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CURRENT FOOD POLICY ISSUES IN BANGLADESH

VOLUME IV

Advisory Notes to the Secretary of Food
April, 1999 to December, 1999

JANUARY 27, 2000

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

International Food Policy Research Institute

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

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INTRODUCTION

One major activity of the Food Management and Research Support Project (FMRSP) is to provide advisory services to the Government of Bangladesh. In carrying out these advisory services, the project produced eleven memos from April through December 1999, most in response to specific requests by the Ministry of Food. This current compilation of memos is the fourth volume of memos. Volume I contains the seven memos written from November 1997 to February 1998; Volume II contains fourteen memos written from March through September 1998; and Volume III contains eleven memos written from October 1998 through March 1999.

The Bangladesh foodgrain situation changed dramatically during the course of 1999 as the flood-damaged 1998/99 aman rice harvest was followed by bumper 1999 boro and 1999/2000 aman rice crops. The focus of government food policy shifted as well, from managing the effects of the 1998 flood to build-up of stocks, domestic procurement and medium-term policy issues. And by the end of 1999, only fifteen months after the peak of the floods, the Ministry of Food was addressing a completely different set of circumstances: a potential bumper aman rice crop, low rice prices and the need to rotate record-level stocks to avoid storage losses.

The first memo, "1998/99 Boro Production: Preliminary Estimates" written 16 May 1999, examined initial boro production estimates by the Department of Agricultural Extension and other sources. The memo noted that the DAE estimate of 9.5 million MTs, was based on a 23.1 percent increase in boro area, and a 5.1 percent yield decline compared with the record boro harvest of 8.13 million MTs in 1997/98. Similarly large increases in boro production had occurred following floods in the late 1980s: production growth rates were 17.7 percent in 1987/88 and 23.3 percent in 1988/89. Timely sowing, increased use of HYVs, adequate supply of inputs and high rice prices during the growing season, all suggested a likely increase in boro production. The 12.6 percent drop in wholesale rice market prices from mid-April to

mid-May, as the boro harvest began, also indicated that the boro harvest would be good, but further price data (for several months) would be required to shed more light on the size of the harvest.

The second memo, "The Use of Fortified Atta for Distribution in the FFE Program", was written 23 June 1999 at the request by USAID/Dhaka. The memo described the current system and discussed the feasibility of distributing about 12 kgs of fortified atta flour, packaged in three two-kilogram bags twice per month, instead of the current program with 15 kilograms of wheat distributed once per month. The cost of fortifying the wheat flour with vitamin A and iron, and packaging the flour in 2 kilogram bags was estimated at about 2 Taka/kg of flour, assuming a milling conversion ratio of 90 to 95 percent. There appeared to be enough local milling capacity for fortification and this seemed most feasible at the district or division level. Potential benefits included reduced system leakages because of the standardized packages and additional vitamin A and iron intake of recipients. A number of issues needed to be further investigated, however, including the storage life of the flour and the exact quantity and type of fortification to be used.

"Public Foodgrain Stocks, Procurement and Distribution under Flood and no Flood Scenarios", was written 16 July 1999 at the request of the Secretary of Food. This memo pointed out that 1 July 1999 foodgrain stocks of 11.35 lakh MTs were nearly 6 lakh MTs more than on 1 July 1998, and were more than sufficient to handle anticipated flood relief distribution needs in the event of another major flood.

The 22 July 1999 memo, "Implications of Additional Food Aid for Domestic Prices", was written in response to a request by USAID/Dhaka. The memo discussed the implications of an additional 200,000 MTs of food aid wheat, and pointed out that an injection of this size into the market would likely lower wheat prices below import parity levels. One option for bringing in additional wheat food aid without depressing market prices would be to simply hold the additional wheat as public stocks until after the wheat harvest in March/April 2000. In any case, given that the funds generated from sales of food aid to the Government of Bangladesh finance development

activities equal to the value of the food, food aid received as a grant likely has large positive net benefits even when it has adverse effects on farmgate prices.

The memo, "Wheat Imports In Spite of Bumper Harvests: Some Possible Explanations", written on 4 August, 1999, examined domestic wheat prices in comparison to international prices. Discussions with private traders suggested that the continued imports, mainly of milling wheat, did not indicate an overall shortage of wheat in domestic markets, but a growing demand for wheat flour for baking purposes. Expected imports of milling wheat from June through August were estimated at about 30 thousand MTs per month, only about 2 percent of the roughly 1.8 million MTs of foodgrain consumed per month.

The memo, "Response to Questions from ERD regarding the Ministry of Food's paper for the September 1999 Donors meeting" was written on 21 August, 1999. In response to the question, "Do the data substantiate the claim for more food aid?", the memo argued that food aid was still needed for targeted distribution programs even though aggregate foodgrain availability was adequate. The memo addressed the second question, whether domestic output growth has been sufficient to avoid a sharp decline in foodgrain availability, by presenting data on the factors accounting for changes in per capita availability between the 1980s and 1990s. Increases in domestic production (0.18 ounces/person/day), significant private sector imports (0.39 ounces/person/day) and a decline in government stocks combined to largely offset declines in average food aid flows (0.44 ounces/person/day) and government commercial imports (0.38 ounces/person/day). In the 1990s, with less food aid available, total PFDS distribution was lower (by 0.68 ounces/person/day), but over 80 percent of this foodgrain was targeted to the poor.

The 24 August, 1999 memo, "Bangladesh Foodgrain Production, Estimated Shortfall and Needs for Additional Food Aid from the USA", requested by the Secretary of Food, argued that additional food aid would provide needed resources to expand targeted distribution. The memo pointed out that given relatively low wheat stocks of 504,000 MTs as of end June 1999, the GOB had the flexibility to time the

distribution of any additional food aid to avoid potential price disincentive effects on wheat producers.

"Public Foodgrain Stocks and Market Prices: Policy Options for a Bumper 1999-2000 Aman Rice Harvest", was written on 18 November, 1999 at the request of Mr. Anisuzzaman, Adviser to the Prime Minister on Food and Agriculture. This memo explored stock and price stabilization options given a large expected aman harvest in December, 1999, expectations of low producer prices, and large quantities of aging rice stocks. The memo showed that end-October stock levels were very high by historical standards, about 300 thousand MTs higher than the average end-October level over the last 15 years. Moreover, projected stocks for end-December were 1.578 million MTs, exceeding the previous record of 1.494 million MTs in July 1988 by 84 thousand MTs. Deterioration of the quality of the rice stock was also a potential problem. With no change in the distribution plan, by the end of April 2000, at least 220 thousand MTs of rice would be more than eight months old.

The memo suggested that rice distribution might need to be accelerated to reduce the volume of aging rice stocks. However, the memo warned that avoiding very low market prices of rice might not be possible, if indeed the aman harvest turned out to be as large as projected. In the event of prices dropping to levels of about 10 Tk/kg wholesale (the estimated export parity price of rice), one option would be for the Government of Bangladesh to encourage private sector exports through assistance of the commercial officers of Bangladesh embassies. In the long-term, if rice surpluses and low rice prices become a recurring problem, effort could be made to development rice export facilities, including adoption of grades and standards for rice quality.

The memo, "Aging Rice Stocks: Options for Increased Rice Distribution", written 28 November 1999, discussed four options for reducing the quantity of aging stocks: increasing VGF distribution by 90,000 MTs; swapping 50,000 MTs of rice for wheat in FFE in March and April 2000; using 75,000 MTs of rice in the WFP Flood Rehabilitation FFW program; and using approximately 11,500 MTs of rice in the ADP project with the Water Development Board. The memo noted that "a significant

price decline appears unavoidable if the aman rice harvest is as good as indicated by early reports".

"Aging Stocks and Options for Increased Foodgrain Distribution" expanded the analysis of stock quality considerations to include wheat, as well as rice. This memo, written 1 December 1999, focused on 104,500 MTs of wheat that as of 31 October 1999 had deteriorated in quality from DSD-3 (optimal quality) to DSD-2. Another 27,500 MTs of wheat had deteriorated to DSD-1. Several possible options were analyzed including selling 1 lakh MTs of wheat to flour mills from December 1999 through February 2000. Given November Dhaka wholesale market wheat prices of 9.1 Tk/kg, such sales would likely earn a price of 9.0 – 9.5 Tk/kg. At 9.5 Tk/kg, these sales would imply a subsidy of 1.65 Tk/kg, given the average cost of wheat to the government of 11.15 Tk/kg. The total financial subsidy would be 16.5 crore Taka, but the alternative could be an even greater financial loss if the wheat deteriorated further in quality.

Finally, the 2 December 1999 memo, "Prospects for Additional U.S. 416b Food Aid for Bangladesh", discussed the rationale for additional food aid and the likelihood of an actual increase if it were requested. The memo pointed out that, in terms of availability, the case for additional food aid was less strong than it was in September 1999, (when the U.S. government had decided not to increase food aid to Bangladesh). Arguments based on the fiscal benefits of food aid and the need to increase access to food by poor households were still valid. Thus, it appeared that there was only a small likelihood of getting an additional two lakh MTs of food aid. The memo pointed out that not requesting additional food aid in 1999/2000 could strengthen the GOB's credibility if at some future point, emergency food aid requirements were very large.

The eleven memos described above were produced by a team of researchers and government officials, with a wide range of backgrounds in government service, practical business experience in grain markets, and academic research. None of the memos was entirely an individual effort; all benefited from insights and comments of

other team members. Paul Dorosh, Economist and Chief of Party of the FMRSP, wrote the initial drafts of all the memos, except the June 23, 1999 memo, "The Use of Fortified Atta for Distribution in the FFE Program", initially drafted by Carlo del Ninno. Quazi Shahabuddin, Research Director, BIDS, played a major role in the the preparation of the Ministry of Food's presentation for the September 1999 Mid-term Review with the Development Partners, as well as in the draft response to ERD's questions. Ruhul Amin, Deputy Chief of the FPMU, made important contributions to many memos, particularly those relating to food stock issues, and co-ordinated data analysis from the FPMU. Mohammed Abdul Aziz, Project Director of the FMRSP, added much to the informal discussion and analysis that formed the basis of many of the memos. Mr. A.K.M Nurul Afsar, Additional Director General, Directorate General of Food, provided useful insights and technical information for the memos on aging foodgrain stocks in late 1999. Mahfoozur Rahman contributed to many of the memos, providing perspectives from his years of experience in industry, export-import, and the private grain trade in Bangladesh, as well as assisting in the analysis. Carlo del Ninno also participated in the discussions and provided helpful comments on drafts of several memos. In addition, a number of others provided research support, including Mr. Hajikul Islam, Research Officer, FPMU, Mr. Abdullah Al Mamun, and Mr. Chowdhury Shameem Mahmoud, Mr. Anarul Kabir, and Mr. Amzad Hossain, research assistants with FMRSP-IFPRI. Credit is also due to Ms. Waheeda Ali Luna, Executive Secretary and Mr. Md. Samsuddin Sumon, Secretary with FMRSP-IFPRI who helped to edit, print and compile these documents.

Finally, it should be noted that these memos are not research reports. Rather, almost all were written in response to direct requests of the Ministry of Food, under very tight time constraints. The major purpose of these memos, thus, was not to provide a comprehensive analysis of these topics, but to provide timely, practical policy analysis needed for current policy decisions. Many of the issues discussed here are the subjects of ongoing research of the FMRSP; subsequent research reports are planned to provide further analysis.

FMRSP
16 May, 1999

1998/99 Boro Production: Preliminary Estimates

Numerous informal field reports, provisional government estimates and market price behavior all point to a bumper boro rice crop. However, at this point (mid-May), with perhaps only about half of the crop harvested, it is too early to know the size of the harvest. (BBS official estimates will likely be available in June.)

Current unofficial estimates of the **Department of Agricultural Extension** suggest that area planted to boro may be 3.425 million hectares, a 23.1 percent over the 1997/98 area. Yield is projected to be 2.77 MTs/hectare, 5.1 percent below 1997/98, giving a total production of **9.5 million MTs**, a 16.9 percent increase over the record boro harvest of 8.13 million MTs in 1997/98.

Similarly large increases in boro production occurred following floods in the late 1980s. In 1987/88, boro yields and production increased by 17.7 percent. Then in 1988/89, area planted to boro increased by 47 percent, so that despite a decline in yields to their 1985/86 level, boro production rose by 23.3 percent (Table 1 and Figure 1). This large increase in boro production in the late 1980s can be attributed to a combination of liberalization of imports of pumps, ample price incentives, and institutional changes, including removal of restrictions regarding tubewell placement.

The large reported increase in area planted to boro is questioned by some analysts, since in most parts of Bangladesh, boro rice cultivation requires irrigation. Nonetheless, it is possible for irrigated area to increase through increasing the number of tubewells, made easier in some areas through use of portable engines. Most factors suggest that yields may well have increased over last year: sowing was timely; HYV and hybrid use has increased; electricity, diesel and fertilizer supplies have been adequate; high rice prices and the aman shortfall encouraged additional production, and pests and disease losses have been extremely small. A large increase in area planted may suggest, however, that less fertile or well-irrigated land has been used for this year's boro crop.

Table 2 shows some sensitivity analysis regarding assumptions of boro area and yield. As discussed above, the unofficial preliminary DAE estimate shows a boro harvest of **9.5 million MTs**, due to a 23.1 percent increase in area (with a **5.1 reduction in yield**). If we assume that the DAE preliminary area estimate is indeed correct, but that **yields** have remained **equal to those of 1997/98**, then production would be **10.0 million MTs**, (estimate 2). Of course, if the area estimate is correct and yields have actually increased, then production would exceed 10 million MTs. Finally, if the area increase was only a modest 10 percent and yields remained unchanged, then production would be **8.9 mn MTs.**

Current market price movements indicate that the boro harvest will be a very good, but again the information is inadequate at this point to tell how large the harvest is.

According to the DG Food data on wholesale market prices, the price of coarse rice fell by 12.6 percent, from 14.3 Tk/kg to 12.5 Tk/kg from 15 April to 10 May, 1999. Private sector rice imports dropped off substantially in April to 150,000 MTs, down from a reported 314,000 MTs in March (Figure 2). Given the sharp drop in prices in late April, it is likely that private sector imports of coarse rice will fall to near zero in the next two months.

Though final boro production estimates are unavailable, it seems clear that the 1998/99 boro harvest will far exceed the 1997/98 record harvest, and that both total foodgrain production and real GDP estimates for 1998/99 will need to be adjusted upwards. The bumper boro harvest has apparently brought to an end a long 10 months of relatively high prices and justifiable concerns about the effects of the 1998 floods on foodgrain supplies and food security of the poor.

Table 1: Boro Production, 1981-99

Year	Boro Area 000 Ha	Boro Yield MT/Ha	Boro Production 000 MT	Total Production 000 MT	Boro as Share of Total (percent)
1980/81	1160	2.27	2630	13,880	18.9
1981/82	1303	2.42	3152	13,629	23.1
1982/83	1433	2.47	3546	14,215	24.9
1983/84	1401	2.39	3350	14,509	23.1
1984/85	1575	2.48	3909	14,623	26.7
1985/86	1533	2.39	3670	15,038	24.4
1986/87	1652	2.43	4010	15,406	26.0
1987/88	1652	2.86	4731	15,413	30.7
1988/89	2439	2.39	5831	15,544	37.5
1989/90	2511	2.46	6167	17,856	34.5
1990/91	2548	2.49	6357	17,852	35.6
1991/92	2635	2.58	6804	18,252	37.3
1992/93	2599	2.53	6586	18,341	35.9
1993/94	2581	2.62	6772	18,041	37.5
1994/95	2664	2.45	6538	16,833	38.8
1995/96	2754	2.62	7221	17,687	40.8
1996/97	2783	2.68	7460	18,883	39.5
1997/98	2783	2.92	8130	18,703	43.5
1998/99P	3425	2.77	9500	18,917	50.2

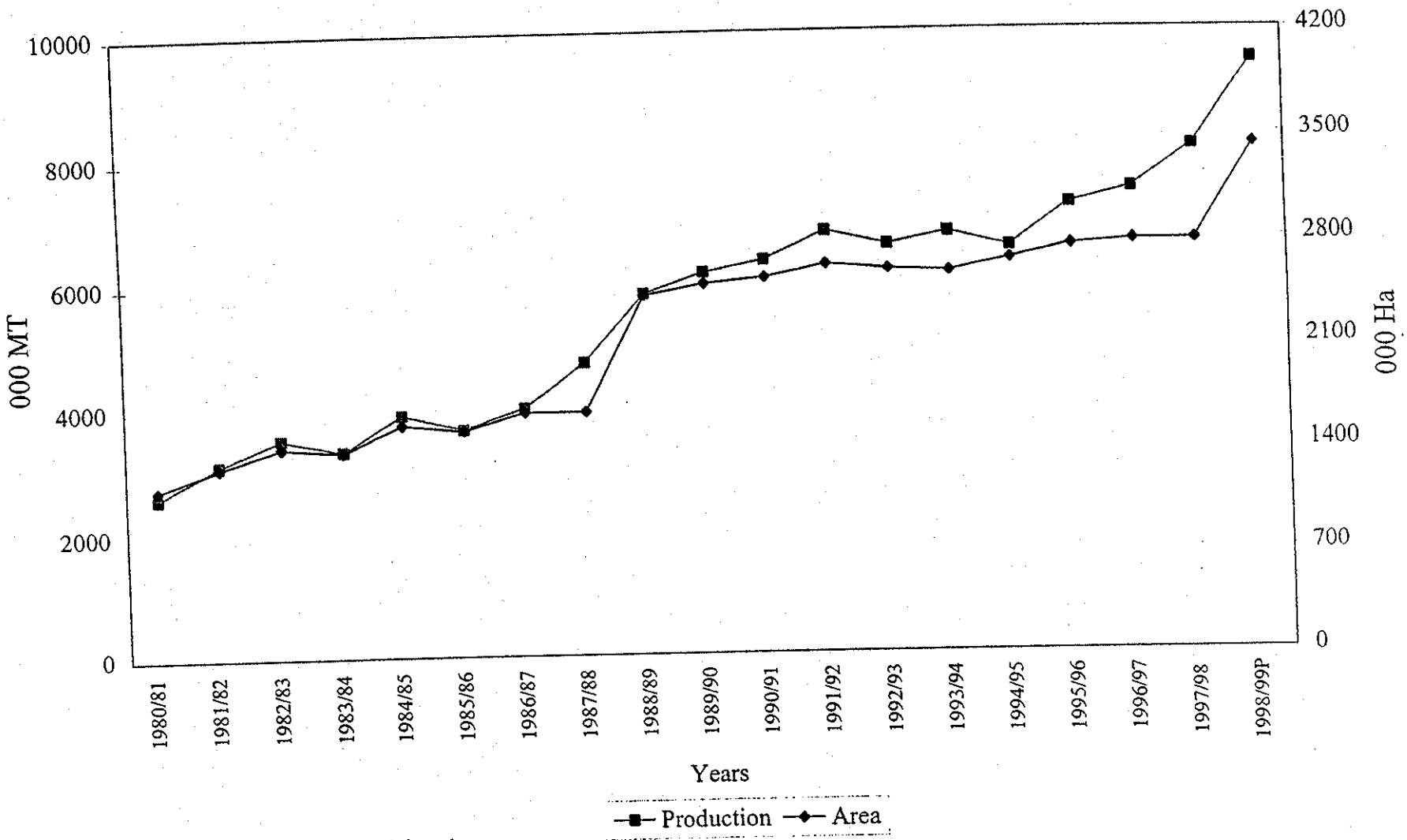
P indicates preliminary estimates.

Source: BBS, FPMU.

Table 2: 1998/99 Boro Production, Alternate Preliminary Estimates

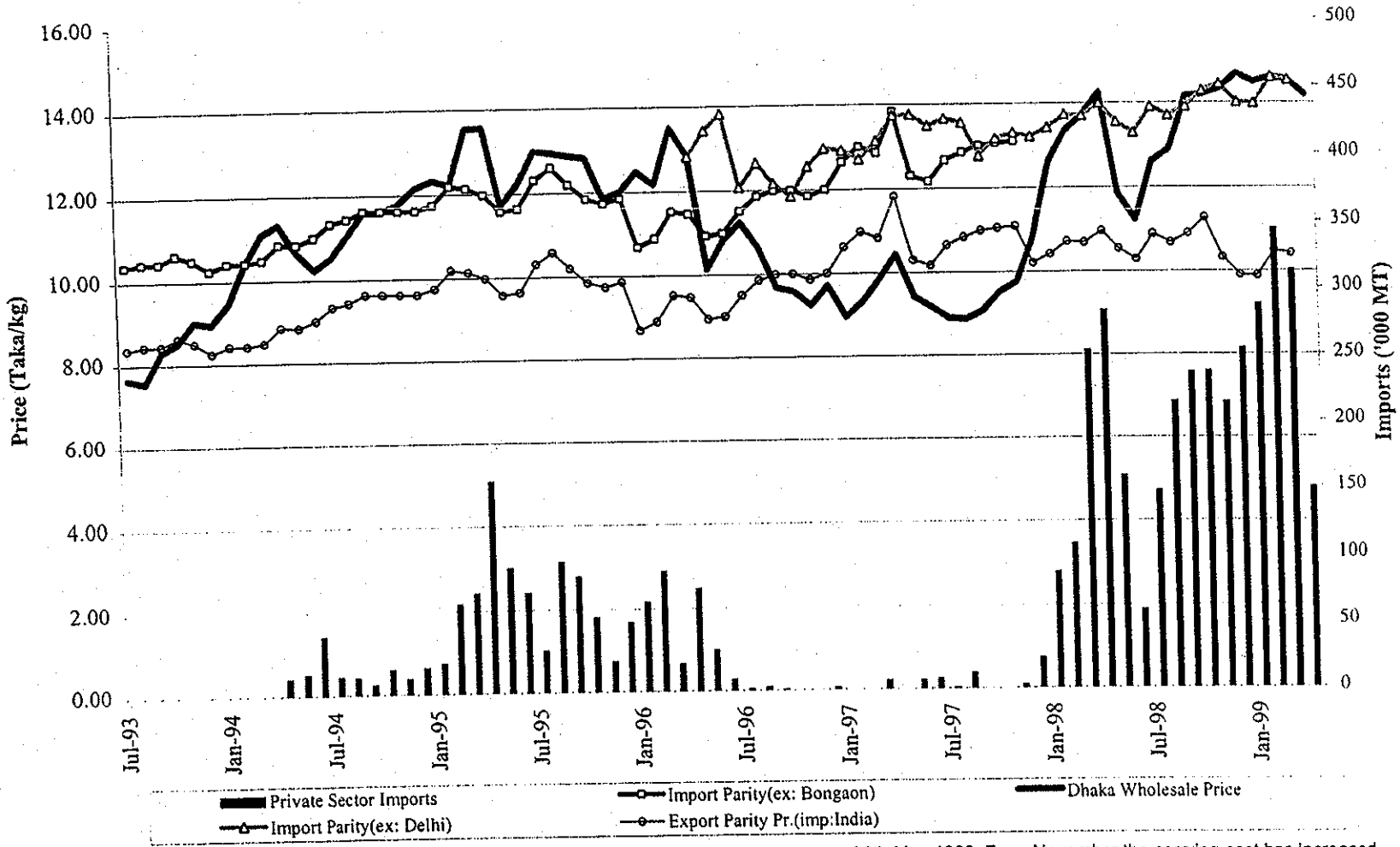
	Area 000 Ha	Yield MT/Ha	Production 000 MT	Percentage change vs. 1997/98 Area	Yield	roduction
1996/97	2783	2.68	7,460	0.0	-8.2	-8.2
1997/98	2783	2.92	8,130	0.0	0.0	0.0
1998/99						
Estimate 1: DAE (Preliminary) large area, low yield	3425	2.77	9,500	23.1	-5.1	16.9
Estimate 2: large area, 1997/98 yield	3425	2.92	10,007	23.1	0.0	23.1
Estimate 3: moderate area, 1997/98 yield	3061	2.92	8,943	10.0	0.0	10.0

Figure 1 : Total Production and Area of Boro, 1980/81 to 1998/99



Note : 1998/99 figure is provisional.

