronounced for the sample averages, though one could detect considerable variation across regions in this respect. However, the traders/millers failed to anticipate the sharp increase in prices of both paddy and rice during the later period, especially during the months of March and April, 1998.

BORDER TRADE WITH INDIA

The paddy and rice prices prevailing in India provided ample incentives for cross-border trade to Bangladesh.[6] This is reflected in the Indian border rice prices in early January at Tk. 9.9/kg that were equivalent, after adjusting for marketing costs, to Tk. 12.0/kg in Dhaka, slightly lower than wholesale prices of rice in Dhaka in January, 1998. The rapid appraisal team visited several sites in Naogaon and Dinajpur districts where both official and non-official border trade were flourishing. The information compiled by the team is summarized in Table 5, which exhibits the major characteristics of cross

[6] From January to May 1998, the private sector imported 8.94 lakh metric tons of rice through official channels, even though the official estimated aman shortfall was only 6.5 lakh MTs (9.5 MTs target less 8.85 estimated actual production). See Dorosh (1998) for discussion of the likelihood that aman production was overestimated, in the light of analysis of total availability, inputs and demand.

Table 5 — Characteristics of Cross Border Rice Trade with India, January, 1998

Village	Hilli	Shapahar	Kamulpur	Ambari
Thana	Birampur	Shapahar	Sadar thana	Parbatipur
District	Dinajpur	Naogaon	Dinajpur	Dinajpur
Official/ Non-Official	Official	Non-official	Non-official	Non-official
Form: Paddy/rice	rice	Paddy	Paddy	paddy
Established traders	none no fixed premise	70 traders	None no fixed premise	20 traders
Localized market	none	Yes	none	few shops no market
Frequency	once in every day	once in every day	2 times weekly market	2 times weekly market
Type of market	port center	big assemble paddy market long distance trade takes place	primary market	medium assemble paddy market
Size of trade	(50 trucks/day)* (15 tons per trucks) (=750 tons/day)	(85 trucks* 300 maund/truck)/day (=25500 maund/day) (=951.77 tons/day)*70%* (=666 tons/day from India) 439.72 tons/day (rice)	(2*10=20 trucks * 300 maund/trucks)/week (=6000 maund/week) (=857 maund/day)=32 tons/day)*60%* (=19 tons/day) (paddy)*66% (=12.54 tons/day) (rice)	(2*15=30 trucks/week) *300 (=9000 maund/week) (=1285 maund/day) (=48 tons/day) *60%* (=29 tons/day) (Indian paddy) (=19 tons/day) (rice)
Distance from	0 km	2 km	0 km	15 km
Custom post	yes	No	no	no
Total	750 tons/day (rice)	439.72 tons/day (rice)	12.54 tons/day (rice)	19 tons/day (rice)

Notes: 1 ton = 26.792 maund; 1 ton paddy = .66 ton rice.
* 70% and 60% represent the shares of inflows from across the border in total market arrival. The rest of the arrivals are from local sources.

border rice trade with India, (as of January, 1998).

It is readily observed from Table 5 that at Hilli in Dinajpur district, 40 to 50 trucks of rice were being imported through official channels daily, which is equivalent to an average of 675 tons of rice per day. At Shapahar in Naogaon district, an estimated 650 tons of paddy (420 tons of rice equivalent) reached the market daily from India through unofficial channels. The appraisal team also reported that smaller amounts of paddy, about 800 tons/week of paddy (500 tons/week of rice equivalent) were being sold in numerous village haats in border areas of North-western Bangladesh. It may be mentioned here that the informal cross-border trade faced unofficial tolls by local police, reported at Tk. 16 per 89kg sack, a toll which added about Tk. 0.5/kg to the price of imported rice through unofficial channels in Bangladesh. Hindering this informal trade only added to the cost of rice for consumer in the country without adding anything to the government revenue.

MARKETED SURPLUS, MARKET ARRIVALS AND PRIVATE STOCKS

Paddy is both a cash and subsistence crop for the farmers in Bangladesh. Even the net buyers have to sell paddy after harvest to meet their immediate cash needs. However, there still exists a close relationship between the amount of paddy harvested and marketed during the season. This is reflected in the decline in the quantity of paddy marketed by farmers' this season as compared to the last aman season in all districts surveyed (Table 6). The shortfall in aman production resulted in a 41.25 percent decline in marketed paddy by the farmers in the sample. To what extent, however, this was indicative of the decline in the aggregate amount of paddy marketed could not be ascertained, given the rather small size and coverage of the sample.

The survey team also collected information from the traders and millers regarding the extent of market arrival of paddy in the 1997/98 post-aman season as well as in the

Table 6 — Decline in Paddy Marketed by Farmers (Current Aman Season vs. Last Aman Season)

District	Number of Farmers	Quantity of Paddy Marketed (MT)		
		Aman 1996-97	Aman 1997-98	Decline (%)
Dinajpur	8	94.43	48.60	-48.54
Naogaon	7	128.10	75.25	-41.26
Bogra	6	50.98	36.17	-29.06
Mymensingh/Sherpur	5	17.24	10.81	-37.34
Total	26	290.76	170.81	-41.25

Source: Rapid Market Appraisal, FMRSP-IFPRI & BIDS, January 14-23, 1998.

Table 7 — Decline in Market Arrival of Paddy (Current Aman Season vs. Last Aman Season)

District	Number of Markets	Average Market Arrival of Paddy in December-January (MT)		
		Aman 1996-97	Aman 1997-98	Decline (%)
Dinajpur	4	10494	7949	-24.25
Naogaon	3	18009	19935	10.69
Bogra	2	14650	9932	-32.20
Mymensingh/Sherpur	3	10938	5268	-51.84
Total	12	54091	43084	-20.35

Source: Rapid Market Appraisal, FMRSP-IFPRI & BIDS, January 14-23, 1998.

Table 8 — Decline in Millers' Stock of Aman Paddy (Current Aman Season vs. Last Aman Season)

District	Sample Size	Millers' Stock (MT)		
		Aman 1996-97	Aman 1997-98	Decline (%)
Dinajpur	4	42.85	31.35	-26.84
Naogaon	3	47.36	34.82	-26.48
Bogra	4	26.95	18.77	-30.35
Mymensingh/Sherpur	6	12.69	5.37	-57.68
Total	17	129.85	90.32	-30.44

Source: Rapid Market Appraisal, FMRSP-IFPRI & BIDS, January 14-23, 1998 last aman season. The information is presented in Table 7. It may be mentioned here that the estimates indicate the arrival in particular markets or in mill areas rather than total arrival in the district concerned. It is readily observed that the traders and millers in Dinajpur, Bogra, and Mymensingh/Sherpur districts reported a decline in market arrival of paddy by 24.25, 32.20 and 51.84 percent respectively in the current season as compared to the last season. The traders and millers in Naogaon, on the other hand, reported an increase in the market arrival of paddy (by 10.69 percent) despite the shortfall in aman production this year. This can be explained by the fact that in Naogaon district, although in two out of the three markets surveyed reported a decline in market arrival of paddy this season, in Shapahar (one of the largest paddy supplying markets of Bangladesh), market arrivals increased significantly due to large scale inflow of paddy from India that made the aggregate arrival greater compared to the last season.[7]

Interviews with millers and traders indicated that January stocks were not large in comparison with normal production years. Apparently, the poor harvest was unanticipated even up to November, 1997, so there was no incentive to build up stocks from the previous boro harvest. On the other hand, the millers cleared up their stock of boro paddy anticipating a good harvest and low price in the current aman season. Table 8 shows that there was a decline in millers' stock of paddy by 30.45 percent in early 1998 compared to the last aman season.[8] One hypothesis is that large farmers (who hold most of the stocks) may have held some stocks for later sale to obtain cash for purchase of growth-augmenting inputs (fertilizer, irrigation etc) for boro rice production in the following season.

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[7]It may be mentioned here that in Dinajpur also, inflow of paddy from India was reported, but the amount was not sufficient to offset the decline in the market arrival of paddy in the other markets fed mostly from domestic supply.

[8]During the interview, it was observed that the millers were somewhat evasive about disclosing their actual stock position. Stock does not generally decline in proportion to the domestic production shortfall because of large cross border trade of paddy, especially in the border districts.

4. POLICY IMPLICATIONS

The increase in rice prices following the aman harvest in the 1997/98 season caused understandable concern. Aman production in 1997/98 was less than it was in the last season (1996/97) mainly because of the high prevalence of no kernel paddy/ empty husks (chita) in the harvested paddy. The size of the production shortfall, however, was still uncertain in mid-January. The then-current estimates of production ranged between 8.5 million tons (USAID estimate) and 9.0 million tons (the preliminary official, BBS estimate), as compared to 9.55 million tons in the last year. In other words, the estimated production shortfall ranged between 5 to 10 percent compared to what it was in 1996/97, nationally. Local production shortfalls in some areas were larger, and reports from some farmers indicate that in some areas, at least, there were significantly larger shortfalls.

In spite of the lack of information on the exact level of the aman harvest in November and December, 1997 our rapid appraisal was able to ascertain that rice markets were stable and price expectations were generally consistent with the normal seasonal off-season rise in prices.[9] Our survey found that significant amounts of rice were coming through both official and unofficial channels from India. These imports of rice appeared to be a major factor in increasing supply and stabilizing rice prices in markets in Bangladesh.

The rapid appraisal thus provided supporting evidence for a number of policy recommendations to the government in late January, 1998. These recommendations, were, first, that government policy should encourage the free operation of the cross border trade as well as flows of rice within Bangladesh in order to help ensure adequate supplies

[9]It may be noted here that although rice prices have risen substantially in comparison with the last year (1996/97), they are currently at approximately the same levels as in January, 1995 and 1996.

and stable prices. Second, some targeted intervention might be required to address the needs of small farmers who had suffered production shortfalls, as well as poor consumers, who were most vulnerable to the sharp increase in rice prices.