Figure 2: Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1993-99



Note : Price data for April 1999 is upto the 5th week only; private sector imports are as of 6th May,1999. From November the carrying cost has increased by 1.1 Tk/kg to 4.1 Tk/kg. Export parity price includes Bongaon price from July 93 to Nov 1997; and Delhi wholesale price thereafter.

Source : Dorosh (1999), calculated using data from FPMU, CMIE (1998,1999) and Baulch, Das et. al, (1998);

FMRSP MEMO
June 23, 1999

THE USE OF FORTIFIED ATTA FOR DISTRIBUTION IN THE FFE PROGRAM

Description of the Current System

At the present time the Government of Bangladesh (GOB) distributes approximately 300 Th MTs of grain to poor families of children enrolled in primary schools. There are approximately 1.5 million families receiving this subsidy. The main goal of this program is to increase the attendance and the participation of children in the school. All the studies and evaluations done so far, agree that this programs has been successful in increasing attendance rate.

At the same time, it is known that there are some shortcomings in the program as well. The main criticism is that because schoolmasters and teachers are involved in the collection and distribution of the grain to the program participants, it creates confusion and decreases the amount of time and effort of the school personnel at a time when there are more children attending the school.

In order to minimize this problem, the GOB has proposed the participating Union Parishads to stipulate a contract with local dealers to collect the grain at the Local Storage Deposits (LSD) and distribute it directly to the school.

Alternative System and its Feasibility

Given the fact that the population in Bangladesh consumes very low amounts of iron and other micronutrients given the structure of their diet (see work in progress of H. Bouis from IFPRI), there is a proposed for using the FFE program to increase the intake of these crucial nutrients. The proposal consists in delivering to the program participants fortified atta flour packaged in two Kg bag two times a month instead of the usual 15 kg of wheat grain they receive in bulk once a month. Probably an equivalent amount will be close to a total of 12 Kg per month, taking into account milling conversion and milling costs.

In this case, the UPs could stipulate a contract with a miller operating in the district or a trader to have the wheat collected from the LSD, fortified, packaged and delivered to the schools every two weeks.

Advantages

- Improve the nutritional status of the children and their families participating to the project
- Solves the distribution problem affecting the schools at the moment
- Delivers a product that even though is more perishable it is more attractive to the consumers
- Reduces the possibility of pilferage in the distribution process, such as the

Constraints

- There must be a homogeneous technological capability of fortifying the foods uniformly in various the milling facilities.

- It will cost about Tk 2 per kg to have the wheat, milled and packaged and some additional small amount for the fortification. Some additional costs are also possible for transportation
- There is the need to control the quality of the product to avoid the possibility of mills using lower quality wheat instead of the wheat allocated for the program.
- Additional expertise might be needed

Nutritional advantages

The main advantage of the proposed system from a nutritional point of view is to increase the amount of intake of micronutrients in the diet of poor families with children. From several available studies we know that the amount of daily intake of vitamin A and iron is well below the recommended daily intake (RDI).

The key issue is to decide what is the safe amount of micronutrients that can be added to the atta flour to be distributed in order to avoid the possibility of exposing the consumers to the danger of toxic intake levels. To address this issue properly it would be necessary to consult a food scientist.

Here I have gathered some preliminary information on some elements to take into consideration:

- Content of current consumed commodities
  - Wheat in India is VA: 162 IU & Iron: 15.7 mg
- Required Daily Intake (RDI)
  - In a deficient population – Iron: 2.5mg per Kg of body weight (~70 mg) & VA: 600 mcg
  - In a normal population RDI for Iron is 8 mg per adult and 4 mg per child
- Amount of intake that is considered to be toxic on a daily sustainable basis
  - Iron: 250 mg per Kg weight & VA 6,000 mcg (child)
- Level of degradation of micronutirnts during storage (To be determined)
- Amount of Atta consumed per capita per day = 100g on average to a maximum of 500 per capita per day

Capability of local Milling Industry

We tried to establish the capacity of the local milling industry for processing, fortifying and packaging the wheat. It appears that there is enough capacity in the country, at least at division level to process the required amount of wheat (look at the attached table that reports the number of mills and the processing capacity, expressed in MT per 8hrs shifts) by district. It is probably better to plan for the processing at a district or division level. In that case the transportation time and cost between the LSD and the Ups can be minimized. This would prolong the durability of the product.

As for the technology of fortification, it is very simple and can be done at the mills. The cost of additional equipment and changes to the process line are minimal. Nutrient premixes are available through global or local manufacturers. It is possible to obtain a list of global nutrient premix manufacturers, but there may be some local manufacturers able to supply the needed. I am aware of one such company in India,

Hexagon Chemicals Co., which produces premixes for wheat flour enrichment/fortification.

From discussions with the miller's association we learned that the cost for processing the commodity would be approximately Tk2.5 for preparing atta flour with a specification of 90 to 95 percent conversion rate. This includes the packaging, which would account for more than half of the cost. Of course these estimates are preliminary and the final cost should be determined through a competitive bid system or negotiations.

A related issue is the distribution of the finished product. The millers themselves or private dealers can be involved in the collection of the wheat from the LSD and the distribution at the union or at the school.

The impressions from the field

Some of our field supervisors visited three thanas and several UPS to discuss the possibility of using atta flour with government officials and local representatives and journalists and to gather their point of view. The response was in general very positive and enthusiastically welcomed by the people.

The thought that the beneficiaries would be better off if they received a finished product instead of wheat grain. They would save the time used to have the wheat processed at local facilities and they would also save some money, even though the quantity received would be less. Everybody agreed on the value of distributing a highly nutritional product that could improve the nutritional status of the beneficiaries given also the fact that the marginal propensity of consuming atta is perceived to be greater than wheat grain. They were also interested in the delivery of a product well packaged, properly sealed, with clear indication of the content and its quantity.

At the moment UP chairman and other officials were in the process of identifying local dealers to collect the grain from the LSDs and to distribute it to student guardians at a central place in the unions where the schools participating in the programs are located. In some cases, especially in the more remote unions, they had some problems to locate suitable dealers because the commission granted for the transportation cost is lower than the actual cost. Therefore, they were thinking that it might be easier to make a contract with a dealer or with a miller to deliver processed atta flour, because they were already receiving compensation for processing the grain.

The impression from the FFE project office

Our discussions at the FFE project office in Dhaka confirmed that the proposed change of delivering atta flour instead of wheat would be welcome. They mentioned that a processed finished product in a packet would be better than using wheat grain. They are aware of the additional nutritional content of the atta flour. They also believe that it would be much easier to control the distribution system and reduce the amount of leakages.

They are also aware that the effectiveness of the management of the processing of the commodity will be crucial for the success of the product. They mentioned that they

would have confidence in NGOs to carry out the management of the program and they specifically mentioned the possibility of involving CARE.

Additional discussions took place on the benefit of the use of atta flour versus cash. They believe that the consumption of atta flour would be higher than in the case of wheat and would provide additional nutritional value compared to cash.

Conclusion

The distribution of fortified atta flour in bags of two kilograms in the FFE program instead of bulk flower appears to be a feasible alternative. There are several advantages that have been pointed out. The recipients would receive a finished product ready for consumption that will save them time and give them the opportunity of increasing their daily intake of critical micronutrients that are currently missing from their diet. It is also possible that distributing bags of finished product it will increase the quality of the transfer received and minimize the amount of leakage that usually occurs in the distribution process.

There are of course some costs and some potential problems that have to be resolved to make this program successful. The milling capacity has to be verified, the quantity and type of fortification has to be decided and of course there is the additional cost of milling and packaging the product that now is used paid by the consumers that has to be taken into account.

APPENDIX - Additional sources of information

There are those two publications I found:

A) Micronutrient fortification of foods, 1996 by The Micronutrient Initiative

B) Micronutrient fortification and enrichement.. , 1994 Technical review Paper

One good source of additional information is the MOST project:
Ritu Nalubola, Ph.D.
Food Science Advisor
MOST Project
1820 N. Fort Myer Dr. Ste. 600
Arlington, VA 22202
Tel: 703-248-3323
Fax: 703-807-0278
Ritu Nalubola rnalubola@istiinc.com

They suggested to contact Mr. Dave Johnson, Agribusiness Advisor with the ATDP project in Banani, Dhaka (can be reached at faaast@bdmail.net) as an excellent resource for any food technology-related questions.

Another source of information is Micronutrient Initiatives:
Program Support Unit, CIDA
House D2, Road 95
Gulshan, Dhaka
Bangladesh
Ph: (880-2) 88 47 40 - 44
Fax: (880-2) 88 35 16

TABLE – Distribution and milling capacity of grain mills by district

Division	District	Mills	Capacity /8h
		N	MT
Barisal	Barguna	4	75
Barisal	Barisal	21	392
Barisal	Bhola	13	242
Barisal	Jhalokati	0	0
Barisal	Patuakhali	1	19
Barisal	Pirojpur	0	0
Chittagong	Bandarban	2	37
Chittagong	Brahmanbaria	28	522
Chittagong	Chandpur	25	499
Chittagong	Chittagong	350	6532
Chittagong	Comilla	236	4404
Chittagong	Cox's Bazar	49	914
Chittagong	Feni	94	1754
Chittagong	Khagrachari	0	0
Chittagong	Laksmipur	4	75
Chittagong	Noakhali	128	2312
Chittagong	Rangamati	1	19
Dhaka	Dhaka	121	2258
Dhaka	Faridpur	60	1113
Dhaka	Gazipur	18	336
Dhaka	Gopalganj	6	112
Dhaka	Jamalpur	3	56
Dhaka	Kishoregonj	15	277
Dhaka	Madaripur	0	0
Dhaka	Manikganj	3	56
Dhaka	Munshiganj	4	75
Dhaka	Mymensingh	17	305
Dhaka	Narayanganj	67	1250
Dhaka	Narsingdi	18	337
Dhaka	Netrokona	0	0
Dhaka	Rajbari	2	37
Dhaka	Shariatpur	0	0
Dhaka	Sherpur	8	109
Dhaka	Tangail	2	37
Khulna	Bagerhat	0	0
Khulna	Chuadanga	31	578
Khulna	Jessore	46	858
Khulna	Jhenaidah	0	0
Khulna	Khulna	64	1194
Khulna	Kushtia	77	1437
Khulna	Magura	0	0
Khulna	Meherpur	8	149
Khulna	Narail	0	0
Khulna	Satkhira	0	0
Rajshahi	Bogra	6	112
Rajshahi	Dinajpur	28	520

FPMU/FMRSP memo
16 July, 1999

Public Foodgrain Stocks, Procurement and Distribution under Flood and no Flood Scenarios

- Current **foodgrain stocks are 11.35 lakh MTs** (1 July net figure), nearly 6 lakh MTs more foodgrain than on 1 July, 1998.

- Foodgrain stocks at the start of July 1998 were only 3.37 lakh MTs of rice and 2.08 lakh MTs of wheat.[1] Foodgrain stocks at the start of July 1999 were **6.80 lakh MTs of rice and 4.55 lakh MTs of wheat**.

- **Boro procurement** following the 1998/99 crop is equal to **3.77 lakh MTs** as of July 14, 1999, only 23 thousand MTs short of the original target of 4 lakh MTs. Additional procurement in the rest of July and during August is expected to be in the range of 15 to 70 thousand MTs.

- In the event of a major flood like the one in July-September, 1998, **government food stocks are sufficient to handle anticipated flood relief distribution needs.** If a major flood occurs, the Ministry of Food is prepared to increase VGF and FFW distribution to meet the needs of flood victims for food and incomes.

- In the plan shown in the Flood Scenario Stock-Flow Table, **VGF distribution** would be equal to 30 thousand MTs of rice and 30 thousand MTs of wheat in August, and then increased to 42 thousand MTs of rice and 42 thousand MTs of wheat per month for September, October and November. This foodgrain is sufficient for **3 million VGF cards in August and 4.2 million cards in September through November**, with a ration of 20 kgs of foodgrain (10 kgs rice and 10 kgs of wheat) per card.

- **FFW distribution** under the flood scenario is **increased by 175 thousand MTs of wheat** over the 400 thousand MTs of wheat in the 1999/2000 budget. The flood distribution plan also includes 125 thousand MTs of FFW rice, as already allocated in the 1999/2000 budget.

- With this increase in Food For Work, **175,000 MTs of additional food aid** is required. **In addition, another 156,000 MTs of food aid** could be sought to cover the VGF wheat distribution. The Flood Scenario Stock-Flow Table shown here, however, assumes only that 175,000 MTs of food aid are obtained, raising total food aid to 998 thousand MTs and leaving wheat stocks at the end of June 2000 at 255 thousand MTs.

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[1] Net rice stocks are equal to gross stocks less 15 thousand MTs for transit deduction. The transit deduction for net wheat stocks is 70 thousand MTs.

- Whether or not there is a flood, existing rice stocks of nearly 7 lakh MTs, need to be distributed within six to seven months to avoid serious quality deterioration in storage. If a major flood occurs, fixed-price aman procurement will likely be zero (domestic tenders may succeed in procuring some rice). Thus, in a major flood scenario, **commercial rice imports** will be needed to maintain stock levels. Approximately **3 lakh MTs** would need to be imported beginning with **50,000 MTs in November, 1999** to maintain rice stocks above a level of 2.2 lakh MTs or more for the rest of 1999/2000.

- In 1998/99, private sector rice imports (24.8 lakh MTs) and wheat imports (8.0 lakh MTs) contributed substantially to market foodgrain supplies after the flood. These imports, which significantly contributed to overall food availability in the country, were made possible by GOB encouragement of the private sector and by favorable market conditions in India. **In the event of a major flood, maintaining private sector trade incentives would again be crucial to national food security.**

- This year India has record foodgrain stocks (31.4 million MTs (19.76 mn MTs of wheat and 11.66 mn MTs of rice, as of the end of April, 1999), and is likely to permit exports if the country has a normal harvest. But in the event of export restrictions (e.g. stringent Indian rice export quotas), the Bangladesh private sector would likely turn to the international market in Thailand for rice. This would likely involve somewhat higher costs, and a fewer number of Bangladesh importers participating in the trade. Current world rice prices are low, $252/MT for 5% broken parboiled rice, FOB Bangkok, $63/MT lower than June of last year.

- In deciding on the appropriate strategy, the Ministry of Food will monitor the evolving flood situation. Key decisions will need to be made in August, including extent of the VGF program, requests for additional food aid (to arrive in early 2000), and government commercial rice imports (to arrive beginning in November 1999).

- **Summary: Stock levels are sufficient for short-term emergency flood relief needs through the end of 1999. Additional food aid wheat of about 3 lakh MTs** would be required for a large increase in Food For Work and **government commercial rice imports of about 3 lakh MTs** would also be needed during the November 1999 – February 2000 period. In the event of a major aman production shortfall, **private imports would again be needed** to make a major contribution toward stabilizing rice markets and maintaining foodgrain supplies.

Time Table for Key Decision:

The Flood scenario will be clear in August 1999. Under the flood scenario, the following time-table for making decisions are proposed:

Distribution:

- VGF Distribution may start from August'99 with 30 lakh cards @ 20 kg of foodgrain (10 kg rice and 10 kg wheat) and then increased 42 lakh cards for September'99 through Novemner'99. Total VGF distribution may be increased to 3.23 lakh MT from 0.15 lakh MT.

- Allocation of FFW may be increased to 7.0 lakh MT from the budget of 5.25 lakh MT.

Rice import:

- August' 99: Decision of import of 50,000 MT of rice may be taken at the end of August'99, so that these can reach in November '99.

- September'99: Decision for import of 100,000 MT of rice so that it is in stock in December'99.

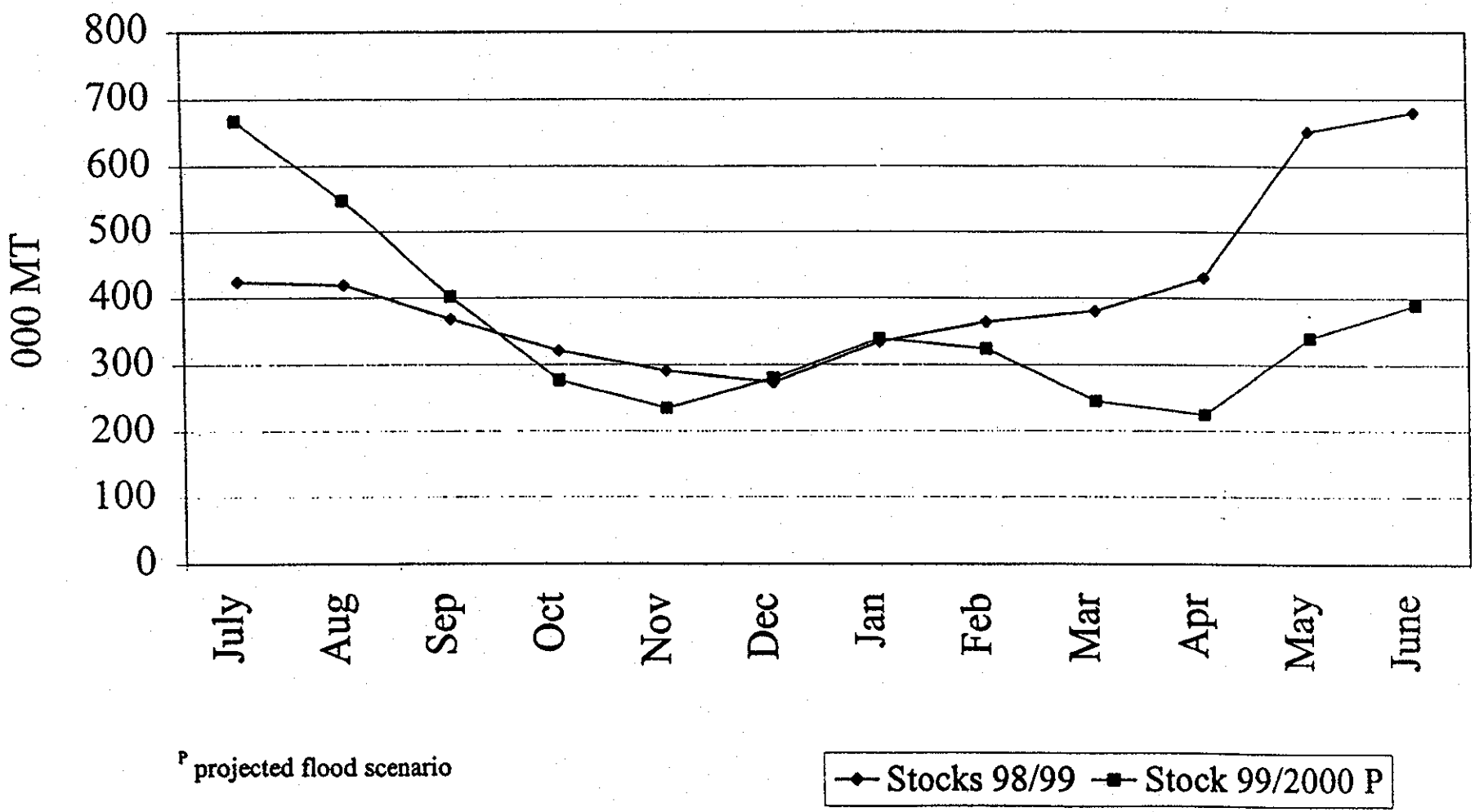
- October'99: Decision for import of 100,000 MT of rice so that it is in stock in January'2000.

- November'99: Decision for import of 50,000 MT of rice so that it is in stock in Feburaryr'2000.

Food Aid:

Donors may be requested in August'99 for additional 300,000 MT of wheat for increased VGF and FFW.