Third, excessively large and ill-timed imports by the government could prove extremely costly to the government. The hasty decision to import 8 lakh tons of rice from India in February, 1995 illustrates this point. This decision was made with little thought about the implications for stocks and cost to the government. The government, therefore, should respond to the aman production shortfall and the rapid prices increase with a cautious policy involving moderate imports of rice and wheat and plans for an increase in targeted distribution of wheat.[10] Given the fact that government would have difficulty procuring more than two to three lakh tons in time for distribution before the boro harvest, it seemed prudent to maintain incentives for continued private sector imports to supplement government imports.

We may mention here that significant developments have taken place in Bangladesh that have greatly reduced the country's susceptibility to acute food shortages. Unlike in the early seventies, Bangladesh faces no acute shortages in foreign exchange. Moreover, private domestic grain markets have developed and the vastly expanded boro harvest has reduced the dependence on aman production for domestic food supplies throughout the year. Moreover, the delivery time for imports has been reduced from several months to six to eight weeks. Finally, internal transport and communication infrastructure has greatly improved so that essentially all areas of Bangladesh are accessible now within days.

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[10]In fact, the Ministry of Food, instead of immediate large-scale imports, adopted a cautious policy of importing moderate amounts of foodgrain (50,000 tons of rice and 150,000 tons of wheat) along with floating a tender of the procurement of up to 100,000 tons of rice to be delivered to various sites in Bangladesh. The domestic tender is designed to provide rice for build up of stocks and possible targeted distribution later (FMRSP Memo, 18 January 1998).

Finally, the Rapid Appraisal Survey and its findings points to a number of issues which merit closer attention from policy making point of view. These are noted below:

(a) Need for proper assessment of the production shortfall due to insufficient rain at the critical stages of growing and maturing of paddy. Proper device, preferably through selective crop cuttings, need to be put in place to get an accurate picture of the magnitude of "chita" in the grain while in the field.

(b) Need for an Early Warning System to detect the probability of shortage of rainfall during the grain filling stage of paddy. Such an information would contribute significantly towards initiating proper action to face the crisis e.g. supplementary irrigation to compensate for the lack of rainfall during the critical stages of production.

(c) Need for exercising extreme caution in interpreting the farmers' estimate of production shortfall collected through rapid appraisal survey since these are observed to be extremely unreliable. However, information on trader's/millers' price expectations can provide useful insights in assessing future market situation and, therefore, should form an integral part of market monitoring mechanism through rapid appraisal surveys. Here, of course, one should distinguish between short term (several weeks) and medium term (several months) price movements since traders/millers' ability to anticipate of future prices differ considerably between the two periods.

APPENDIX 1 — QUESTIONNAIRES FOR RAPID APPRAISAL SURVEY (AMAN SEASON, 1997-98)

A. Questionnaire for Farmers

Food Management and Research Support Project
Rapid Appraisal Survey, January 14 - 24, 1998
A Joint Study by the Ministry of Food, IFPRI and BIDS
Questionnaire for Farmers

1 **Name**________________________________

2 **Address:**

District code: Dinajpur = 1, Naogaon= 2, Bogra = 3 and Mymensingh/Sherpur=4

Dist.: [ ] Thana: [ ] UP: [ ]

Vill.: [ ]

3 **Land holding and operation:**

In acres /decimals (please tick)

(1) Total Land owned	Land rented out (2) Share cropping	(3) Fixed rent	(4) Fallow	Land rented in (5) Share cropping	(6) Fixed rent	(7) Total Land Cultivated =(1)-(2)-(3)-(4)+(5)+(6)
						(Please calculate figure for this column after returning from field)

4 **Area, output and yield of major cereals, 1997**

	Total area Cultivated (acre/decimal)	Total Output (md)	Yield (md/acre)
I. Wheat (96-97)			
II. Boro (96-97)			
III.Aus (97-98)			
IV.Aman (1997-98)			

Note: Please mention 1 md = ……... Kg.

5 **Use of output, Aman 1997-98**

Head	Quantity	
	1997-98	1996-97
Retention for seed and animal feed		
Retention for self- consumption		
Output sold as paddy		
Output sold as rice		
(please give the quantity of paddy		
converted to rice and sold)		
Expected future sale		
Total		

6 **Details of output sold, Aman 1997-98**

Transport code: Foot = 1, Bicycle= 2, Rickshaw/van= 3, Ox/pushcart=4
Truck = 5, Deshi boat=6, Engine boat=7, Others=8

A. Paddy:	Sold at:				
	Homestead	Haat	Mill	LSD	Total
Buyer					
Place					
Quantity					
Unit price received					
Name of market					
Distance of market					
Roads to Market: Dirt/pukka/brick-soled					
Transported by					
Transport cost					
Packing cost					
Loading-unloading cost					
Market toll					
Other cost, if any					
				A. Total Paddy	