Figure 1: Month-end Stocks of Rice in 1998/99 and 1999/2000[P]



[P] projected flood scenario

Figure 2: Month-end Stocks of Wheat in 1998/99 and 1999/2000[P]

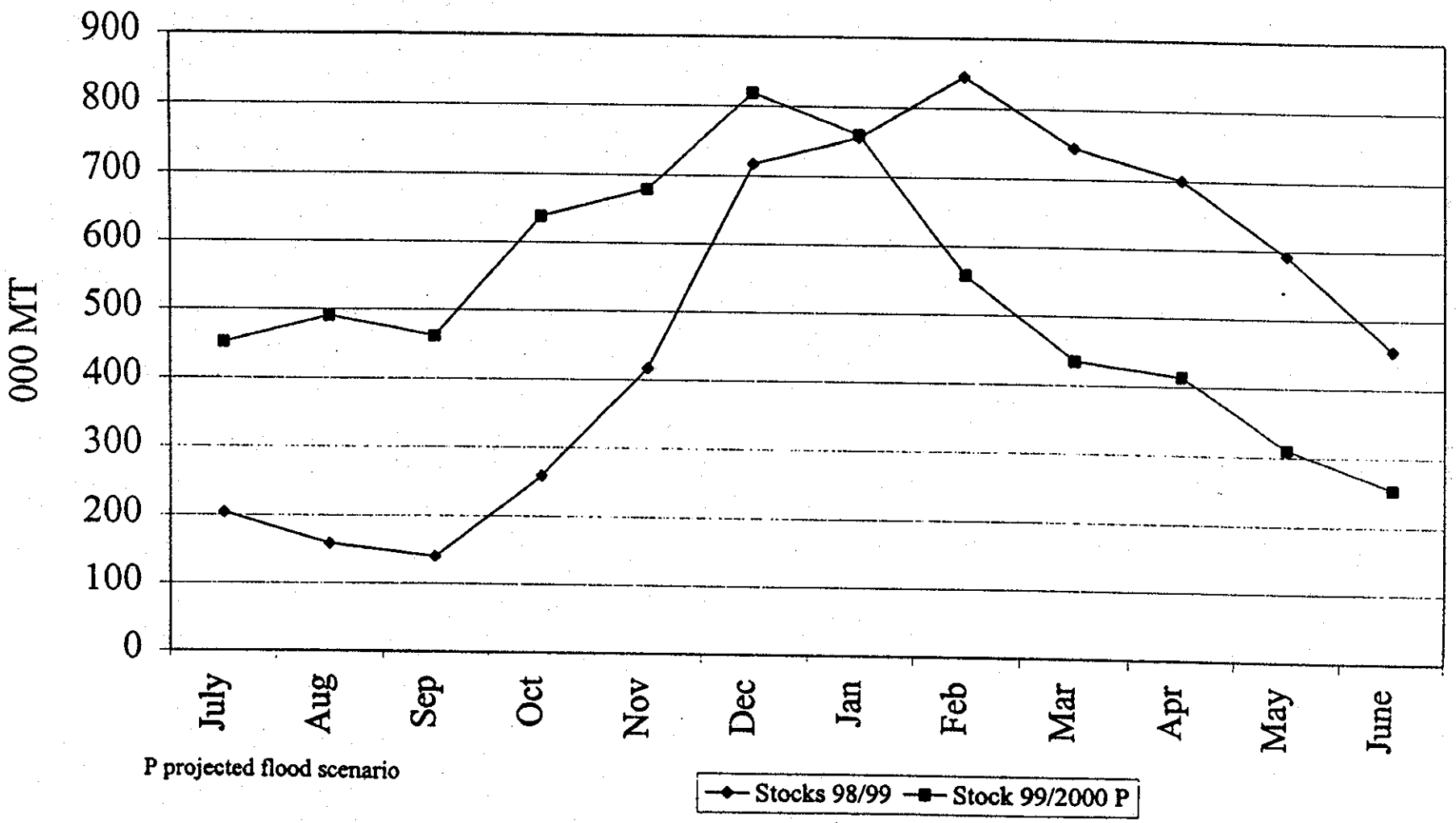
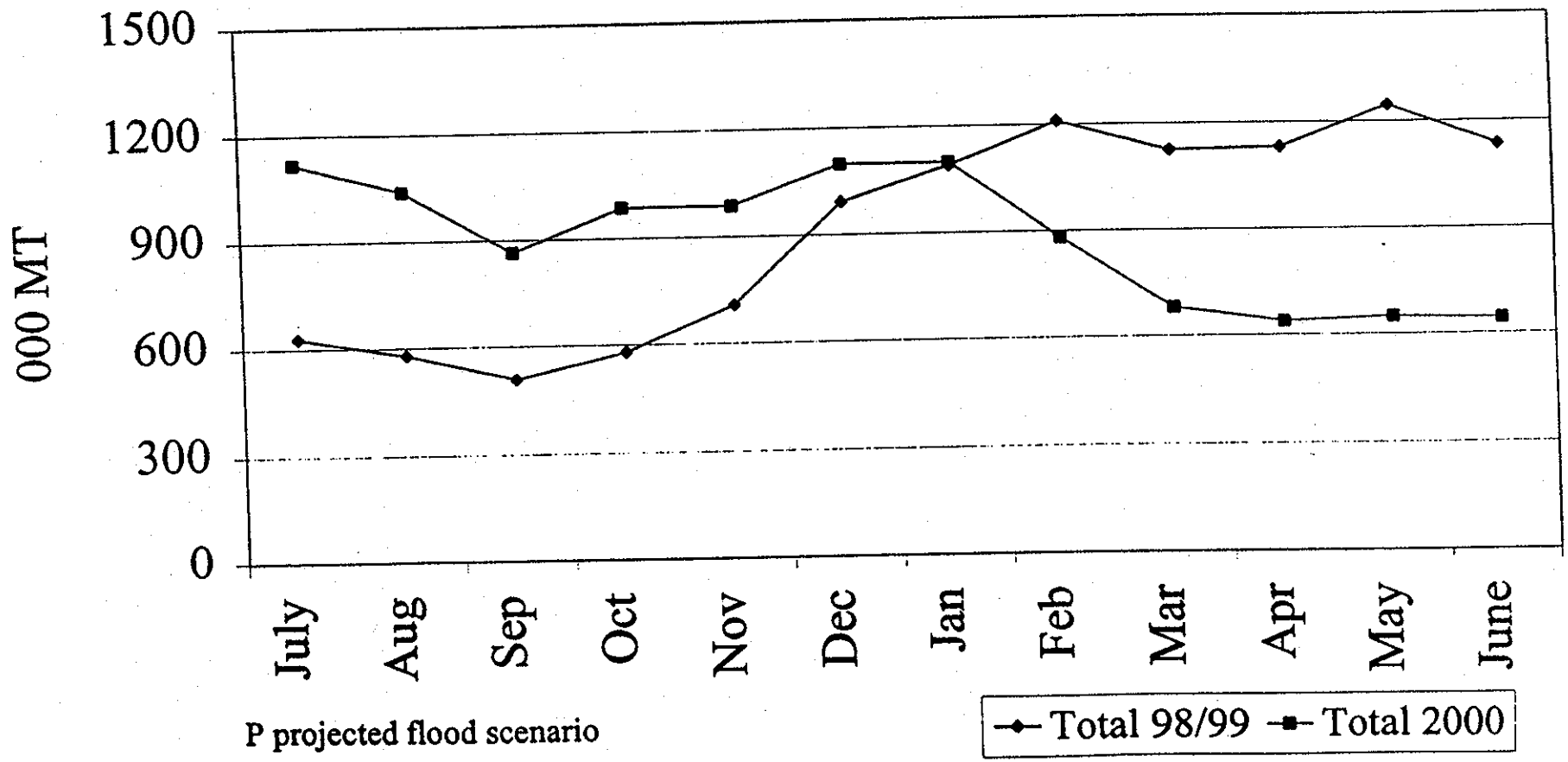


Figure 3: Month-end Stocks of Total Foodgrain in 1998/99 and 1999/2000[P]



P projected flood scenario

FPMU

Monthly Projection of Govt. Stock, Procurement, Import, Offtake of Rice & Wheat during 1999/2000

Base Case

15-07-1999

('000 MTs)

MONTH	OPENING STOCK			ADDITION									TOTAL ADDI-TION	OFF-TAKE																					Total OFF-TAKE	Stock net of transit deduct			6+ MNTH END STK
				Domestic Procurement			Import							RICE											Rice Total	WHEAT										Wheat Total				
							Food Aid		Commercial		Total Import			Priced				Non-Priced								Priced				Non-Priced											
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Rice	Wheat	Rice	Wheat	Total	OMS/ FPC	OP	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Others	Total	OMS/ FPC	OP/FM	LEI	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Other	Total					
July '99	695	525	1,220	75	7	82	0	0	0	0	0	0	82	0.0	0.6	10.6	11.1	0.0	12.0	25.0	0	2.0	2.6	0.3	41.9	53.0	0.0	1.0	1.0	8.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	63.0	702	451	1153	J	36
August	717	521	1,238	30	0	30	2	90	0	0	2	90	92	10.0	1.0	10.6	21.6	0.0	12.0	25.0	10	2.0	20.4	1.1	70.5	92.1	0.0	1.0	1.0	8.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	20.0	112.1	641	520	1161	A	11
Septem	656	590	1,246	0	0	0	0	35	0	0	0	35	35	20.0	1.0	11.0	32.0	0	12.0	25.0	10	2.0	20.0	4.0	73.0	105.0	0.0	1.0	1.0	8.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	1.0	11.0	21.0	126.0	535	533	1069	S	-39
October	550	603	1,154	0	0	0	0	250	0	0	0	250	250	30.0	1.0	9.8	40.8	0	5.0	13.0	0	0.0	6.6	5.0	29.6	70.5	10.0	1.0	1.0	8.0	20.0	0.0	10.0	17.0	0.0	0.0	0.0	0.1	27.1	47.1	117.6	464	735	1199	O	-21
Novem	479	805	1,284	0	0	0	0	154	0	0	0	154	154	0.0	1.0	9.7	10.7	0	5.0	13.0	0	0.0	0.0	7.9	25.9	36.6	20.0	1.0	2.0	8.0	31.0	25.0	10.0	17.0	0.0	0.0	0.0	3.8	55.8	86.8	123.4	427	801	1229	N	182
Decem	442	871	1,314	50	0	50	0	217	0	0	0	217	217	0.0	0.0	10.2	10.2	10	5.0	13.0	0	0.0	0.0	5.1	33.1	43.3	30.0	1.0	2.0	8.0	41.0	25.0	10.0	17.0	0.0	0.0	0.0	0.2	52.2	93.2	136.5	433	924	1357	D	280
Janu '2000	448	994	1,442	100	0	100	0	75	0	0	0	75	75	0.0	0.0	10.9	10.9	20	5.0	12.0	0	0.0	0.0	4.8	41.8	52.7	0.0	2.0	2.0	8.0	12.0	50.0	10.0	17.0	0.0	0.0	0.0	2.0	79.0	91.0	143.7	480	907	1387	J	302
February	495	977	1,472	50	0	50	0	0	0	0	0	0	0	20.0	1.0	11.6	32.6	25	4.0	12.0	0	0.0	0.0	2.2	43.2	75.8	20.0	2.0	1.0	8.0	31.0	100.0	10.0	17.0	0.0	0.0	0.0	2.0	129.0	160.0	235.8	453	746	1199	F	257
March	468	816	1,284	0	30	30	0	0	0	0	0	0	0	20.0	1.0	10.6	31.6	40	4.0	12.0	0	0.0	0.0	2.0	58.0	89.7	20.0	2.0	1.0	9.0	32.0	100.0	10.0	16.0	0.0	0.0	0.0	1.0	127.0	159.0	248.7	363	616	979	M	167
April	379	686	1,064	25	80	105	0	0	0	0	0	0	0	0.0	1.0	10.0	11.0	20	0.0	0.0	10	3.0	0.0	1.0	34.0	45.0	0.0	1.0	1.0	9.0	11.0	75.0	20.0	33.0	10.0	0.0	0.0	1.0	139.0	150.0	195.0	342	545	887	A	121
May	357	615	972	150	23	173	0	0	0	0	0	0	0	173	0.0	1.0	10.0	11.0	10	0.0	0.0	10	3.0	0.0	1.0	24.0	35.0	0.0	1.0	1.0	9.0	11.0	25.0	20.0	33.0	10.0	0.0	0.0	2.0	90.0	101.0	136.0	457	466	923	M	86
June	472	536	1,008	75	20	95	0	0	0	0	0	0	0	95	0.0	1.0	10.0	11.0	0	0.0	0.0	10	3.0	0.0	1.0	14.0	25.0	0.0	1.0	1.0	8.0	10.0	0.0	20.0	33.0	10.0	0.0	0.0	2.0	65.0	75.0	100.0	506	411	917	J	110
Total				555	160	715	2	821	0	0	2	821	823	1538	100	10	125	235	125	64	150	50	15	50	35	489	724	100	15	15	99	229	400	120	200	50	0	0	15	785	1014	1738					

July '99 - Dec'99	155	7	162	2	746	0	0	2	746	748	910	60	5	62	126	10	51	114	20	6	50	23	274	400	60	6	8	48	122	50	30	51	20	0	0	5	156	278	679					
Jan-June 2000	400	153	553	0	75	0	0	0	75	75	628	40	5	63	108	115	13	36	30	9	0	12	215	323	40	9	7	51	107	350	90	149	30	0	0	10	629	736	1059					

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<u>FPMU</u>

Monthly Projection of Govt. Stock, Procurement, Import, Offtake of Rice & Wheat during 1999/2000

Flood Scenario

15-07-1999

('000 MTs)

ADDITION

MONTH	Opening Stock Rice	Opening Stock Wheat	Opening Stock Total	Domestic Procurement Rice	Domestic Procurement Wheat	Domestic Procurement Total	Import Food Aid Rice	Import Food Aid Wheat	Import Commercial Rice	Import Commercial Wheat	Total Import Rice	Total Import Wheat	Total Import Total	TOTAL ADDITION
July '99	695	525	1,220	40	7	47	0	0	0	0	0	0	0	47
August	682	521	1,203		0	0	2	90	0	0	2	90	92	92
Septem	563	560	1,123	0	0	0	0	35	0	0	0	35	35	35
October	417	531	949	0	0	0	0	250	0	0	0	250	250	250
Novem	292	708	1,000	0	0	0	0	154	50	0	50	154	204	204
Decem	251	749	1,000		0	0	0	217	100	0	100	217	317	317
Janu '2000	295	889	1,184		0	0	0	75	100	0	100	75	175	175
February	354	830	1,184		0	0	0	0	50	0	50	0	50	50
March	339	627	966	0	30	30	0	75	0	0	0	75	75	105
April	261	505	766	25	80	105	0	100	0	0	0	100	100	205
May	240	484	724	150	23	173	0	0	0	0	0	0	0	173
June	355	380	735	75	20	95	0	0	0	0	0	0	0	95
Total				290	160	450	2	996	300	0	302	996	1298	1748
July '99 - Dec'99				40	7	47	2	746	150	0	152	746	898	945
Jan-June 2000				250	153	403	0	250	150	0	150	250	400	803

OFF-TAKE — RICE

MONTH	Priced OMS/FPC	Priced OP	Priced EP	Priced Total	Non-Priced FFW	Non-Priced VGD	Non-Priced FFE	Non-Priced TR	Non-Priced VGF	Non-Priced GR	Non-Priced Others	Non-Priced Total	Rice Total
July '99	0.0	0.6	10.6	11.1	0.0	12.0	25.0	0	2.0	2.6	0.3	41.9	53.0
August	10.0	1.0	10.6	21.6	0.0	12.0	25.0	10	30.0	20.4	1.1	98.5	120.1
Septem	20.0	1.0	11.0	32.0	0	12.0	25.0	10	42.0	20.0	4.0	113.0	145.0
October	30.0	1.0	9.8	40.8	0	5.0	25.0	0	42.0	6.6	5.0	83.6	124.5
Novem	0.0	1.0	9.7	10.7	0	5.0	25.0	0	42.0	0.0	7.9	79.9	90.6
Decem	0.0	0.0	10.2	10.2	10	5.0	25.0	0	0.0	0.0	5.1	45.1	55.3
Janu '2000	0.0	0.0	10.9	10.9	20	5.0	0.0	0	0.0	0.0	4.8	29.8	40.7
February	20.0	1.0	11.6	32.6	25	4.0	0.0	0	0.0	0.0	2.2	31.2	63.8
March	20.0	1.0	10.6	31.6	40	4.0	0.0	0	0.0	0.0	2.0	46.0	77.7
April	0.0	1.0	10.0	11.0	20	0.0	0.0	10	3.0	0.0	1.0	34.0	45.0
May	0.0	1.0	10.0	11.0	10	0.0	0.0	10	3.0	0.0	1.0	24.0	35.0
June	0.0	1.0	10.0	11.0	0	0.0	0.0	10	3.0	0.0	1.0	14.0	25.0
Total	100	10	125	235	125	64	150	50	167	50	35	641	876
July '99 - Dec'99	60	5	62	126	10	51	150	20	158	50	23	462	588
Jan-June 2000	40	5	63	108	115	13	0	30	9	0	12	179	287

OFF-TAKE — WHEAT; Total OFF-TAKE; Stock net of transit deduct

MONTH	Priced OMS/FPC	Priced OP/FM	Priced LEI	Priced EP	Priced Total	Non-Priced FFW	Non-Priced VGD	Non-Priced FFE	Non-Priced TR	Non-Priced VGF	Non-Priced GR	Non-Priced Other	Non-Priced Total	Wheat Total	Total OFF-TAKE	Stock net of transit deduct Rice	Stock net of transit deduct Wheat	Stock net of transit deduct Total		6+ MNTH END STK
July '99	0.0	1.0	1.0	8.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	63.0	667	451	1118	J	36
August	0.0	1.0	1.0	8.0	10.0	0.0	0.0	0.0	10.0	30.0	0.0	0.0	40.0	50.0	170.1	548	490	1038	A	-17
Septem	0.0	1.0	1.0	8.0	10.0	0.0	0.0	0.0	10.0	42.0	0.0	1.0	53.0	63.0	208.0	402	461	864	S	-107
October	10.0	1.0	1.0	8.0	20.0	0.0	10.0	0.0	0.0	42.0	0.0	0.1	52.1	72.1	196.6	277	638	915	O	-143
Novem	20.0	1.0	2.0	8.0	31.0	25.0	10.0	0.0	0.0	42.0	0.0	3.8	80.8	111.8	202.4	236	679	915	N	6
Decem	30.0	1.0	2.0	8.0	41.0	25.0	10.0	0.0	0.0	0.0	0.0	0.2	35.2	76.2	131.5	280	819	1099	D	92
Janu '2000	0.0	2.0	2.0	8.0	12.0	75.0	10.0	34.0	0.0	0.0	0.0	2.0	121.0	133.0	173.7	339	760	1099	J	91
February	20.0	2.0	1.0	8.0	31.0	125.0	10.0	34.0	0.0	0.0	0.0	2.0	171.0	202.0	265.8	324	557	881	F	28
March	20.0	2.0	1.0	9.0	32.0	150.0	10.0	33.0	0.0	0.0	0.0	1.0	194.0	226.0	303.7	246	435	681	M	-50
April	0.0	1.0	1.0	9.0	11.0	125.0	20.0	33.0	10.0	0.0	0.0	1.0	189.0	200.0	245.0	225	414	639	A	-96
May	0.0	1.0	1.0	9.0	11.0	50.0	20.0	33.0	10.0	0.0	0.0	2.0	115.0	126.0	161.0	339	310	650	M	-82
June	0.0	1.0	1.0	8.0	10.0	0.0	20.0	33.0	10.0	0.0	0.0	2.0	65.0	75.0	100.0	389	255	644	J	-7
Total	100	15	15	99	229	575	120	200	50	156	0	15	1116	1345	2221					
July '99 - Dec'99	60	6	8	48	122	50	30	0	20	156	0	5	261	383	972					
Jan-June 2000	40	9	7	51	107	525	90	200	30	0	0	10	855	962	1249					

Flood Scenario:

Domestic Procurement: No aman procurement; small additional boro: July (40), Aug 99 - March 2000 (0);

Food Aid: July 0, Aug 90, Sept 35, Oct 250, Nov 154; Dec 217; Jan 75 (Japan 35 not included);

Additional Food Aid: 175 Mts (March 75; April 100);

Rice Distribution: VGF: Aug 30; Sept 42; Oct 42; Nov 42; Addtl 175 FFW (from Jan through May);

Wheat Distribution: Addtl 152 VGF: Revised distribtion Aug 30; Sept 42; Oct 42; Nov 42,

FFE: To help rotate rice stocks, all FFE from July- Dec is rice; all FFE from Jan - June 2000 is wheat.

FMRSP/IFPRI memo
22 July, 1999

Implications of Additional Food Aid for Domestic Prices

In response to needs for relief and rehabilitation following the devastating floods from July through September 1998, donors sharply increased food aid in 1998/99. It is still too early to say definitively whether there will be serious floods in Bangladesh in 1999. Certainly, if such floods again occur, food aid requirements will exceed the current amounts pledged. This memo, however, focuses on an alternative scenario in which no serious floods occur, and explores the likely effects of additional food aid wheat on the domestic market.

Food Aid Flows in 1998/99 and 1999/2000

In 1998/99, donors committed 1.08 million MTs of foodgrain (almost entirely wheat) for flood relief, in addition to 596,000 MTs of regularly programmed food aid. Because of shipping delays and requests by the Government of Bangladesh to postpone delivery, however, actual food aid shipments in 1998/99 were only 1.24 million MTs. For 1999/2000, current estimates are that 823,000 MTs of food aid will arrive in 1999/2000, (of which 821,000 MTs are wheat).

The possibility now exists for an additional 200,000 MTs of U.S. 416-B food aid for 1999/2000. If there is a serious flood, an estimated additional 325,000 MTs would be required for flood relief distribution. In this case, the additional 200,000 MTs of U.S. 416-B could fill some of these government distribution needs, and most likely not adversely affect domestic prices (which would likely be at import parity) or even private sector imports.