B. Rice:					
Buyer					
Place					
Quantity					
Unit price received					
Name of market					
Distance of market/LSD					
Roads to Market/LSD: Dirt/pukka/brick-soled					
Transported by					
Transport cost					
Packing cost					
Loading-unloading cost					
Market toll					
Other cost, if any					
				B: Total Rice	

7 Market Price of Aman:

Month	1997-98		1996-97	
	Paddy	Rice	Paddy	Rice
December				
January				
February				
March				
April				

8 A) The production of Aman this season is same/higher/lower than the last season (please tick)
B) In your opinion, this year production is higher/lower by ....% as compared to last year.

9 What are the principal reasons, in your opinion, of crop failure (if any)? (please tick)

(I) No rain (and lack of supplementary irrigation)
(II) Pest infestation (and lack of DAE measures)
(III) Use of spurious, under-grade fertilizer
(IV) Decline in land fertility
(V) Other (please mention)

10 (A) How much is going to be your coming Boro acreage? .... decimal
(B) How much was Boro acreage last season?................................decimal

11 Remarks:

Date, name and signature of interviewer:

B. Questionnaire for Traders/Millers

Extra-rapid Market Appraisal

A joint study by IFPRI- FPMU and Ministry of Food

January, 1998

<u>Questionnaire for Traders/ Miller</u>

1. Name :   2. Market :

3. Thana :   4. District :

5. Trading since 19 . . . .

6. How much was carried over from previous seasons when you started purchasing Aman 1997-'98 ?

Paddy : ___________ Md   Rice : ___________ Md

7. Stock of Aman Paddy and Rice :

Year	December		January	
	Paddy (Md)	Rice (Md)	Paddy (Md)	Rice (Md)
1997-98				
1996-97				

8. Capacity of your shop/ godown : ___________ Md

9. Estimated market arrivals:

Month	Paddy (Md)	Rice (Md)
December '97		
January '98		
December '96		
January '97		

10. Weekly average sales:

Month	Paddy (Md)	Rice (Md)
December '97		
January '98		
December '96		
January '97		

11. If market arrival is low this season, what are the reasons in your opinion?

i)
ii)
iii)

12. A) If market arrival is low, who holds the marketable surplus now ? : (Please tick)

i) Farmer
ii) Miller
iii) Trader

B) In your opinion the expected behavior of the stockist this season will be : (Please give a short answer)

13. A) The production of Aman this season is same/ higher/ lower than last season (Please tick)

B) In your opinion, this year's production is higher/ lower by . . . . % as compared to last year

14. What are the principal reasons, in your opinion, for crop failure (if any) in your Thana ? : (Please tick)

(I) No rain (and lack of supplementary irrigation)
(ii) Pest infestation (and lack of DAE measures)
(iii) Use of spurious, under-grade fertilizer
(iv) Decline in land fertility

15. What are Aman prices in your market ?

	Aman Paddy (Tk/Md)	Aman Rice (Tk/Md)
December '97		
January '98		
December '96		
January '97		

16. What are the basic reasons for high prices of Aman this season? : (Please tick)

(i) Production Short-fall
(ii) Boro "Carry-over" was low
(iii) Cloudy/ Foggy weather causing delayed processing
(iv) Paddy and rice not coming sufficiently from Northern districts due to heavy traffic congestion
(v) Traders are stock piling apprehending price hike
(vi) Transport cost is high

17. What do you expect Aman price to be in coming days?

	Aman Paddy (Tk/Md)	Aman Price (Tk/Md)
End of January '98 to February '98		
Pre-Boro		

18. What are the measures you suggest government should take to stop price rise and to meet the deficit : (Please tick)

(i) Import by private channel
(ii) Import by government channel
(iii) Import by both
(iv) Government should procure by open tender
(v) OMS sales should start immediately
(vi) Other (Please mention)

19. What do you expect about upcoming Boro production ?

20. A) To which markets does this market supply paddy / rice :

B) From which markets does this market obtain supply of paddy/ rice :

C) Truck fare for transporting paddy and rice to nearest wholesale market:

Month	Name of market and distance	Aman Paddy (Tk/Md)	Aman Rice (Tk/Md)
December '97			
January '98			
December '96			
January '97			

21. Investigator's own observation and remarks:

Name and Signature of Investigator : ______________________________

Date : ___/___/____

C. Questionnaire for Government Officials

Extra-rapid Market Appraisal
A joint study by IFPRI- FPMU and Ministry of Food
January 1998
Questionnaire for Government Officials

1. Name :
2. Designation :
3. District :
4. What are the principal reasons, in your opinion, for crop failure (if any) in your district / Thana ? : (Please tick)
   (i) Inadequate rain (and lack of supplementary irrigation)
   (ii) Pest infestation (and lack of DAE measures)
   (iii) Use of spurious, under-grade fertilizer
   (iv) Decline in land fertility
   (v) Other : Please specify

5. What are the official (or estimated) figures of production for following crops in your district / Thana ?

		Output in MT
Aman	1997 - 98	
Aman	1996 - 97	
Boro	1997	
Boro	1996	

6. What are Aman prices in your district / Thana ?

	Aman Paddy (Tk/Md) (Farmers price)	Aman Rice (Tk/Md) (Wholesale coarse rice)
December '97		
January '98		
December '96		
January '97		

7. What are the basic reasons for high prices of Aman this season ? : (Please tick)

(i) Production Short-fall
(ii) Boro "Carry-over" was low
(iii) Cloudy/ Foggy weather causing delayed processing
(iv) Paddy and rice not coming sufficiently from Northern districts due to heavy traffic congestion
(v) Traders are stock piling anticipating price hike
(vi) Transport cost is high
(v) Other (Please specify)

7. What do you expect Aman price to be in coming days ?
8.

	Aman Paddy (Tk/Md)	Aman Price (Tk/Md)
End of January '98		
February '98		
March '98		
April '98		

9. How much is going to be total deficit, in your own evaluation, for the District/ Thana : _______________ MT

[For DG Food officials only]

10. How much is current PFDS stock in the LSD / Thana / District ?

Paddy : _______________ MT

Rice : _______________ MT

Wheat : _______________ MT

11. What are the measures you suggest government should take to check the price increase and to meet the deficit :

(Please tick)

(i) Import by private channel
(ii) Import by government channel
(iii) Import by both
(iv) Government should procure by open tender
(v) OMS sales should start immediately
(vi) Other (Please mention)

12. What are your expectations for the upcoming Boro harvest ? (Please tick)

a) Normal ☐ b) Shortfall ☐ c) Bumper ☐

APPENDIX 2 — WHOLESALE PRICES OF RICE BY DISTRICT

Figure 1A — Monthly Wholesale Price of Rice (Dinajpur, 1995-96)

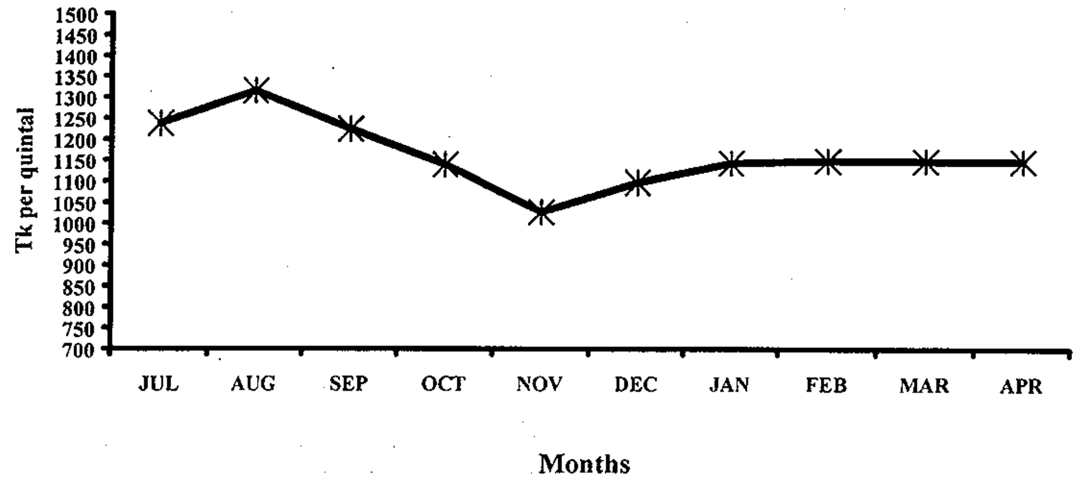


Figure 1B — Monthly Wholesale Price of Rice (Dinajpur, 1997-98)