Impact of Additional Food Aid in a No-Flood Scenario

In the absence of a flood, however, an additional 200,000 MTs of wheat would likely result in lower market prices. As foodgrain from the successful wheat and boro rice harvests in March-June 1999 has reached the market, domestic prices of both rice and wheat fell have fallen sharply. Wholesale prices of coarse rice in Dhaka fell by 23 percent, from 14.5 Tk/kg in the first week of April to 11.2 Tk/kg in the first week of July, 1999 (Figure 1). National average wholesale wheat prices, likewise, fell by 15 percent from the first week of March to the first week of July, from 9.7 Tk/kg to 8.3 Tk/kg (Figure 2).

In real terms, (i.e. adjusting for overall inflation[1]), real rice prices are still slightly above the long term declining trend from 1987 to 1999, but are essentially at about their

[1] Using the non-food Dhaka middle-income Cost of Living Index before June 1998 and the national Consumer Price Index thereafter.

average level of the last six years (Figure 3). Real wheat prices, though, are about five percent below their long-term trend.

Moreover, domestic wheat prices are below international parity prices (Figure 2). Compared to U.S. Hard Red Winter #2 import parity Dhaka, domestic prices were 16 percent below import parity in May 1999. This likely overstates somewhat the disparity between domestic and international prices since domestically produced wheat is soft white wheat and is generally of lower quality than U.S. Hard Red Winter #2. Moreover, discussions with the Cargill office in Dhaka in May indicated that in recent months, most private sector imports likely came from non-U.S. and non-E.C. sources (such as Turkey and CIS countries)[2] and were of lower standards than U.S. Hard Red Winter #2. Nonetheless, even after adjusting for quality, it appears likely that domestic wheat prices are currently somewhat below import parity, even with 1998/99 average international prices at their lowest levels since the early 1990s.

The average food aid quantity for the two relatively normal harvest years before the 1998 flood (1996/97 and 1997/98) was only 584 thousand MTs. Thus, a 200 thousand MT increase in food aid wheat over current plans of 821 thousand MTs, would bring food aid to about 400 thousand MTs more than in the two years before the flood. The evidence suggests that this amount of food aid, if distributed, would very likely depress domestic wheat prices to levels substantially below import parity (assuming normal foodgrain harvests and no decline in import parity).

Additional Food Aid without Adverse Effects on Producer Prices

One option for bringing in additional wheat food aid without depressing market prices is to simply hold the additional wheat as public stocks. Government net wheat stocks if there is no serious flood are likely to be about 400 thousand MTs at the end of June 2000 (Table 1). Net rice stocks are projected to be about 500 thousand MTs. An addition of 200 thousand MTs to wheat stocks would bring total wheat stocks to 600 thousand MTs and total foodgrain stocks to 1.1 million MTs. If the additional food aid were available, one alternative for the Government of Bangladesh would be to procure less than the 450 thousand MTs currently planned for the aman and boro seasons in 1999/2000. In this way, total stocks would be in the range of 900,000 to 1.1 million MTs.

Finally, it should be noted that food aid brings substantial benefits to Bangladesh since, with the funds generated from sale of the food aid to the Government of Bangladesh finance development activities equal to the value of the food. Thus, food aid received as a grant likely has large positive net benefits even when it has adverse effects on farmgate prices.

[2] Some wheat reportedly also came from Australia.

Conclusions

In a no major flood scenario, an additional 200 thousand MTs of food aid wheat, if distributed on the domestic market in 1999/2000, would likely depress domestic wheat prices, adversely affecting domestic production and farmer incomes. If food aid is nonetheless increased (because of its likely substantial net positive benefits), the option of avoiding increased wheat distribution through public stock build-up should be considered. In any case, care should be taken to avoid adversely affecting farmgate prices and domestic wheat production through sharp increases in the distribution of wheat at the time of the wheat harvest in February through April 2000.

Table 1: Food Aid and PFDS Wheat Distribution Scenarios: 1999/2000

	Base Scenario (No Serious Flood) level	Flood Scenario level	Flood Scenario change vs base	Flood w/ stock recovery level	Flood w/ stock recovery change vs base
		(Units: '000 MTs of Wheat)			
Opening Stock (net)	455	455		455	
Domestic Procurement	160	160		160	
Commercial Imports	0	0		0	
Food Aid	821	996	175	1146	325
PFDS Distribution	1014	1345	331	1345	331
Storage Loss	11	11		11	
End Stock	411	255	-156	405	-6

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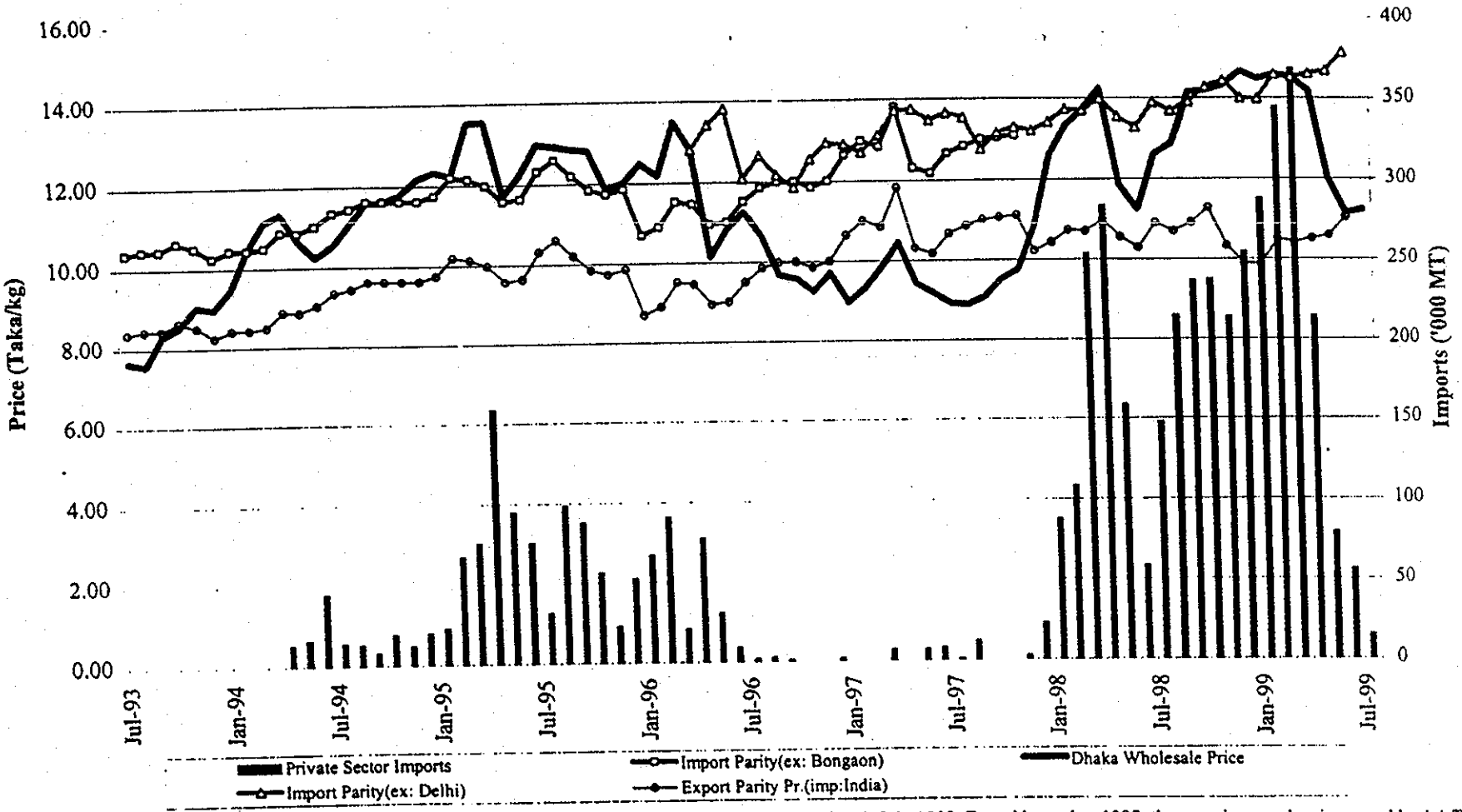
Figure 1 - Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1993-99



Note : Price data for July 1999 is up to the second week only; private sector imports are as of 18th July,1999. From November 1998, the carrying cost has increased by 1.1 Tk/kg to 4.1 Tk/kg. Export parity price includes Bongaon price from July 93 to November 1997; and Delhi wholesale price thereafter.

Source : Dorosh (1999), calculated using data from FPMU, CMIE (1998,1999) and Baulch, Das et. al, (1998);

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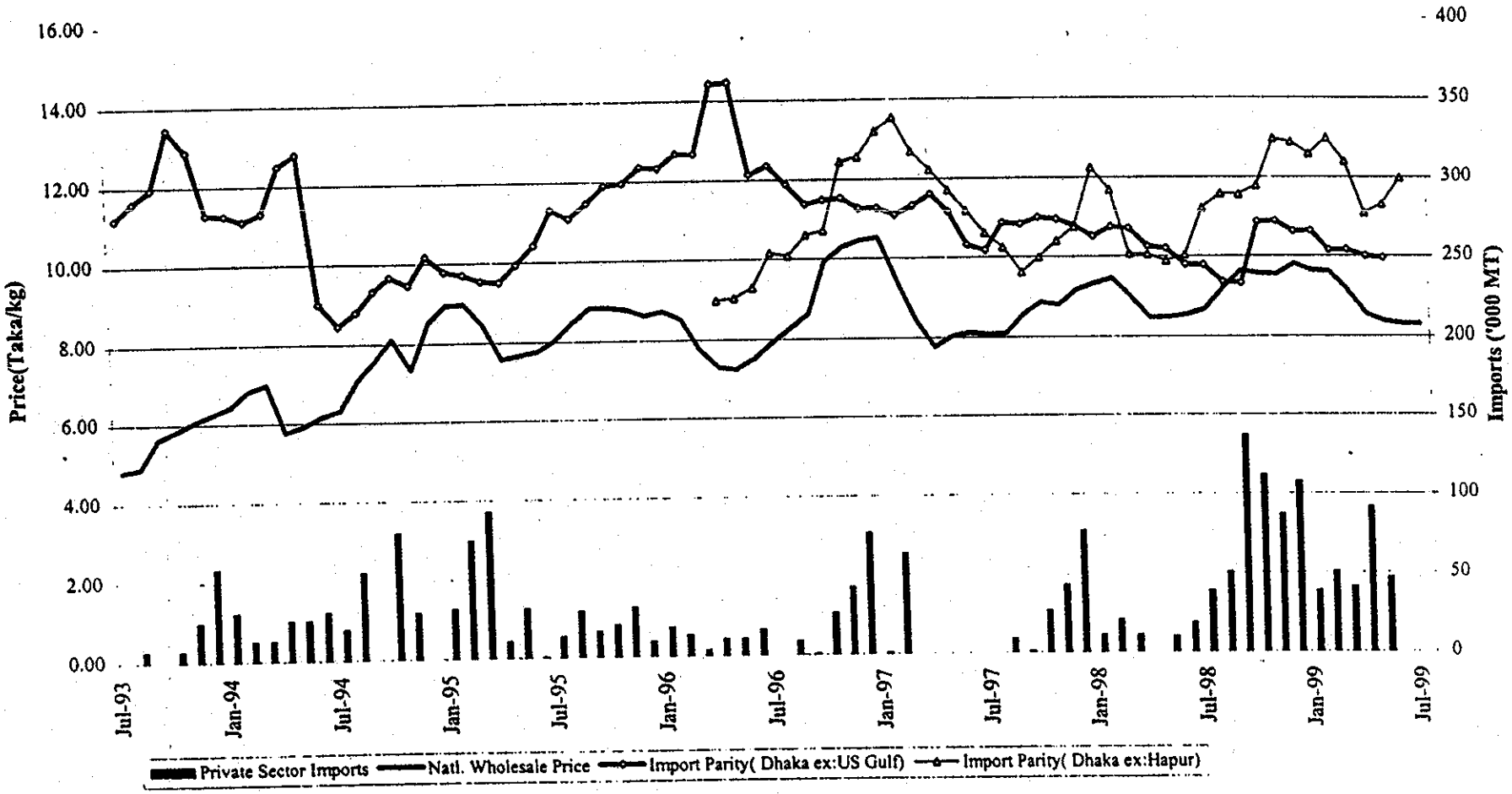
Figure 2 - Wheat Prices and Quantity fo Private Wheat Imports in Bangladesh, 1993-99



Note : Price data for July 1999 is up to the second week only; Import parity(Dhaka) price is based on US # 2 HRW and includes import tariffs; Private imports are as of 18th July, 1999. From November 1998, the carrying cost from Hapur has increased by 1.1 Tk/kg to 4.1 Tk/kg.

Source : FPMU, DAM, USDA, CMIE (1999).

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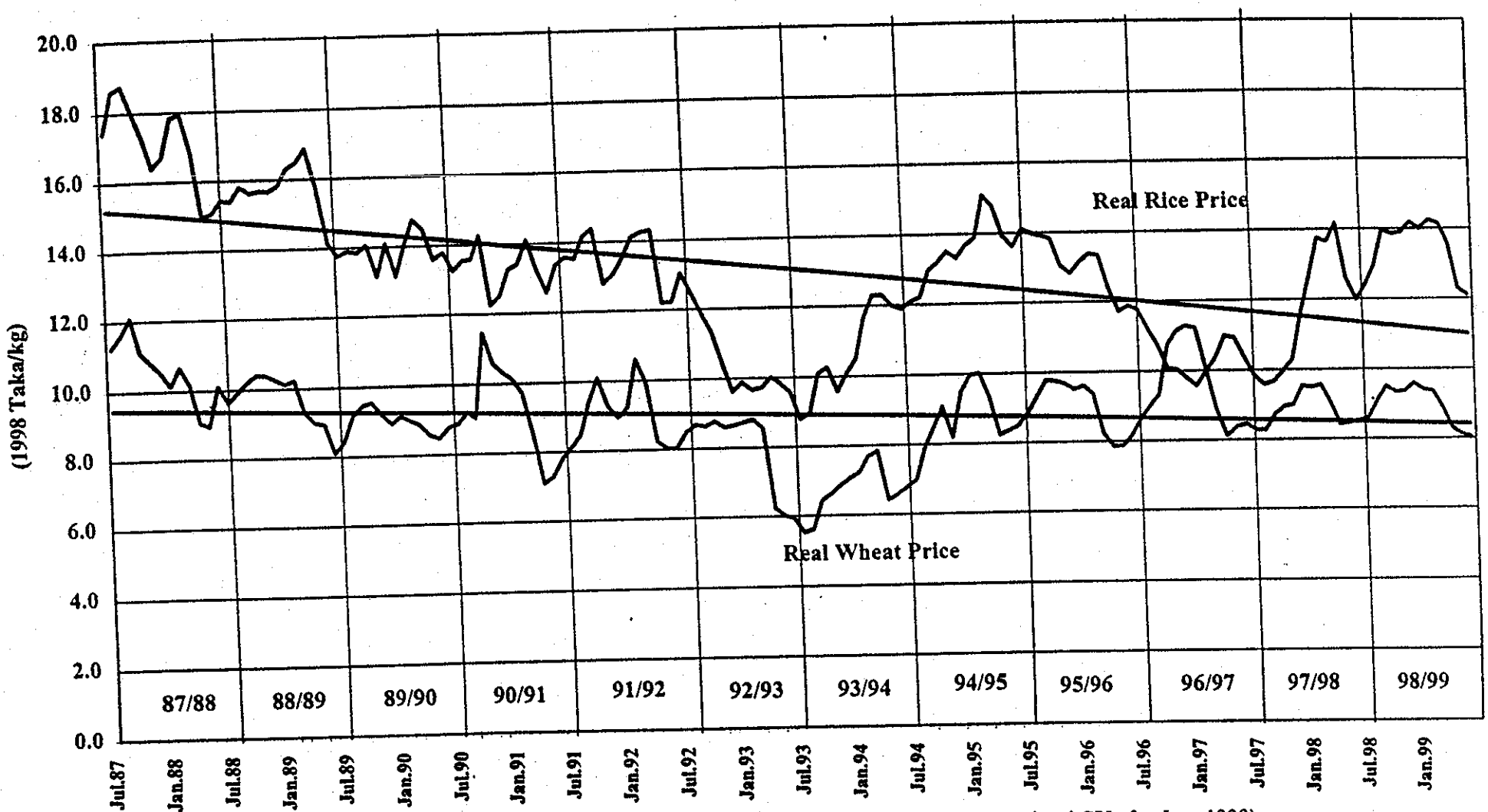
Figure 3 - National Average Real Wholesale Price of Rice and Wheat, 1987-99



Note: Prices are deflated using the non-food Dhaka middle-income Cost of Living Index (and the national CPI after June 1998).
Source : FPMU data and author's calculation.

7/22/99

Wheat Imports In Spite of Bumper Harvests: Some Possible Explanations

In spite of excellent wheat and boro rice harvests and a sharp fall in both wheat and rice prices in recent months, private sector wheat imports have continued. 47 thousand MTs of wheat were imported by the private sector in May, and letters of credit and discussions with traders indicate that substantial additional quantities (on the order of 2 lakh MTs) are expected. This memo discusses these recent developments and the main determinants of private sector wheat imports, and suggests that the continued imports may be due more to use of wheat for baking purposes than to shortages of foodgrain in domestic markets.

Recent Foodgrain Prices and Imports

Following the onset of the wheat harvest, national average wholesale wheat prices fell by 15 percent from 9.7 Tk/kg during the first week of March to 8.3 Tk/kg during the first week of July (Figure 1). Since then, they have risen slightly, to 8.6 Tk/kg in the third week of July, almost exactly the same level as at this time in 1998.

Rice prices fell even more sharply in recent months. Following the start of the boro harvest, wholesale prices of coarse rice in Dhaka fell by 23 percent, from 14.5 Tk/kg in the first week of April to 11.2 Tk/kg in the first week of July (Figure 2). Rice prices rose slightly in the following two weeks, to 11.4 Tk/kg, but were still 10 percent below their level of 1998 (12.6 Tk/kg).

Thus, foodgrain prices have fallen in accordance with the increased supplies from the bumper harvests. In real terms, (i.e. adjusting for overall inflation[1]), real rice prices are still slightly above the long term declining trend from 1987 to 1999, but are essentially at about their average level of the last six years (Figure 3). Real wheat prices, though, are about five percent below their long-term trend.

However, international prices are also low compared to levels in recent years (Figure 1). Compared to U.S. Hard Red Winter #2 import parity Dhaka, domestic prices were 16 percent below import parity in May 1999.[2] This likely overstates somewhat the disparity between domestic and international prices since domestically produced wheat is soft white wheat and is generally of lower quality than U.S. Hard Red Winter #2. Moreover, discussions with the Cargill office in Dhaka in May indicated that in recent

[1] Using the non-food Dhaka middle-income Cost of Living Index before June 1998 and the national Consumer Price Index thereafter.
[2] Note that Figure 1 uses a 15 percent quality discount for wheat in domestic markets compared with U.S. hard red winter #2.

months, most private sector imports likely came from non-U.S. and non-E.C. sources (such as Turkey and CIS countries)[3] and were of lower standards than U.S. Hard Red Winter #2.

Discussions with private traders indicate that wheat imports for June, July and August will likely total about 2 lakh MTs, (i.e. about 60 thousand MTs per month). Some of this wheat (perhaps 20 to 30,000 MTs) is reportedly low-cost wheat from Ukraine. And perhaps 50-65 percent of the wheat (i.e. about 30-35 thousand MTs per month) is milling wheat that has a higher protein content than domestic soft white wheat.

Total private sector wheat imports for 1998-99 (through May) were 8.05 lakh MTs, but this high total likely reflects anticipated foodgrain shortages following the 1998 flood. Total wheat imports in 1997-98 were only 2.29 lakh MTs, equivalent to 19 thousand MTs per month. In comparison, it appears now that 30 to 35 thousand MTs of milling wheat will be imported from June through August, 1999.

Trends in the Bangladesh Wheat Sector

One reason for the continued wheat imports in recent months is the apparent long-term growth in the milling and baking industries in Bangladesh. Spurred by urbanization, there appears to be growing demand for biscuits, breads and cakes, especially in the urban areas. Because these products require at least 50 percent milling wheat (i.e. wheat with a higher protein content), there is now a rather steady demand for imported wheat.

This shift in demand towards wheat products may also be a reflection of increased incomes and a desire for greater diversification in the diet. Similar patterns have been observed in other Asian countries with rice-based diets, where consumption of wheat and wheat products, as well as eggs, poultry and other meat has risen along with urbanization and increased incomes.

Conclusions

The continued wheat imports do not appear to indicate a shortage of wheat in domestic wheat markets. Average market prices remain low following the excellent wheat and boro harvests earlier in the year, indicating ample wheat supplies. Instead, recent wheat imports, much of which are milling wheat, in large part reflect a growing demand for wheat flour for baking purposes. This market is not large in terms of national food supply. Expected imports of milling wheat from June through August are estimated at about 30 thousand MTs per month, only about 2 percent of the roughly 1.8 million MTs of foodgrain consumed per month. Nonetheless, further investigation is warranted to better understand this expanding market and its implications for national food policy.