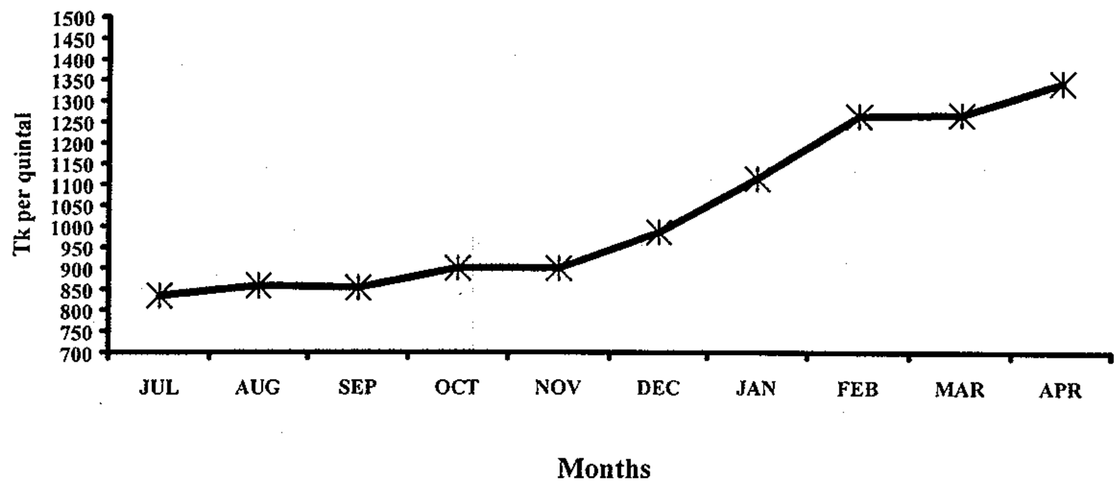


Figure 2A — Monthly Wholesale Price of Rice (Naogaon, 1995-96)

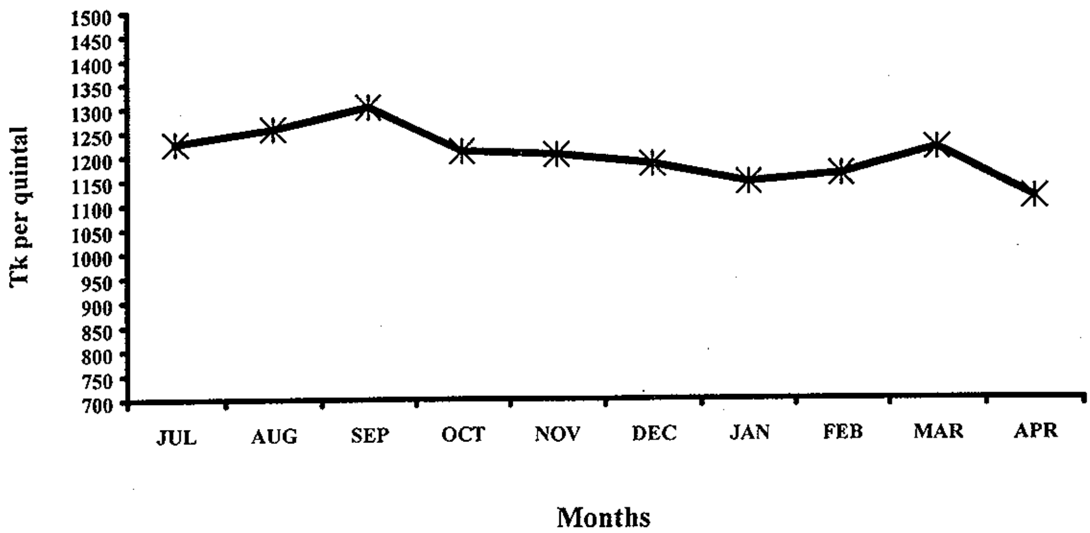


Figure 2B — Monthly Wholesale Price of Rice (Naogaon, 1997-98)

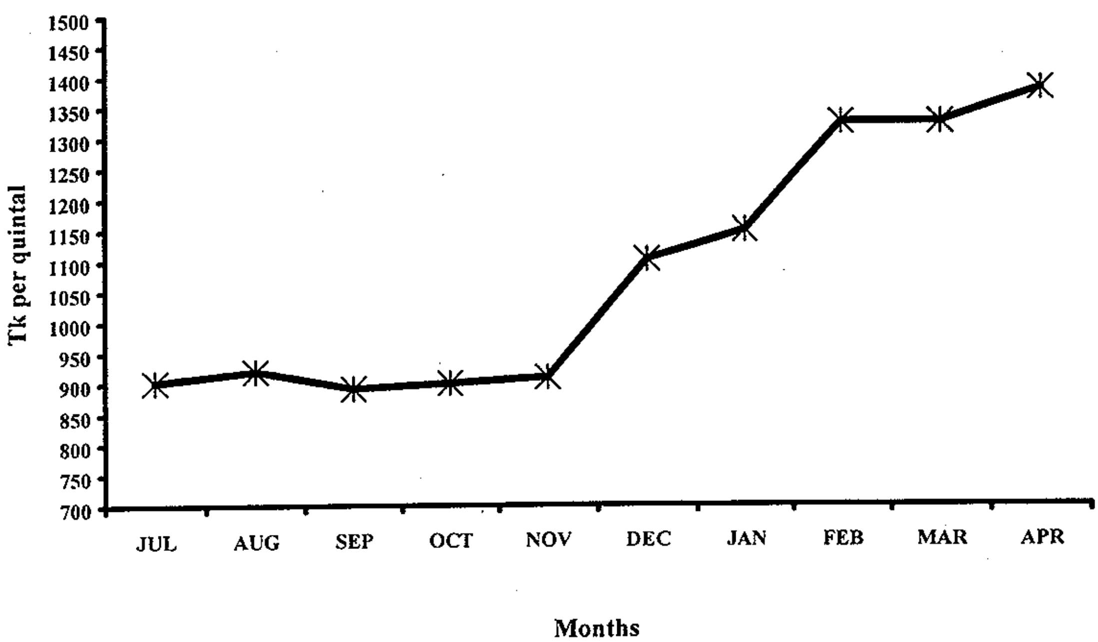


Figure 3A — Monthly Wholesale Price of Rice (Bogra, 1995-96)