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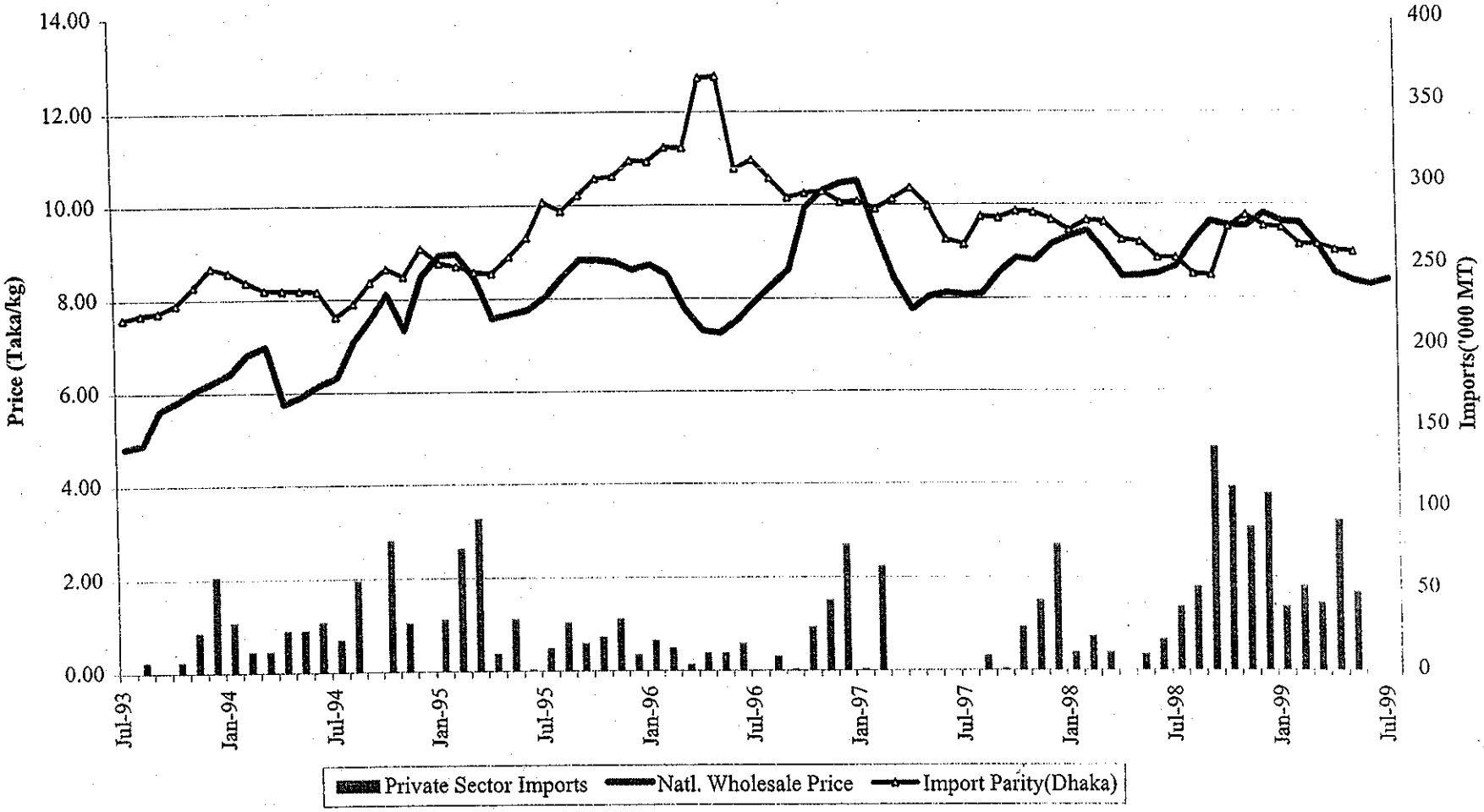
[3] Some wheat reportedly also came from Australia.

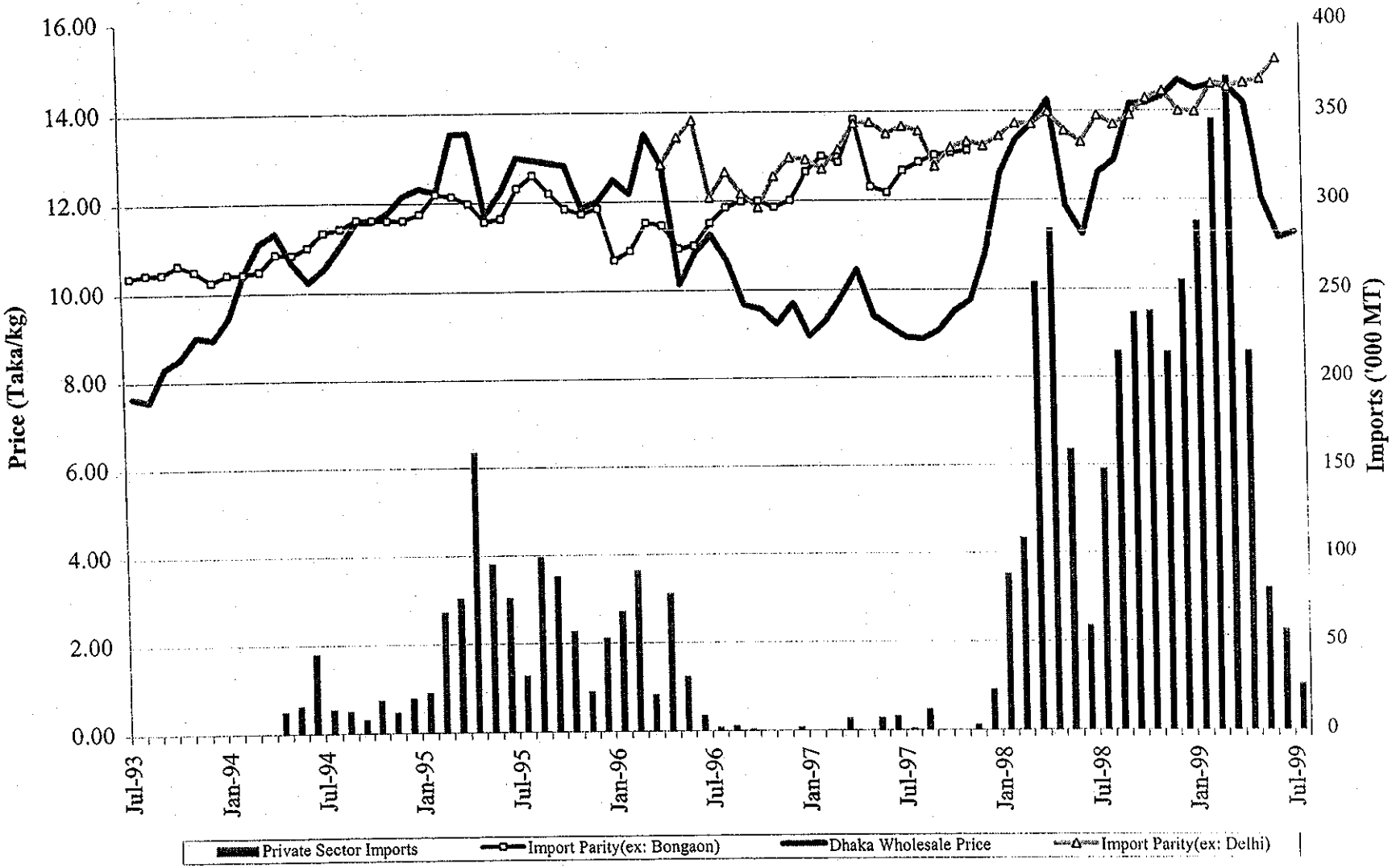
Figure 1: Wheat Prices and Quantity of Private Wheat Imports in Bangladesh, 1993-99



Note : Domestic price data for July 1999 is upto the third week only; Import parity(Dhaka) price is based on US # 2 HRW discounted 15 percent, and includes import tariffs.

Source : FPMU, DAM, USDA and CMIE(1999).

Figure 2: Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1993-99



Note : Price data for July 1999 is up to the third week only; private sector imports are as of 26th July,1999. From November 1998, the carrying cost has increased by 1.1 Tk/kg to 4.1 Tk/kg.

Source : Dorosh (1999), calculated using data from FPMU, CMIE (1998,1999) and Baulch, Das et. al, (1998).

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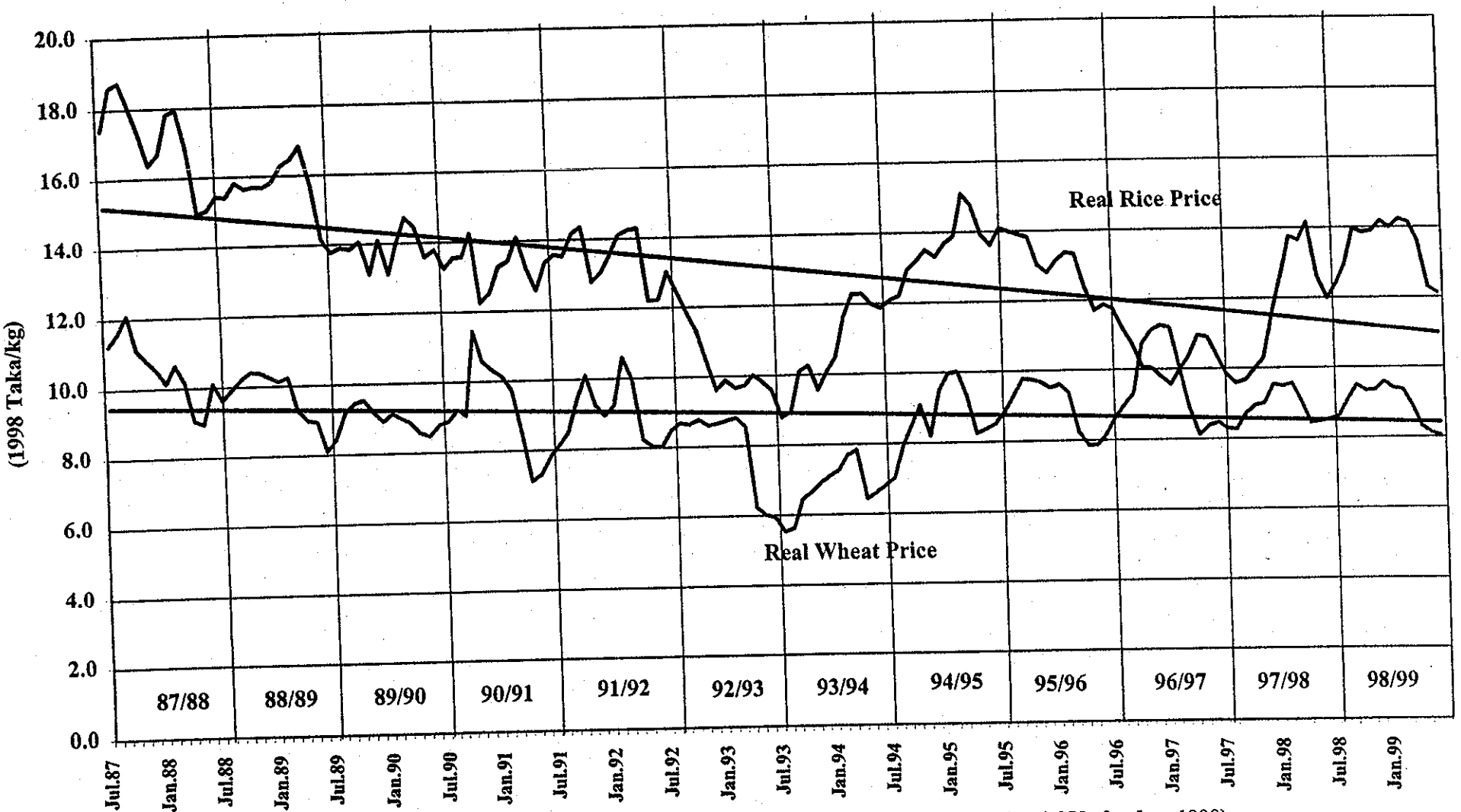
Figure 3 - National Average Real Wholesale Price of Rice and Wheat, 1987-99



Note: Prices are deflated using the non-food Dhaka middle-income Cost of Living Index (and the national CPI after June 1998).
Source : FPMU data and author's calculation.

7/22/99

21 August, 1999

Draft Response to Questions Raised by ERD for the September 1999 Mid-Term Review with the Development Partners

Question 1: Do the data substantiate the claim for more food aid?

Food aid flows should not be determined solely on the basis of estimated food gap or in terms of total foodgrain availability in the country. The data indicates that per capita availability of rice as well as foodgrains have not declined; instead availability either has remained constant or has increased in recent years (Figure 2 of the Mid-Term Review paper, enclosed). In particular, per capita foodgrain availability in Bangladesh in 1998/99 reached its highest level in the entire twenty-year period. This increase in per capita availability, however, should not be interpreted as an excess of food aid or total foodgrain supply. The bumper boro harvest was not available for household consumption for the first ten months of the fiscal year, so food aid was needed in the immediate aftermath of the flood. More importantly, millions of poor households lack adequate purchasing power to consume sufficient food even in normal years. These households benefited from the large increase in food aid targeted to the poor in 1998/99: in a normal year with typical levels of food aid, these households would consume less food.

Food aid is an important component of food security to the poor, since various programs targeted to food-insecure households are funded by food aid. It is important to emphasize here that the poor households cannot buy adequate food from the market even if the foodgrain is available in sufficient quantity at reasonable prices. These households need additional entitlements (income-earning opportunities or direct transfer of food or cash) to augment their capacity to acquire food. In other words, poverty and food security caused by inadequate access to food are chronic problems that exist even in the absence of flood and other natural disasters. Thus, there is a need for steady and increasing flow of resources to tackle the food security problems of Bangladesh. Lower levels of food aid, on the other hand, are likely to result in less total resources for the government's programs for poverty alleviation. Donors should, therefore, make a long-term commitment to food security and not to link food aid either to the size of national food gap or to the total foodgrain availability in the country.

Question 2: Has domestic output growth been sufficient to avoid a sharp decline in foodgrain availability?

In spite of a major decline in food aid between the 1980s and the 1990s, total foodgrain availability fell only slightly, because the moderate increase in per capita domestic production was supplemented by private sector foodgrain imports.[1] As shown

[1] If we include the 1998/99 flood year, availability per capita for the decade of the 1990s actually increases slightly. This is somewhat misleading, however, since most of the

in Table 1a, total foodgrain availability per capita in the 1990/91 – 1997/98 period was 15.65 ounces/person/day, down by 0.10 ounces/person/day (0.6 percent) compared with the average for the 1980s. Average food aid flows fell by 0.44 ounces/person/day (324 thousand MTs per year). Government commercial imports also fell by 0.38 ounces/person/day (353 thousand MTs per year). Increases in domestic production (0.18 ounces/person/day) and significant private sector imports (0.39 ounces/person/day) largely offset the decline in food aid and government commercial imports.

The above figures thus reflect the major changes in the Bangladesh food economy of the last decades, particularly the elimination of major rationing channels (palli rationing and statutory rationing) in the early 1990s, and the liberalization of private sector foodgrain imports in 1992/93. In the 1990s, with less food aid available, total PFDS distribution is lower (by 0.68 ounces/person/day), but over 80 percent of this foodgrain is targeted to the poor.[2]

large boro harvest in May/June of 1998/99 was not actually consumed during the 1998/99 fiscal year. Thus, per capita consumption of foodgrain did not rise as fast as per capita availability in 1998/99.

[2] Moreover, since most of the increase in production and imports in the 1990s have been in the form of rice, per capita availability of rice has actually risen, while that of wheat has fallen (See annex table 3.1).

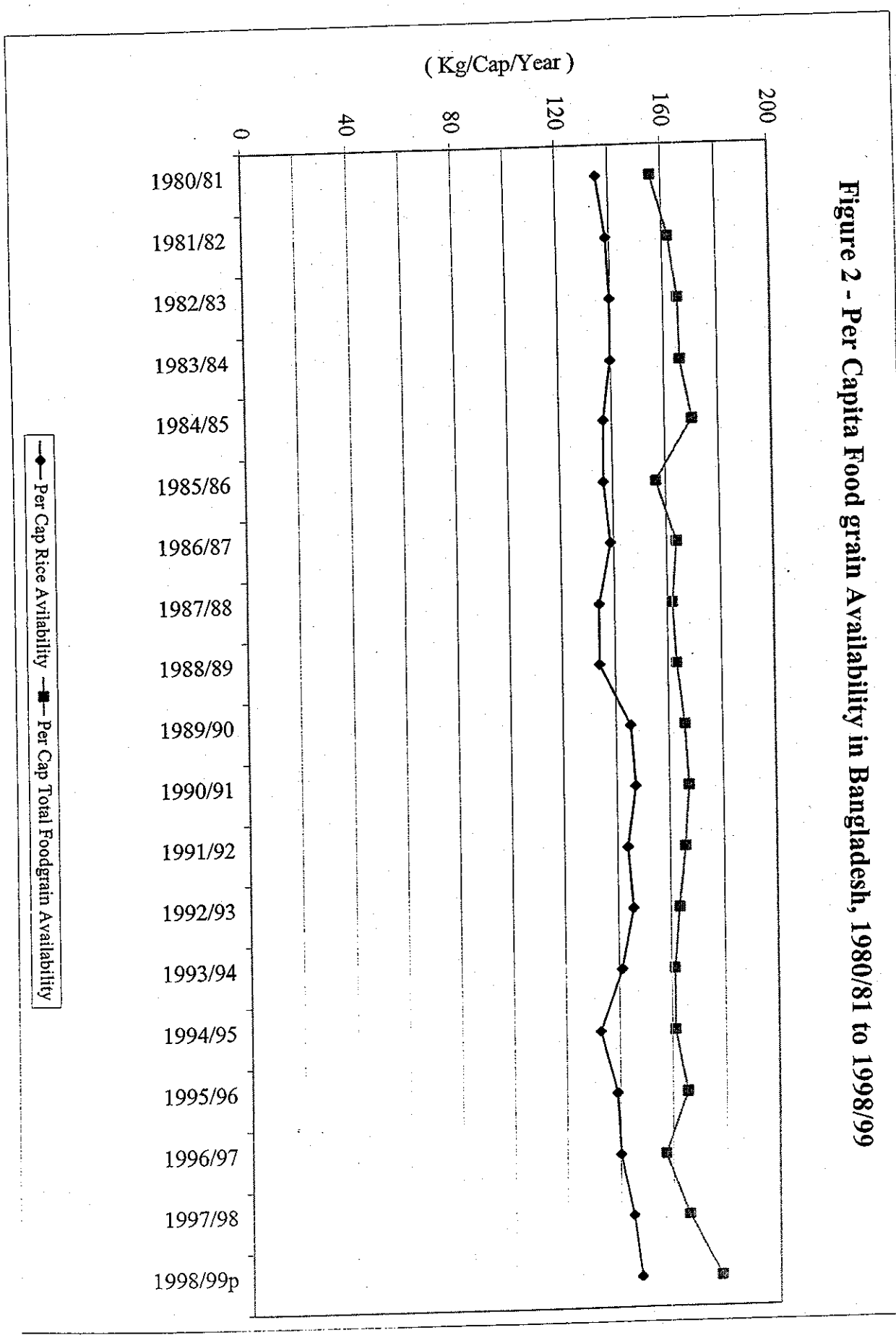


Figure 2 - Per Capita Food grain Availability in Bangladesh, 1980/81 to 1998/99

Table 1a - Per Capita Daily Foodgrain Availability and Requirement in Bangladesh (1980/81 to 1998/99)

(ounces/day/person)

Year	Domestic Production (Gross)			Net Production (deducting 10% for Seed, Feed & Wastage)	Mid-year Population (million)	Foodgrain Consumption Requirement	Food Gap (7- 5)	Private Imports	Public Distri-bution	Internal Procu-rement	National Availa-bility (5+9+10-11)	Availa-bility Gap*	Food Aid	Govt Comm Imps	Change Govt Stocks
	Rice	Wheat	Total												
1	2	3	4	5	6	7	8	9	10	11	12	13			
1980/81	14.92	1.17	16.09	14.48	89.9	15.50	1.02		1.66	1.09	15.05	0.95	0.81	0.35	0.49
1981/82	14.33	1.02	15.35	13.81	91.9	15.50	1.69		2.17	0.32	15.67	0.33	1.20	0.12	-0.67
1982/83	14.63	1.13	15.76	14.18	93.9	15.50	1.32		1.99	0.20	15.97	0.03	1.00	0.89	-0.01
1983/84	14.61	1.22	15.82	14.24	96.0	15.50	1.26		2.06	0.27	16.04	-0.04	1.45	0.62	0.19
1984/85	14.41	1.44	15.85	14.26	98.1	15.50	1.24		2.52	0.34	16.44	-0.44	1.29	1.27	0.21
1985/86	14.49	1.00	15.49	13.94	100.3	16.00	2.06		1.48	0.34	15.09	0.91	1.05	0.11	-0.04
1986/87	14.53	1.03	15.55	14.00	102.5	16.00	2.00		2.00	0.18	15.82	0.18	1.34	0.32	-0.21
1987/88	14.23	0.97	15.19	13.67	104.7	16.00	2.33		2.31	0.35	15.64	0.36	1.65	1.04	0.61
1988/89	14.07	0.92	14.99	13.49	106.8	16.00	2.51		2.66	0.38	15.77	0.23	1.23	0.71	-0.41
1989/90	15.85	0.79	16.64	14.97	108.9	16.00	1.03		1.92	0.85	16.04	-0.04	0.84	0.52	0.17
1990/91	15.54	0.87	16.42	14.77	111.0	16.00	1.23		2.07	0.68	16.16	-0.16	1.34	0.03	-0.09
1991/92	15.61	0.91	16.52	14.87	113.0	16.00	1.13		2.01	0.87	16.00	0.00	1.21	0.13	0.10
1992/93	15.41	0.99	16.40	14.76	115.0	16.00	1.24	0.30	0.90	0.20	15.77	0.23	0.62	0.08	-0.04
1993/94	14.90	0.93	15.84	14.25	117.0	16.00	1.75	0.26	1.14	0.14	15.51	0.49	0.54	0.00	-0.48
1994/95	13.67	1.01	14.68	13.21	119.0	16.00	2.79	0.82	1.28	0.22	15.09	0.91	0.76	0.50	0.19
1995/96	14.13	1.09	15.22	13.70	121.0	16.00	2.30	0.68	1.43	0.34	15.47	0.53	0.59	0.67	0.13
1996/97	14.84	1.14	15.98	14.38	123.0	16.00	1.62	0.19	1.09	0.48	15.18	0.82	0.49	0.09	-0.06
1997/98	14.58	1.39	15.97	14.37	125.0	16.00	1.63	0.88	1.25	0.48	16.03	-0.03	0.42	0.20	-0.18
1998/99	14.73	1.52	16.25	14.62	127.0	16.00	1.38	2.64	1.62	0.57	18.31	-2.31	0.94	0.58	0.43
(1) 1980s	14.60	1.07	15.67	14.11	99.30	15.75	1.64	0.00	2.08	0.43	15.75	0.25	1.19	0.59	0.03
(2) 1990s	14.82	1.10	15.92	14.33	119.00	16.00	1.67	0.64	1.42	0.44	15.95	0.05	0.77	0.25	0.00
(3) 1991-9	14.83	1.04	15.88	14.29	118.00	16.00	1.71	0.39	1.40	0.43	15.65	0.35	0.75	0.21	-0.05
(3)-(1)	0.23	-0.03	0.20	0.18	18.70	0.25	0.07	0.39	-0.68	-0.01	-0.10	0.10	-0.44	-0.38	-0.09

Note: (i) before 1985/86 requirement was calculated @15.5 oz./day /capita and (ii) before 1991/92 private import of foodgrain was not allowed.

* Availability gap (per capita) is based on a standard of 16 ounces per day for all years.

Sources: Calculated from data from the Bangladesh Bureau of Statistics and Directorate of Food

Annex Table 3.1 - Total Foodgrain Availability from 1980/81 to 1998/99p.

Year	Rice Production ('000 MT)	Net PFDS Distribution ('000 MT)	Private Imports ('000 MT)	Net Rice Availability ('000 MT)	Wheat Production ('000 MT)	Net PFDS Distribution ('000 MT)	Private Imports ('000 MT)	Net Wheat Availability ('000 MT)	Total Foodgrain Availability ('000 MT)	Per Capita Rice Availability (kg/cap)	Per Capita Wheat Availability (kg/cap)	Per Capita T.Fgrain Availability (kg/cap)
1980/81	13,880	-327	0	12,165	1,092	852	0	1,835	14,000	135.3	20.4	155.7
1981/82	13,629	482	0	12,748	967	1,282	0	2,153	14,901	138.7	23.4	162.1
1982/83	14,215	328	0	13,121	1,095	1,415	0	2,401	15,522	139.7	25.6	165.3
1983/84	14,509	358	0	13,416	1,211	1,427	0	2,517	15,933	139.7	26.2	166.0
1984/85	14,623	266	0	13,426	1,464	1,948	0	3,265	16,692	136.9	33.3	170.1
1985/86	15,038	153	0	13,687	1,042	1,039	0	1,977	15,664	136.5	19.7	156.2
1986/87	15,406	358	0	14,223	1,091	1,574	0	2,555	16,779	138.8	24.9	163.7
1987/88	15,413	180	0	14,052	1,048	1,948	0	2,891	16,943	134.2	27.6	161.8
1988/89	15,544	326	0	14,316	1,021	2,199	0	3,117	17,433	134.0	29.2	163.2
1989/90	17,856	-243	0	15,827	890	1,447	0	2,248	18,075	145.3	20.6	166.0
1990/91	17,852	244	0	16,311	1,004	1,345	0	2,248	18,559	146.9	20.3	167.2
1991/92	18,252	-180	0	16,246	1,065	1,509	0	2,468	18,714	143.8	21.8	165.6
1992/93	18,341	243	0	16,750	1,176	597	355	2,010	18,761	145.7	17.5	163.1
1993/94	18,041	202	74	16,512	1,131	1,008	312	2,338	18,851	141.1	20.0	161.1
1994/95	16,833	83	583	15,816	1,245	1,213	1,013	3,347	19,162	132.9	28.1	161.0
1995/96	17,687	240	650	16,808	1,369	1,133	850	3,215	20,023	138.9	26.6	165.5
1996/97	18,883	226	15	17,236	1,454	550	237	2,096	19,331	140.1	17.0	157.2
1997/98	18,854	130	1,007	18,106	1,803	875	142	2,640	20,745	144.8	21.1	166.0
1998/99p	17,853	35	2,661	18,763	1,850	1,346	804	3,815	22,578	147.7	30.0	177.8
Ave 1980s	14,695	236	0	13,462	1,115	1,520	0	2,524	15,985	137.1	25.6	162.7
Ave 1990-98	18,067	105	259	16,624	1,237	1,075	323	2,512	19,136	142.2	21.5	163.6

Note: 1998/99 total rice production assumes boro production as 8.5 million metric ton.
Source : FPMU, MOF.

Bangladesh Foodgrain Production, Estimated Shortfall and Needs for Additional Food Aid from the USA

Introduction

Bangladesh is a chronic food deficit country. During the 1990s, the average food deficit was over 2 million MTs. Though this deficit was largely met through food aid, government commercial imports and private sector imports, adequate aggregate foodgrain supplies did not eliminate hunger and malnutrition. This is because food imports by the private sector can only meet the demand for those who have purchasing power. Moreover, paucity of resources in the public sector limits the ability of the Government of Bangladesh to ensure access to food by the poor. In this situation, food aid serves two important purposes: (i) it adds to total foodgrain supplies, reducing the overall food deficit; and (ii) it provides resources to increase access to food by the poor through direct distribution programs such as Vulnerable Group Feeding (VGF) and through wages in kind under Food For Work (FFW) programs, including flood rehabilitation programs. Financial resources generated through sale of food aid to the Food for Education (FFE) program are also used for poverty alleviation programs. Therefore, food aid in Bangladesh enhances the ability of the Government of Bangladesh to address the food access issue though several channels, as well as helping to balance the supply-demand gap.

Food Production Target for 1999/2000

The food production target for 1999/2000 has been set at 22.40 million MT, about 1.1 million tons more than the estimated production of 21.35 million MT for 1998/1999. The production target has been set on the assumption of normal weather and a reasonable margin of profit for the farmers. However, actual production will depend on the prevailing weather and market situations during the year. The crop wise production target and actual /estimates of last five years are as below:

Table 1: Foodgrain Production in Bangladesh: 1994/95 – 1999/2000

(million MTs)

Crops	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000 (Target)
Aus	1.791	1.676	1.871	1.875	1.616	1.800
Aman	8.504	8.790	9.552	8.850	7.736	9.500
Boro	6.538	7.221	7.460	8.137	10.000 (Estimate)	9.200
Total Rice	16.833	17.687	18.883	18.861	19.352	20.500
Wheat	1.245	1.369	1.454	1.803	2.000 (Estimate)	1.900
Total Foodgrain	18.078	19.056	20.337	20.664	21.352	22.400
Net Production	16.270	17.150	18.303	18.598	19.217	20.160

The Food Gap

The food gap is calculated as the difference between net production (gross production less a ten percent allowance for seed, feed and wastage) and a target foodgrain consumption of 454 grams/person/day. For 1999/2000, the estimated food gap, based on a net foodgrain production target of 20.16 million MTs, is 1.2 million MTs. The actual food gap may of course be larger, since actual production may not reach the target levels. (The possibility of flood damage to the 1999/2000 aman crop still remains, as water levels in major rivers have risen significantly in the last two weeks.) Note that the average annual food gap in the 1990s was 2.2 million MTs.

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Projected Food Aid Arrivals

Projected food aid for 1999/2000 is 807,000 MTs including 300,000 MT under U.S. Agriculture Act 416B, 100,000 MTs under the WFP's EMOP and 50,000 MT from the European Union that were deferred from the 1998/99 program (Table 2). Therefore, the new inflow of food aid for 1999/2000 is only 357,000 MTs. This amount is below the trend food aid over 600,000 to 700,000 MT annually that Bangladesh received in the recent past.

Many donors tend to base their contribution of food aid from the standpoint of the food gap. Food aid flows, in particular, should not be made on the basis of calculated food gaps alone, however. One reason is that considerable uncertainty remains over production projections. More important, food aid is an important component of food security for the poor. Poor households need additional entitlements (income earning opportunities or transfer of food) to augment their capacity to acquire food.

The essence of the food security problem in Bangladesh is poverty, and poverty reduction requires substantial additional resources. Additional food aid from the U.S. Government would contribute badly needed resources to address the short term and long term food security problems in Bangladesh. Donors, including the USA, should make a long-term commitment to food security and not to link food aid and other aid only to the size of the national annual food gap.

Expected Food Aid from USA

The 1998 floods caused large-scale damage to infrastructure, and the poor of Bangladesh are still adjusting to the shocks of the floods. Recently, the Government of Bangladesh approved an extension of the Vulnerable Group Feeding program to cover three million households for three months. Serious resource constraints limit other programs, however. In order to ease some of these resource constraints faced by the Government of Bangladesh, the Government thus is requesting about 200,000 MT as additional food aid during 1999-2000 from the US Government. This foodgrain will be

used in targeted programmes like Food for Work for rehabilitation of infrastructure outside EMOP, Food for Education, Vulnerable Group Feeding (VGF) and rehabilitation of small infrastructure (through the Test Relief program).

Distribution of this foodgrain is unlikely to adversely affect producer prices or domestic wheat production for three reasons. First, private sector imports in recent months indicate that current domestic prices remain at levels near import parity. And in the event of a poor aman rice harvest in November/December, wheat prices would likely remain at import parity levels and import demand would substantially increase. Second, the Government of Bangladesh is requesting that the additional wheat arrive some time after April 2000, after the Bangladesh wheat harvest in March. Finally, government wheat stocks are currently low (504,000 MTs at the end of the 1998/99 fiscal year in June). Thus, the Government of Bangladesh has the flexibility to time the distribution of the wheat to avoid potential price disincentive effects on producers.

Table 2 - Projected Shipment and Arrival of Foodgrain During 1999/2000

(Food Aid only)

FPMU
23-08-1999
(In m. tons)

	Projection												
Donor	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**Total**
Wheat													
Austalia					50,000								50,000
Canada			52,934										52,934
EC*				50,000									50,000
France						25,000							25,000
PL-480 (Title-1)													0
PL-480 (Title-2)						117,330							117,330
US SEC-416/B**			100,000	200,000									300,000
WFP (EMOP)***			36,456		70,000								106,456
EMOP (New)			861		21,000								21,861
WFP (Normal)			55,000		25,000								80,000
Total Wheat	**0**	**0**	**245,251**	**250,000**	**166,000**	**142,330**	**0**	**0**	**0**	**0**	**0**	**0**	**803,581**
Rice													
Italy			3,000										
Total Rice	**0**	**0**	**3,000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3,000
Total Food Aid (Wheat + Rice)	**0**	**0**	**248,251**	**250,000**	**166,000**	**142,330**	**0**	**0**	**0**	**0**	**0**	**0**	806,581

* EC, 50,000 MT defered quantity from 1998-99 FY
** US 416B, 300,000 MT defered quantity from 1998-99 FY
*** EMOP, 1000,000 MT defered quantity from 1998-99 FY.

FOOD POLICY AND FOOD SECURITY IN BANGLADESH; MINISTRY OF FOOD'S PAPER FOR THE MID-TERM REVIEW WITH THE DEVELOPMENT PARTNERS ON 14 SEPTEMBER 1999

(FULL PAPER AND SUMMARY VERSION)

5 September, 1999

Food Policy and Food Security in Bangladesh

Introduction

Bangladesh has made substantial progress in increasing foodgrain production over the last two decades. Yet, about half the population of Bangladesh lives in poverty, lacking adequate resources to meet their basic human needs, including food. Moreover, millions of households are threatened by natural disasters, such as the devastating flood of 1998, that often involve substantial loss of lives and short-term emergency needs for food and shelter. In this context of chronic poverty and a hazardous natural environment, the Government of Bangladesh is firmly committed to achieving food security for all, defined as access by all people at all times to sufficient food to meet their dietary requirements for a healthy and productive life.

In 1998, the Government of Bangladesh, supported by donors, managed the flood situation efficiently, avoiding a major food crisis through public distribution of foodgrain to flood-affected households, timely government commercial imports, food aid and promotion of private sector imports. Nonetheless, poverty and food insecurity caused by inadequate access to food are chronic problems that continue even in the absence of floods or other natural disasters.

Ensuring Food Security in the Medium and Long-Run

In spite of rapid increases in both rice and wheat production, domestic production of foodgrains in Bangladesh still falls short of minimum supplies needed to provide a minimum standard level of consumption (16 ounces/person/day) for all citizens of the country. This food gap is met by a combination of government commercial imports, food aid and private sector imports. Over time, food aid flows to Bangladesh have declined, from an average of 1.43 million MTs in 1985/86 to 1987/88 (equivalent to 64 percent of the food gap in these years) to 635 thousand MTs in 1995/96-

1997/98 (equivalent to only 26 percent of the food gap). Increases in private sector imports have to a large extent offset this decline in food aid and prevented a major fall in per capita foodgrain availability.

For 1999/2000, net domestic production is expected to be 20.160 million MTs, leaving a food gap of 1.198 million MTs. Food aid flows, however, should not be made mainly on the basis of calculated food gaps. As shown in Table 1, per capita foodgrain availability in Bangladesh in 1998/99 reached its highest level in the entire twenty-year period. This increase in per capita availability does not indicate an excess of food aid or a surplus in total foodgrain supply. The unexpectedly large boro harvest did not add to foodgrain supplies until late in 1998/99; in the immediate aftermath of the flood, food aid was very much needed. Moreover, food aid provided resources to increase food consumption of millions of poor households that lack adequate purchasing power to consume sufficient food, even in non-flood years. These households benefited from the large increase in food aid targeted to the poor in 1998/99; in a normal year, with typical levels of food aid, these households would consume less food.

Thus, food aid is an important component of food security for the poor. Food imports by the private sector can only meet the demand of those who have adequate purchasing power. Poor households need additional entitlements (income-earning opportunities or transfers of food or of cash) to augment their capacity to acquire food. Paucity of resources in the public sector limits the capacity of the Government of Bangladesh to ensure access to food for all the poor and to reduce poverty. Food aid thus serves several important purposes: (i) it adds to total foodgrain supplies, reducing the overall food deficit; (ii) it increases access to food by the poor through direction distribution programs like Vulnerable Group Feeding (VGF); (iii) it provides wages in

kind in Food For Work (FFW) programs that generate employment and build physical infrastructure; and (iv) it even generates financial resources for poverty alleviation programs through the sale of food aid to the Food For Education (FFE) program. If food aid is reduced, the result is likely to be less total resources for poverty alleviation. Donors should therefore make a long-term commitment to food security and not to link food aid and other aid only to the size of the national food gap.

Lessons from the Flood

The massive flood of 1998 caused an acute food crisis for many households who lost their homes, crops, employment opportunities, food stocks and seed. To meet the needs for relief and rehabilitation, the Government of Bangladesh significantly expanded its public foodgrain distribution from 1.718 million MTs (0.813 million MTs of rice and 0.905 million MTs of wheat) in the original budget to 2.132 million MTs (0.529 million MTs of rice and 1.603 million MTs of wheat). Food aid provided the foodgrain to make this increased distribution possible, and later permitted an increase in public stocks to safe levels. The main channels were Vulnerable Group Feeding, (which distributed 464 thousand MTs of foodgrain to 4.2 million households), and Food For Work (which provided 698 thousand MTs of foodgrain as wages for infrastructure repairs and construction).

The government's success in handling the 1998 flood provides several major lessons for food policy and enhancing food security in Bangladesh. First, large-scale private sector imports of foodgrain, (2.663 million MTs of rice and 0.805 million MTs of wheat in 1998-99) following the flood demonstrated the valuable contribution that the trade liberalization of the early 1990s has made to enhanced food security in Bangladesh. Second, at the household level, Bangladesh government

programs mitigated the negative effects of the flood on food security through a combination of rapid disbursement of emergency food relief from its existing stocks and additional distribution of foodgrain through VGF and other channels. From July through the end of November 1998, most of the foodgrain distributed came from government stocks, not from flood-relief food aid, thus highlighting the need for three to four months of security stocks for emergency relief. Third, the late arrival of food aid constrained distribution of foodgrain to flood-affected households from August through November 1998, suggesting that the government may need to hold more stocks during the early part of the fiscal year so as to be ready for possible floods or other natural disasters. Also, in a situation like that in 1998 when private sector imports maintained total foodgrain supply in Bangladesh at normal levels, including cash payments along with food distribution can enable government relief efforts to reach more people with more resources. Finally, the capacity of the government to undertake early assessment of disasters, particularly estimates of crop damage, needs to be strengthened.

National Comprehensive Food Security Policy

Achieving food security and adequate nutrition in Bangladesh is a monumental task, requiring substantial resources and a joint effort by the Government of Bangladesh, donors, non-governmental organizations and the private sector, including food-insecure households, themselves. In order to help achieve this objective, a committee, headed by the Secretary of Food, recently has been formed and charged with formulation of a National Comprehensive Food Security Policy. This comprehensive document is expected to include objectives and policies covering all aspects of food security, including agricultural production, food markets, the Public Foodgrain Distribution System, disaster relief and nutrition.

Table 1 - Foodgrain Availability and Requirement in Bangladesh (1980/81 to 1998/99)

(000 m. tons)

Year	Domestic Production (Gross)			Net Production (deducting 10% for Seed, Feed & Wastage)	Mid-year Population (million)	Foodgrain Consumption / Requirement (@16oz/day/cap)	Food Gap (7- 5)	Private Imports	Public Distri-bution	Internal Procu-rement	National Availa-bility (5+9+10-11)	Per Capita Availa-ability (oz/day)	Food Aid	Govt Comm Imps	Change Govt Stocks
	Rice	Wheat	Total												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1980/81	13880	1092	14972	13475	89.9	14419	944		1542	1017	14000	15.05	751	325	458
1981/82	13629	967	14596	13136	91.9	14740	1603		2067	303	14901	15.67	1141	114	-633
1982/83	14215	1095	15310	13779	93.9	15061	1282		1935	192	15522	15.97	976	868	-5
1983/84	14509	1211	15720	14148	96.0	15397	1249		2051	266	15933	16.04	1441	615	189
1984/85	14623	1464	16087	14478	98.1	15734	1256		2562	349	16692	16.44	1306	1287	217
1985/86	15038	1042	16080	14472	100.3	16606	2134		1541	349	15664	15.09	1087	113	-41
1986/87	15406	1091	16497	14847	102.5	16970	2123		2120	188	16779	15.82	1425	342	-225
1987/88	15413	1048	16461	14815	104.7	17335	2520		2503	375	16943	15.64	1787	1130	666
1988/89	15544	1021	16565	14909	106.8	17682	2774		2941	416	17433	15.77	1356	780	-455
1989/90	17856	890	18746	16871	108.9	18030	1159		2164	960	18075	16.04	949	584	186
1990/91	17852	1004	18856	16970	111.0	18378	1407		2372	783	18559	16.16	1540	37	-108
1991/92	18252	1065	19317	17385	113.0	18709	1323		2345	1016	18714	16.00	1414	150	122
1992/93	18341	1176	19517	17565	115.0	19040	1475	355	1073	233	18761	15.77	735	93	-45
1993/94	18041	1131	19172	17255	117.0	19371	2116	312	1376	166	18777	15.51	654	0	-576
1994/95	16833	1245	18078	16270	119.0	19702	3432	1013	1573	277	18579	15.09	935	620	231
1995/96	17687	1369	19056	17150	121.0	20033	2883	850	1795	422	19373	15.47	738	839	161
1996/97	18883	1454	20337	18303	123.0	20364	2061	237	1392	616	19316	15.18	618	112	-72
1997/98	18855	1803	20658	18592	125.0	20696	2103	1135	1621	616	20732	16.03	549	253	-231
1998/99	19353	2000	21353	19218	127.0	21027	1809	3467	2135	752	24068	18.31	1233	763	568
(1) 1980s	15011	1092	16103	14493	99.3	16197	1704	0	2143	442	16194	15.75	1222	616	36
(2) 1990s	18233	1361	19594	17634	119.0	19702	2068	819	1742	542	19653	15.95	935	319	6
(3) 1991-9	18093	1281	19374	17436	118.0	19537	2100	488	1693	516	19101	15.65	898	263	-65
(3)-(1)	3082	189	3270	2943	18.7	3339	396	488	-449	75	2907	-0.10	-324	-353	-100

Note: (i) before 1985/86 requirement was calculated @15.5 oz./day /capita and (ii) before 1991/92 private import of foodgrain was not allowed.

Sources: Bangladesh Bureau of Statistics and Directorate of Food

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FMRSP/FPMU memo
18 November, 1999

Public Foodgrain Stocks and Market Prices: Policy Options for a Bumper 1999-2000 Aman Rice Harvest

Target aman production for 1999/2000 is 9.50 million MTs, but field reports and satellite imagery suggest that the aman crop may be considerably larger, perhaps even more than 11.0 mn MTs. National average market prices of coarse rice, which were already rather low after the bumper boro harvest, declined by 0.25 Tk/kg in recent weeks to 11.87 Tk/kg, (DG Food data for November 16, 1999). Yet the scope for government procurement to support market prices is limited because almost all existing storage capacity is being used. Moreover, the stock situation is further complicated by the need to rotate approximately 230 thousand MTs of aging rice stocks in the next several months.

This memo explores these issues and outlines government policy options for addressing the problems of low producer prices and large quantities of aging stocks. First, the memo compares data on current stock levels with recent historical trends. Next, the quantity of aging stocks is estimated and options for stock rotation are discussed. Trends in domestic and international rice prices are then examined, and the potential impact of a large aman harvest on domestic prices is estimated. Finally, policy options, including private or public sector rice exports, are discussed.

Current Foodgrain Stocks in Historical Perspective

Current public foodgrain stock levels in Bangladesh are very high. At the end of October 1999, stocks were 1.423 million MTs, (1.338 million MTs net of transit deduction: 715 thousand MTs of rice and 622 thousand MTs of wheat).[1] Projected stocks end-December 1999 are a record 1.578 million MTs, surpassing the previous record stock level of 1.494 million MTs in July 1988 by 84 thousand MTs. Under the current operational procurement and distribution plan, the projected average stock level for 1999/2000 is 1.347 million MTs, (1.272 million MTs net of transit deduction).