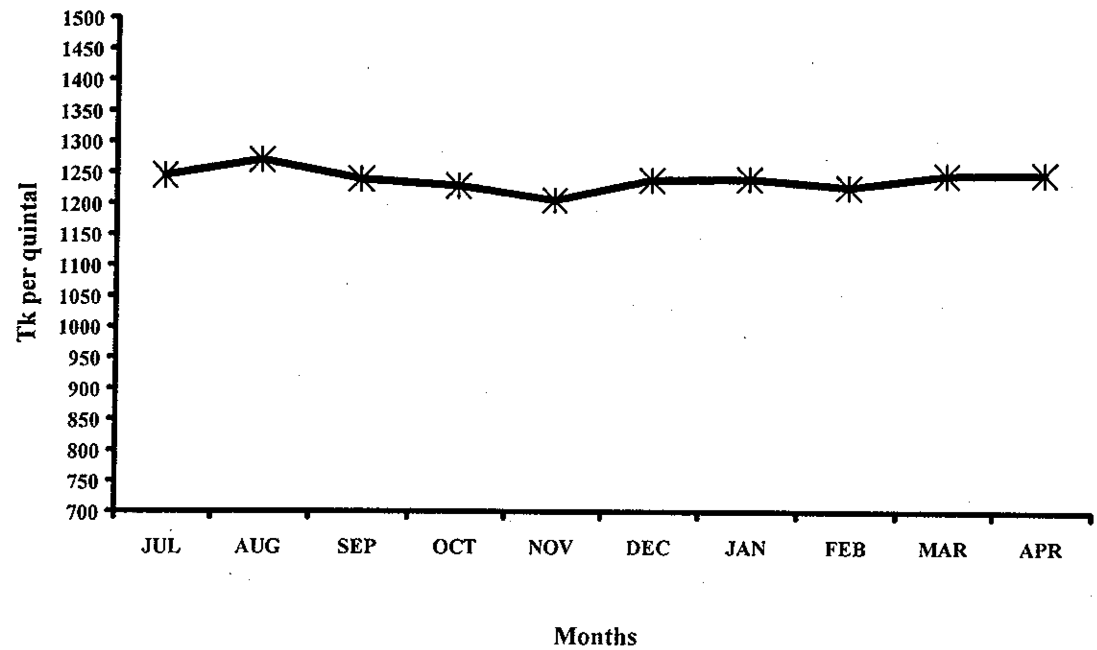


Figure 3B — Monthly Wholesale Price of Rice (Bogra, 1997-98)

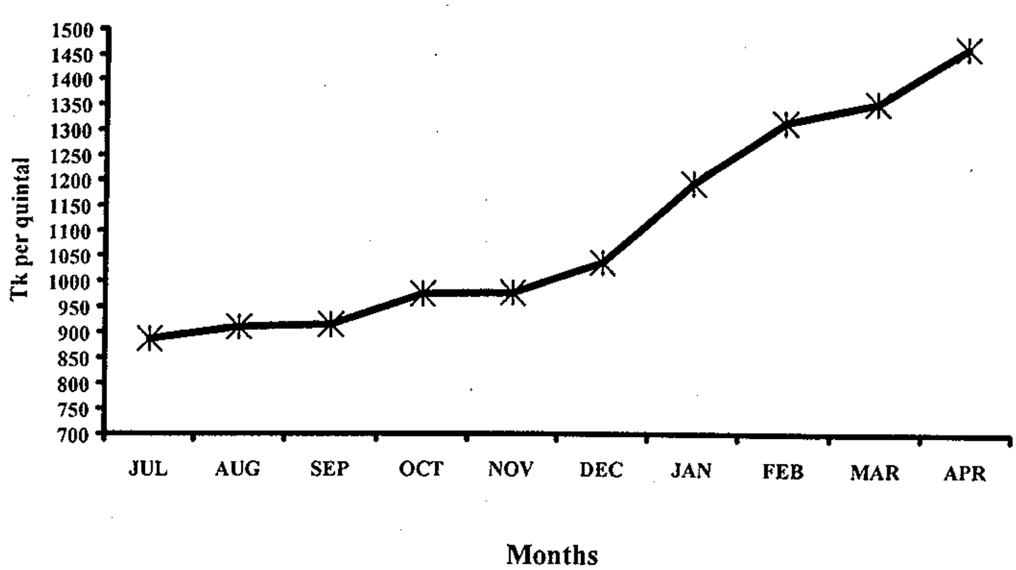


Figure 4A — Monthly Wholesale Price of Rice (Mymensingh/Sherpur, 1995-96)