Current PFDS stock levels appear to be more than sufficient for distribution requirements and a national food security stock reserve. Since the elimination of palli and statutory rationing in 1991/92 and 1992/93, respectively, total public distribution has declined, as have stock levels needed to ensure the smooth operation of the PFDS. From 1985/86 to 1991/92, average annual distribution was 633 thousand MTs of rice and 1.651 million MTs of wheat. Public foodgrain stocks averaged 989 thousand MTs (455 thousand MTs of rice and 534 thousand MTs of wheat). The overall ratio of average stocks to annual distribution was 44.2:100 (Table 1).

[1] The transit deduction for rice is 15 thousand MTs; for wheat the transit deduction is 70 thousand MTs.

From 1993/94 to 1998/99, average annual distribution was 603 thousand MTs (26.4 percent less than 1985/86 to 1991/92 average distribution). Average rice distribution declined by 89 thousand MTs per year (14.0 percent) to 544 thousand MTs per year and wheat distribution declined by nearly one third (31.1 percent, 514 thousand MTs per year) to 1.137 million MTs. Stocks were 603 thousand MTs lower than in the earlier period. Average rice stocks declined by 89 thousand MTs to 5.44 lakh MTs; average wheat stocks declined by 5.14 lakh MTs to 1.137 lakh MTs. The overall ratio of average stocks to annual distribution rose to 49.5:100

Current stocks of rice (end October) are approximately 3 lakh MTs more than the average end-October stock levels for 1985/86-1992/93 and 1993/94-1998/99, (Appendix Table 1 and Figure 1). Moreover, under the current distribution plan, rice stocks will remain above average monthly stock levels for the rest of the fiscal year. Wheat stocks are also large and are projected to reach 982 thousand MTs, (912 thousand MTs net of transit deduction). End-December wheat stocks would then be approximately 4 lakh MTs more than the average for December since the mid-1980s (Figure 2).

Age of Stocks

Unfortunately, under existing storage conditions, rice can generally only be stored for about 6 – 7 months before the quality significantly deteriorates. Boro rice, procured mostly from June to August, is especially difficult to store due to the high humidity during the monsoon season. Following the large boro harvest in 1999, the government procured 6.02 lakh MTs of rice (of which 98 thousand MTs of rice equivalent was in the form of paddy). Much of this rice is getting old. Under the current distribution plan, at least 253 thousand MTs of rice in storage will be more than six months old. If no changes are made to the distribution plan, by the end of March at least 233 thousand MTs of rice will be more than seven months old, and by the end of April, at least 220 thousand MTs will be more than eight months old (Table 2 and Figure 3). There is no major short-term problem for wheat stocks, however. The large projected rise in stocks is due to food aid arrivals from October through December, and this stock can safely be stored at least until June 2000 and perhaps for several months thereafter (Table 3 and Figure 4).

Thus, approximately 230 thousand MTs of rice stock must be distributed between November and January, in addition to the scheduled 399 thousand MTs of rice distribution planned for these months, if significant storage losses are to be avoided. Increasing net rice distribution by 230 thousand MTs following the expected good aman harvest would likely depress market prices even further. One option is to both increase distribution and to increase domestic rice procurement by the same amount, thus rotating the stocks. A second broad option is for the government to export this rice, though given the age of this rice and time required for shipment and export arrangements, this option may not be feasible at this point.

Several alternative channels could be used if the government chose to expand distribution, including VGF, a swap of rice for wheat in FFW, and using rice in the proposed (and not as yet confirmed) WFP flood rehabilitation FFW program.

The 1999/2000 Aman Harvest and Market Prices

Favorable weather, adequate input supplies and favorable price incentives have contributed to what appears to be a record aman crop in 1999/2000. Production may exceed the target of 9.50 million MTs (and the record of 9.55 million MTs of 1996/97) by 1.5 million MTs or more, reaching or surpassing 11.0 million MTs. Such a large harvest would likely depress market prices of rice.

Market prices of rice have already fallen sharply from their post-flood levels of 1998-99. Dhaka wholesale prices of coarse rice fell from 14.17 Tk/kg in April 1999 to 11.15 Tk/kg in June 1999, and were still only 11.74 Tk/kg in October 1999. Rice prices, which had been approximately equal to the import parity price of rice exported from India from September 1998 through April 1999, are now approximately 2 Tk/kg below import parity, eliminating price incentives for import of coarse rice from India. Moreover, prices are still well above export parity levels, (estimated at about 10.0 Tk/kg), indicating that at current prices Bangladesh coarse rice could not compete with Indian coarse rice in India's major domestic markets or with Indian exports on world markets (Figure 5). Note also that Thai export prices for 15 percent broken rice have fallen sharply in the last year, from $304/MT in September 1998 to only $205 in October 1999 (Figure 6).

Domestic prices in Bangladesh are likely to fall even further if the aman harvest is as good as expected. Table 4 presents estimates of national average wholesale coarse rice prices for the period December 1999 through April 2000 under alternative assumptions for the size of the harvest and the own-price elasticity of rice demand, i.e. the price-responsiveness of consumer demand for rice). The calculations use the 1996/97 aman season as a base, a year when aman production was 9.55 MTs and the average price was 9.57 Tk/kg (equivalent to 10.82 Tk/kg in 1999/2000 prices). As indicated, an aman harvest of 9.55 million MTs, equal to that of 1996/97, would imply a decrease in per capita availability of rice compared to that of three years ago since population has increased. Thus, the estimated price is 11.58 to 12.05 Tk/kg, slightly higher than the inflation-adjusted price of 1996/97. However, a harvest of 10.5 million MTs would imply an increase in per capita demand of 7.11 percent and a decline in rice prices to perhaps 8.50 Tk/kg.[2]

Such a large price decline would put rice prices at record low levels in real terms, falling below the low real prices of in 1996/97 and 1997/98 (about 10.0 Tk/kg in 1999/2000 prices) and 1993/94 (about 9.3 Tk/kg in 1999/2000 prices), (Figure 7).

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[2] An own-price elasticity of –0.3 is more appropriate for a large harvest (and therefore a large percentage change in per capita availability relative to the base), because consumer demand is likely to be more elastic for a large change in price than for a small change in price. In other word, the response of consumers to a large percentage increase in price is generally more than proportionally greater than their response to a small percentage change in price.

Policy Options

Several steps may be considered to address the twin problems of aging rice stocks and low market prices for rice.

First, it is imperative that some means be found to distribute the approximately 230 thousand MTs of aging rice stock in the next several months. Care should be taken to avoid depressing market prices, though, so domestic procurement may be increased by an equivalent amount. This will entail substantial costs to the government, but these costs were in a sense inevitable after the large boro procurement was followed by a good aman harvest. Possible channels for distribution include VGF, a swap of rice for wheat in FFW, and using rice in the proposed (and not as yet confirmed) WFP flood rehabilitation FFW program.

Avoiding very low market prices of rice may not be possible, however. Government net procurement beyond what is currently planned for the aman season (net distribution of 199 thousand MTs) is not feasible because of storage capacity constraints. (And even without additional net procurement, the large projected stocks may require substantial movement of foodgrains to take advantage of all usable storage space.) Exports by the government or private sector are one alternative, though government exports would be very costly. Moreover, current low world prices have reduced export parity of coarse rice to approximately 10.0 Tk/kg.

Nonetheless, the government could encourage private sector exports by facilitating trade contacts in importing countries through the assistance of the commercial officers of Bangladesh embassies. Private traders could also be alerted to the likelihood of a rice market glut and the government's willingness to permit exports.

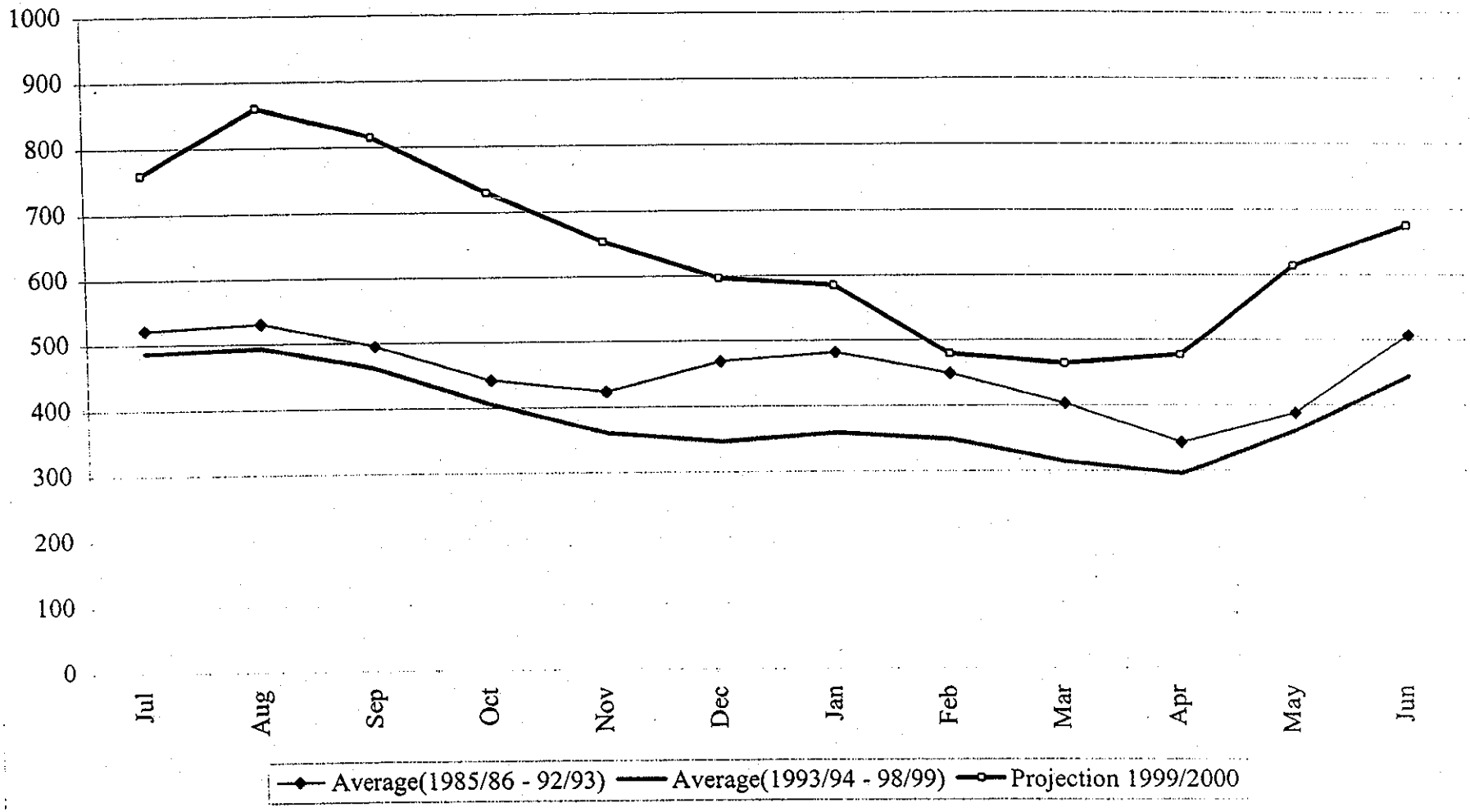
Of course, low rice prices in the short term are not a problem for everyone: households that are net purchasers of rice benefit from low consumer prices. Farmers' losses are on average partially offset by their increased production of rice. Nonetheless, there is a legitimate concern that low prices will reduce incentives for production and rural incomes in the long run. A long-term solution, if rice surpluses are a recurring phenomena, is to develop rice export facilities, including adoption of grades and standards for rice quality. In this year of low world prices of government warehouses filled to capacity, a significant price decline appears unavoidable if the aman rice harvest is as good as indicated by early reports.

Table 1: Public Foodgrain Stocks and Distribution: 1985/86 to 1999/2000

	Average Monthly Closing Stocks			Distribution			Average Stocks / Distribution (%)		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total
1986	416	486	902	372	1169	1541	111.8	41.6	58.5
1987	205	509	714	495	1625	2120	41.4	31.3	33.7
1988	386	725	1111	468	2035	2503	82.5	35.6	44.4
1989	490	640	1130	690	2251	2941	71.0	28.4	38.4
1990	660	541	1201	675	1489	2164	97.8	36.3	55.5
1991	547	513	1060	971	1401	2372	56.3	36.6	44.7
1992	478	326	804	760	1585	2345	62.9	20.6	34.3
1993	595	594	1189	476	598	1074	125.0	99.3	110.7
1994	259	475	734	350	1026	1376	74.0	46.3	53.3
1995	176	397	573	529	1244	1773	33.3	31.9	32.3
1996	427	489	916	593	1202	1795	72.0	40.7	51.0
1997	551	399	950	739	653	1392	74.6	61.1	68.2
1998	296	448	744	529	1092	1621	56.0	41.0	45.9
1999	423	557	981	526	1603	2129	80.5	34.8	46.1
2000	643	704	1347	708	1011	1719	90.8	69.6	78.4
Ave 1986-92	455	534	989	633	1651	2284	74.8	32.9	44.2
Ave 1994-99	355	461	816	544	1137	1681	65.0	42.6	49.5
Difference	-99	-73	-173	-89	-514	-603	-9.8	9.7	5.3
% Difference	-21.8%	-13.7%	-17.5%	-14.0%	-31.1%	-26.4%			

Source: FPMU, Ministry of Food.
StockMemo.17Nov99.xls

Figure 1 - Monthly Closing Stock of Rice[a], 1985/86 - 1999/2000

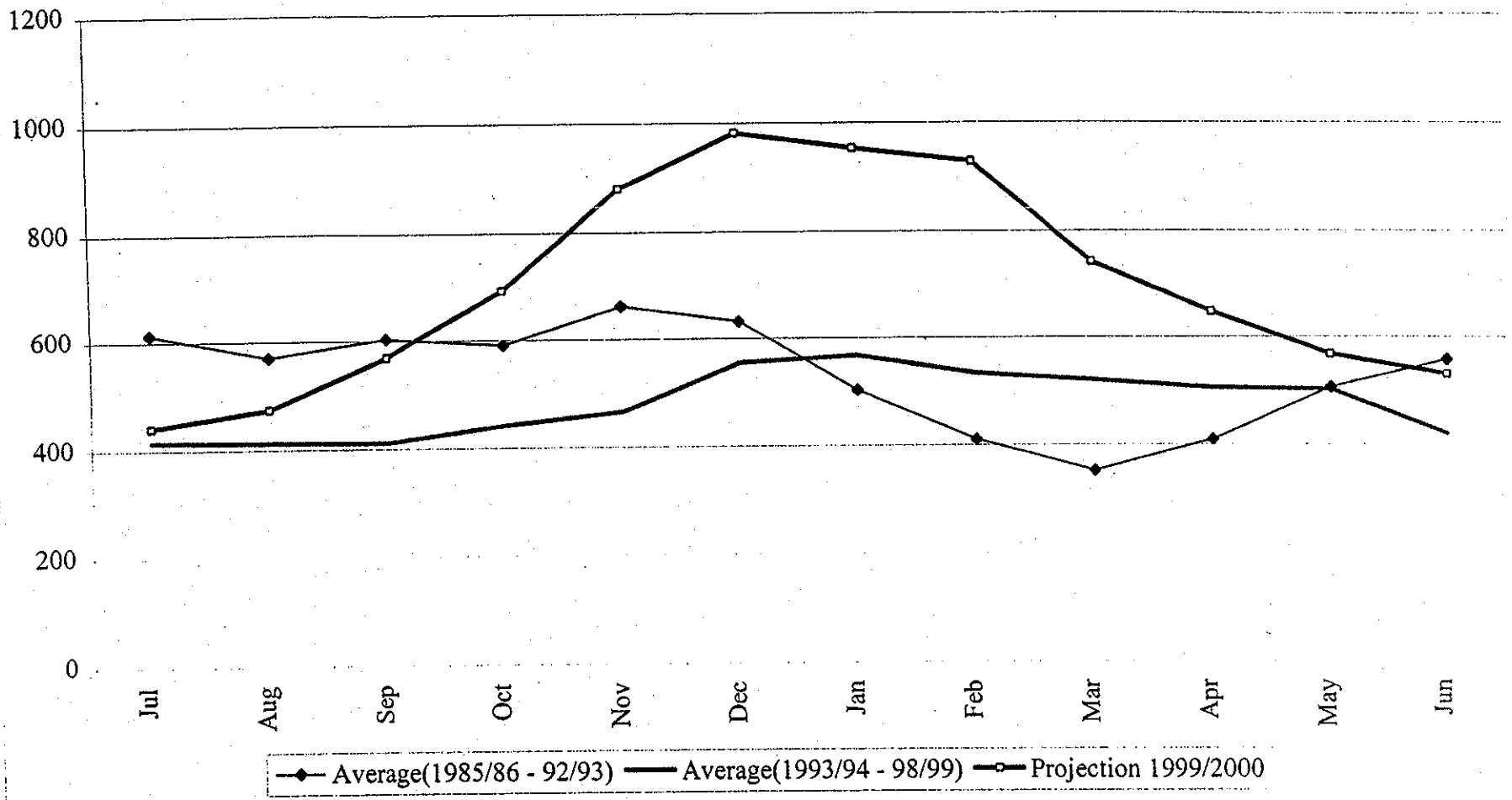


[a] Gross rice stocks

Source : FPMU, MIS DG Food.

E: \paul\Seminar Handouts\Closing Stock.xlsStock Chart 1

Figure 2 - Monthly Closing Stock of Wheat[a], 1985/86 - 1999/2000



[a] Gross wheat stocks

Source : FPMU, MIS DG Food.

E: \paul\Seminar Handouts\Closing Stock.xlsStock Chart 2

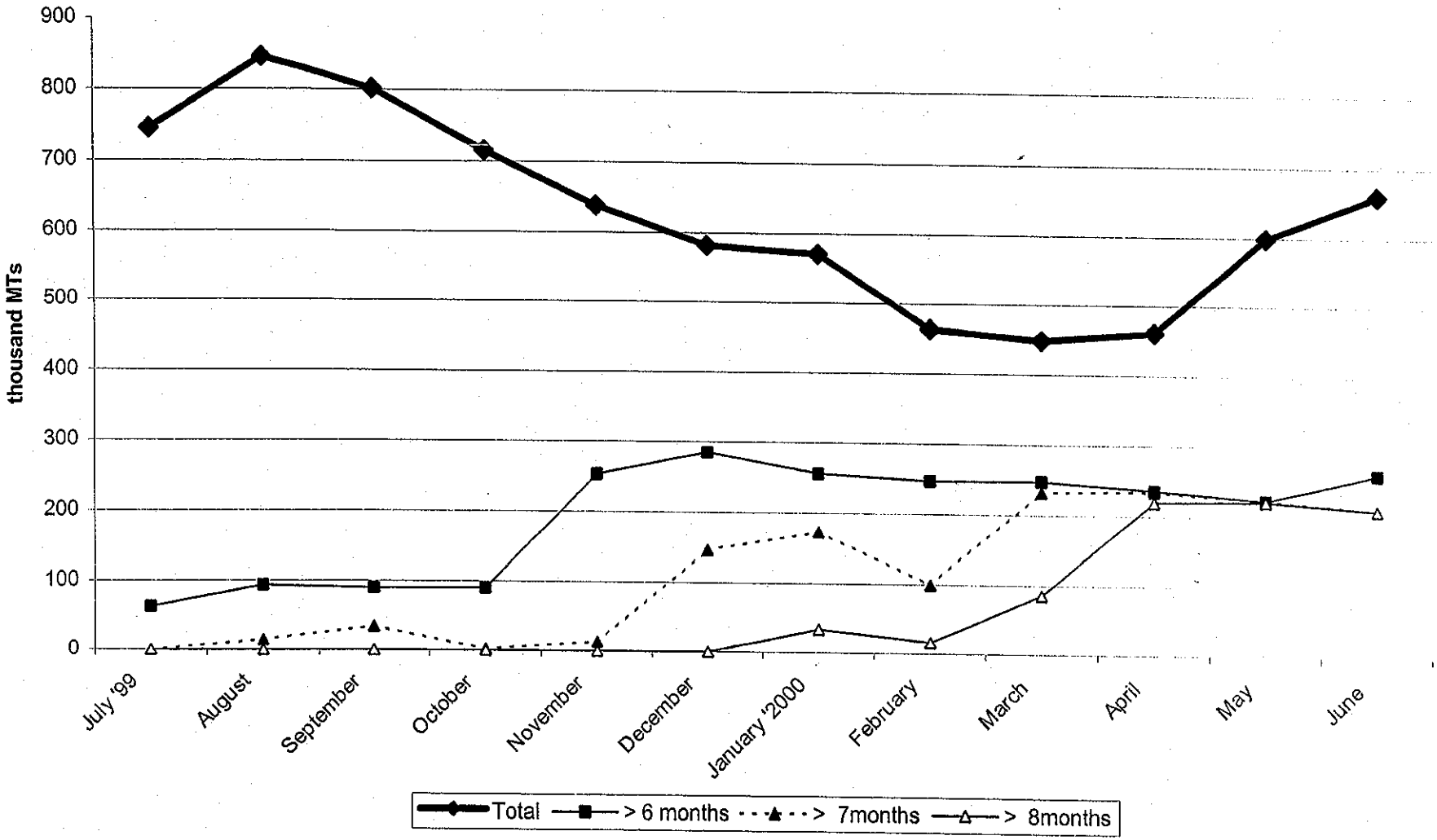
Table 2: Projected Quantity and Age of Rice Stocks, 1999-2000

	End Stock Rice Total	End Stock Rice > 6 months	End Stock Rice > 7months	End Stock Rice > 8months
July '99	745	62	0	0
August	846	94	15	0
September	801	89	35	0
October	715	90	2	0
November	639	253	14	0
December	582	285	146	0
Jan '2000	570	256	173	34
February	464	247	100	17
March	449	248	233	85
April	462	237	235	220
May	599	224	224	222
June	661	261	211	211

Note: Old stock is defined as old stock in addition to the projected typical 0.7 thousand MTs of rice storage losses per month.

Source: Ministry of Food, FPMU.

Figure 3: Projected Quantity and Age of Rice Stocks,[a] 1999-2000



aStocks are net of transit deduction.

Source: FPMU.