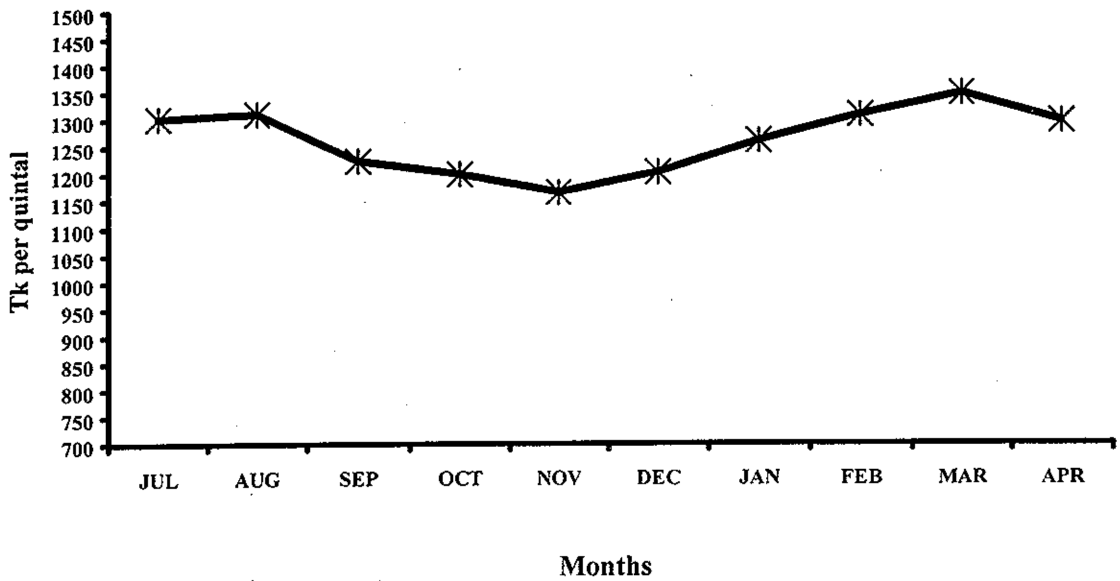
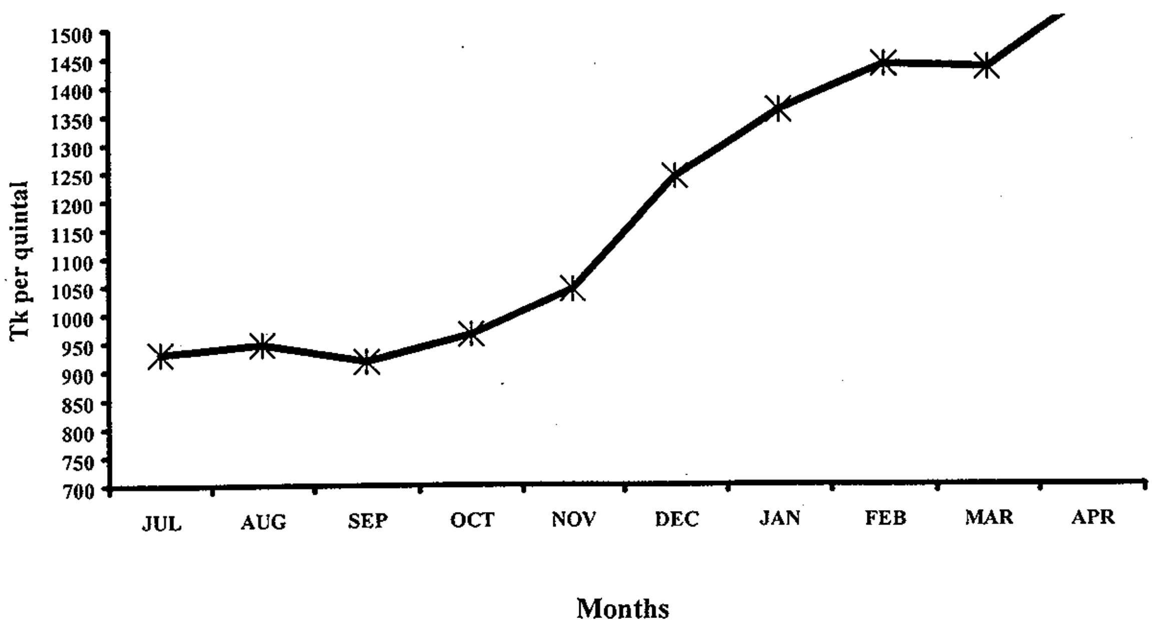


Figure 4B — Monthly Wholesale Price of Rice (Mymensingh/Sherpur, 1997-98)



FMRSP Bangladesh

Food Management & Research Support Project
Ministry of Food, Government of the People's Republic of Bangladesh

International Food Policy Research Institute
IFPRI

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