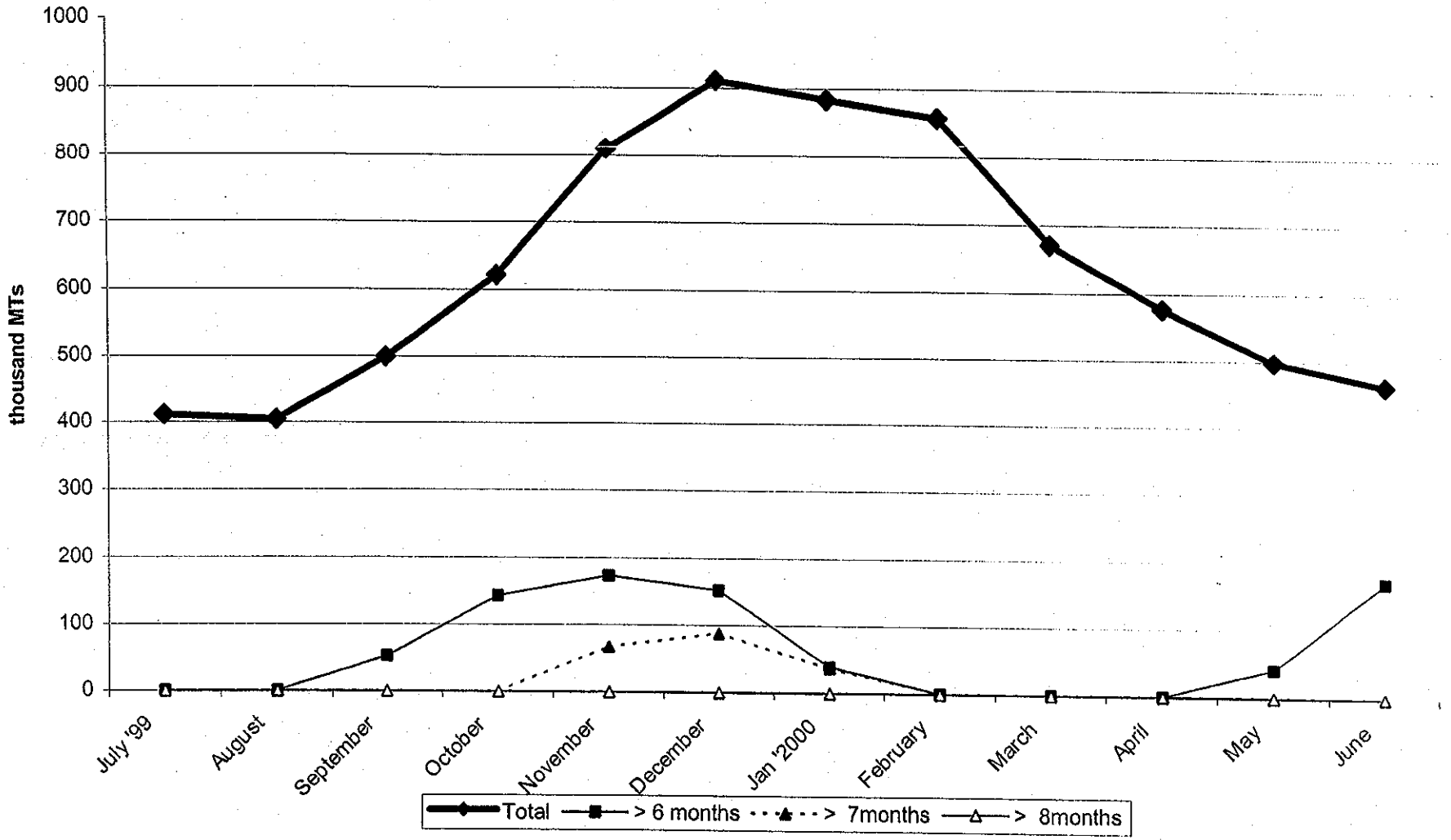
Table 3: Projected Quantity and Age of Wheat Stocks, 1999-2000

	End Stock Wheat Total	End Stock Wheat > 6 months	End Stock Wheat > 7months	End Stock Wheat > 8months
July '99	412	0	0	0
August	405	0	0	0
September	499	53	0	0
October	622	144	0	0
November	811	174	68	0
December	912	153	89	0
Jan '2000	884	39	37	0
February	859	0	0	0
March	672	0	0	0
April	578	0	0	0
May	498	41	0	0
June	462	171	0	0

Note: Old stock is defined as old stock in addition to the projected typical 1.0 thousand MT of wheat storage losses per month.

Source: Ministry of Food, FPMU.

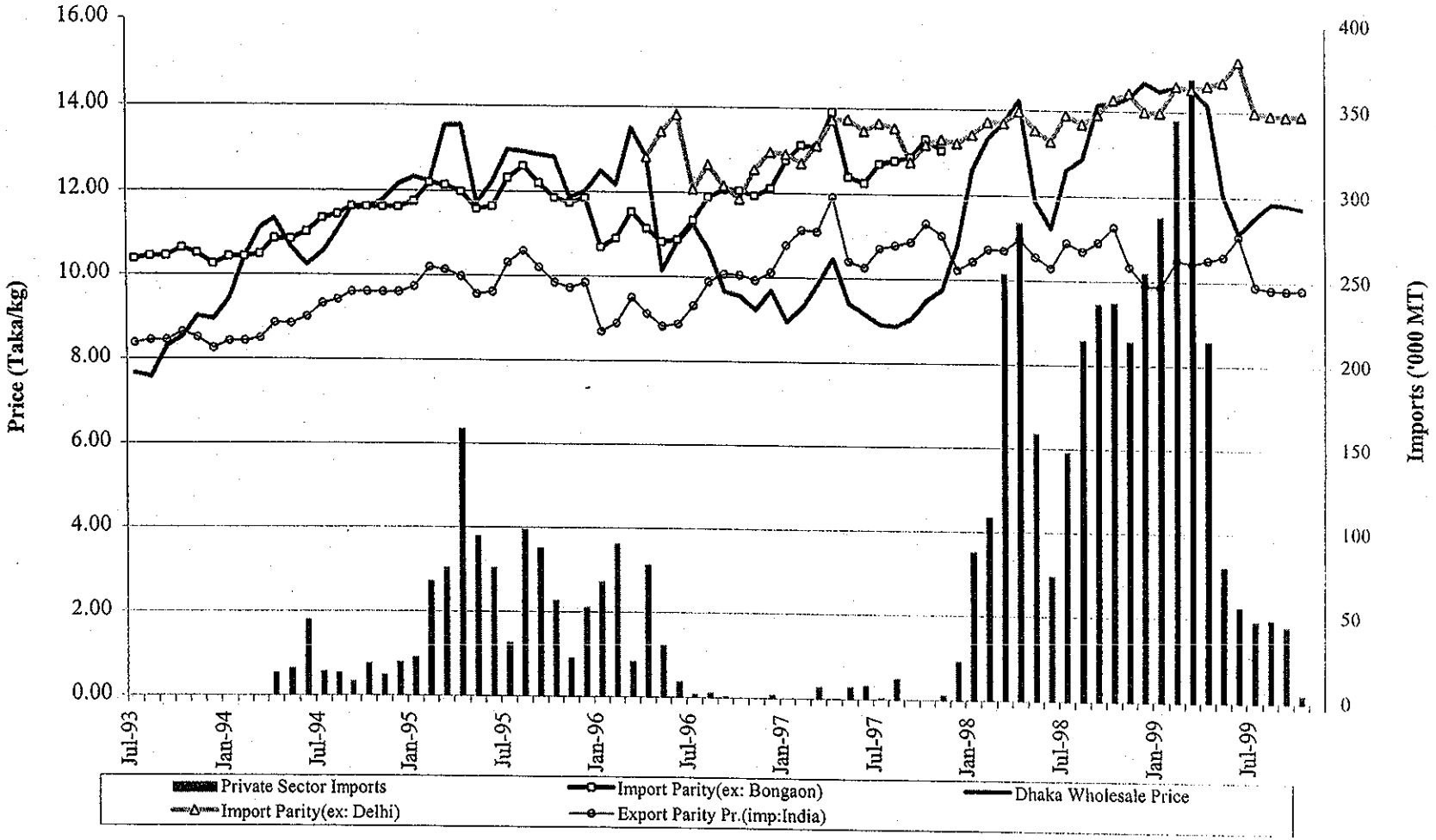
Figure 4: Projected Quantity and Age of Wheat Stocks,[a] 1999-2000



[a]Stocks are net of transit deduction.

Source: FPMU

Figure 5 - Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1993-99

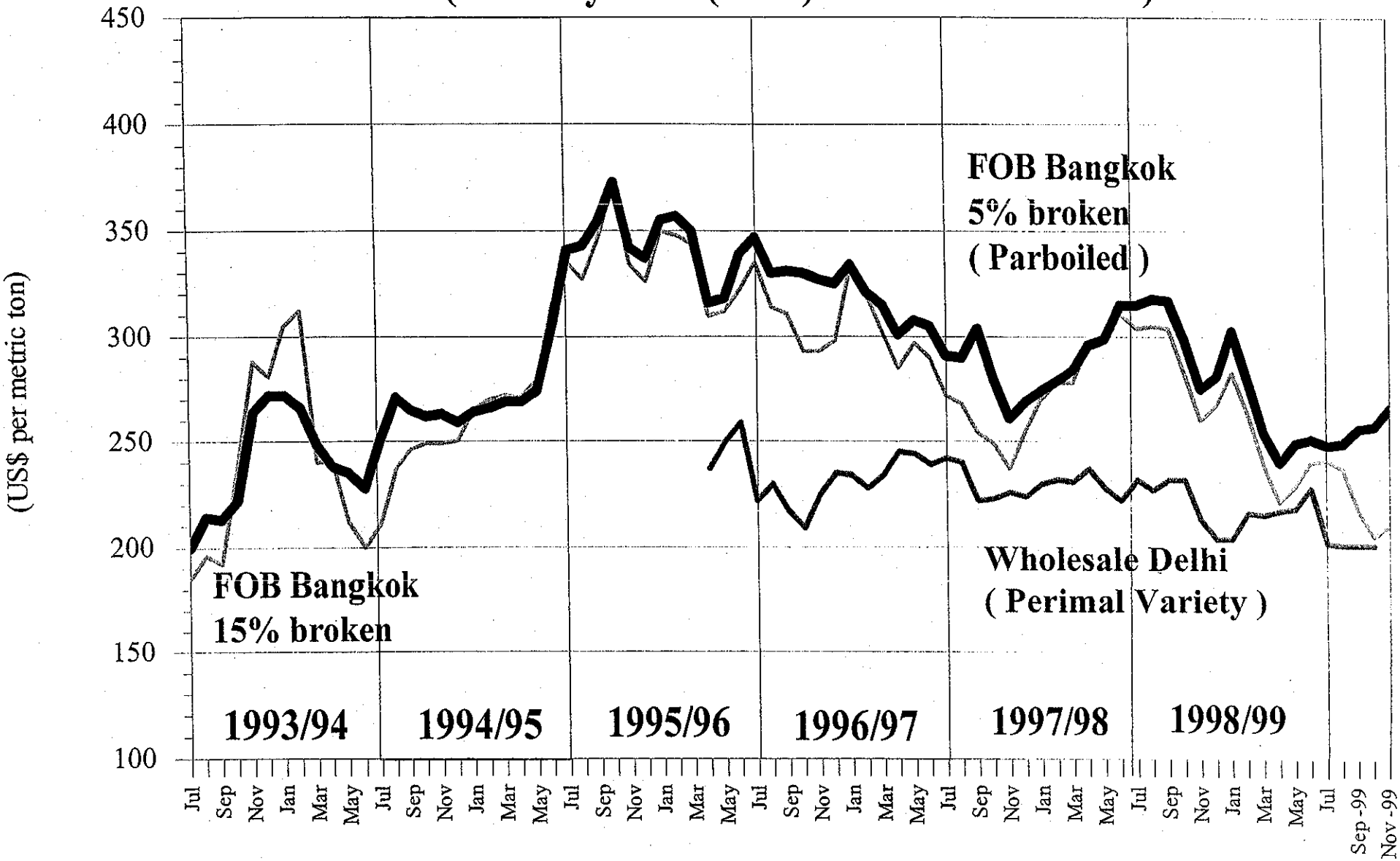


Note : Price data for October 1999 is up to the fourth week only; private sector imports are as of 31st October,1999. From November 1998, the carrying cost has increased by 1.1 Tk/kg to 4.1 Tk/kg. Export parity price Includes Bongaon price from July 93 to Nov 1997; and Delhi wholesale price thereafter.
Souce : Dorosh (1999), calculated using data from FPMU and MIS, DG Food, CMIE (1998, 1999) and Baulch, Das et. al, (1999).

E: \paul\Seminar Handouts\Closing Stock.xlsFig2.3 (2) Chart 4

Figure 6 - International Rice Price, 1993/94 to 1999/2000

(Monthly Thai (FOB) Rice Traded Price)



Source: USDA, CMIE.

Table 4: Estimated Wholesale Coarse Rice Prices under Alternative Assumptions

Aman Harvest (mn MTs)	% change in per cap demand	Estimated National Average Wholesale Price (Tk/kg)[a] Own-price elasticity of rice demand -0.20	-0.25	-0.30
9.55	-2.38%	12.05	11.76	11.58
10.00	2.11%	9.62	9.82	9.96
10.50	7.11%	7.58	8.12	8.50
11.00	12.10%	6.03	6.76	7.30

Assumptions:

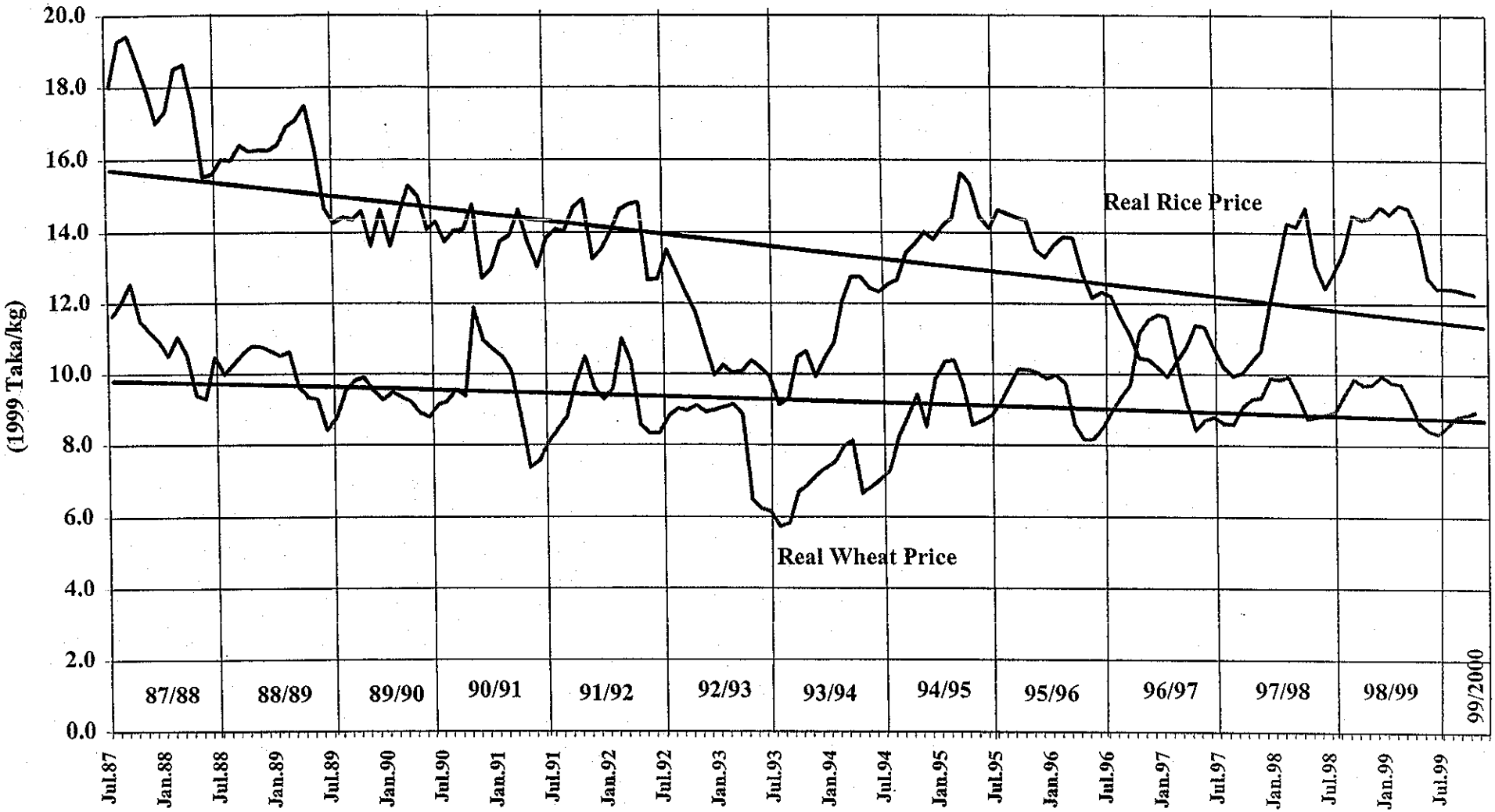
1. Base period for calculations: 1996/97 aman season:
   (rice production = 9.55 mn MTs; price = 9.57 Tk/kg).
2. No private sector imports for December 1999 - April 2000 period.
3. Change in private stock equals 1/6 of total availability for December 1999-April 2000.
4. Inflation rate between 1996/97 and 1999/2000 (non-food CPI): 13.0%.

[a] Price estimates shown are for December 1999 through April 2000.

Notes:
The 1996/97 aman price of 9.57 Tk/kg is equivalent to 10.82 Tk/kg in expected December 1999 - April 2000 current prices.
In per capita terms, 9.55 mn MTs of aman rice production in 1996/97 is equivalent to 10.02 mn MTs of aman rice production in 17 Nov, 1999

RiceEquil10.xls

Figure 7 - National Average Real Wholesale Price of Rice and Wheat, 1987-99.



Note: Prices are deflated using the non-food Dhaka middle-income Cost of Living Index (and the national CPI after June 1998).
Source : FPMU data and author's calculation.

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Table 4: Estimated Wholesale Coarse Rice Prices under Alternative Assumptions

Aman Harvest (mn MTs)	% change in per cap demand	Estimated National Average Wholesale Price (Tk/kg)[a] Own-price elasticity of rice demand -0.20	-0.25	-0.30
9.55	-2.38%	12.05	11.76	11.58
10.00	2.11%	10.78	10.79	9.96
10.50	7.11%	7.58	8.12	8.50
11.00	12.10%	6.03	6.76	7.30

Assumptions:

1. Base period for calculations: 1996/97 aman season:
   (rice production = 9.55 mn MTs; price = 9.57 Tk/kg).
2. No private sector imports for December 1999 - April 2000 period.
3. Change in private stock equals 1/6 of total availability for December 1999-April 2000.
4. Inflation rate between 1996/97 and 1999/2000 (non-food CPI): 13.0%.

[a] Price estimates shown are for December 1999 through April 2000.

Notes:

The 1996/97 aman price of 9.57 Tk/kg is equivalent to 10.82 Tk/kg in expected December 1999 - April 2000 current prices.

In per capita terms, 9.55 mn MTs of aman rice production in 1996/97 is equivalent to 10.02 mn MTs of aman rice production in 17 Nov, 1999

RiceEquil10.xls

Appendix Table 1 - Monthly Closing Stock of Rice and Wheat, 1985/86 - 1999/2000

('000 MTs)

Month	Rice			Wheat			Total		
	Av. (85/86 - 91/92)	Av. (92/93 - 98/99)	Projection 1999/2000	Av. (85/86 - 91/92)	Av. (92/93 - 98/99)	Projection 1999/2000	Av. (85/86 - 91/92)	Av. (92/93 - 98/99)	Projection 1999/2000
Jul	522	487	760	613	415	442	1135	902	1202
Aug	531	493	861	570	413	475	1101	907	1336
Sep	495	461	816	604	412	569	1099	874	1385
Oct	442	406	730	590	443	692	1033	849	1422
Nov	423	360	654	661	466	881	1085	827	1535
Dec	468	346	597	632	555	982	1100	901	1579
Jan	482	359	585	504	567	954	985	926	1539
Feb	449	349	479	411	535	929	860	883	1408
Mar	403	314	464	353	522	742	756	836	1206
Apr	343	296	477	410	507	648	753	802	1125
May	388	361	614	507	503	568	895	864	1182
Jun	507	444	676	559	421	532	1065	865	1208

Source : FPMU, MIS, DG Food.

FMRSP/FPMU memo
28 November, 1999

Aging Rice Stocks: Options for Increased Rice Distribution

Following the bumper boro harvest of April to June, 1999, the GOB procured 602 thousand MTs of rice, (of which 98 thousand MTs of rice equivalent was procured as paddy).[i] Since rice distribution from July through October was only 210 thousand MTs, government rice stocks remain high, but **substantial storage losses are likely if this rice is not distributed soon.**

Net rice stocks were 6.82 lakh MTs at the start of July 1999. Current distribution plans call for only 3.87 lakh MTs of rice distribution from July through December 1999. Thus, at least **2.90 lakh MTs of the rice** in government godowns will be **more than six months old as of 31 December 1999.**

Under current distribution plans, the problem will become even more serious in early 2000: by the **end of April, at least 2.20 lakh MTs will be more than eight months old.** Rice distribution or sales need to be increased by this amount if substantial storage losses are to be avoided.

Several alternative rice distribution channels are possible:

a) **VGF distribution** of 2.5 million cards @ 18 kgs/card for March and April would use 45,000 MTs of rice per month, **90,000 MTs** in total.

b) **Swapping rice for wheat in FFE** at a ratio of 1:1.32 in March and April 2000 would increase rice distribution by 25,000/month, **50,000 MTs** in total.

c) Rice could be used instead of wheat in the proposed **WFP Flood Rehabilitation FFW program**, increasing rice distribution by **75,000 MTs** in total from January through April 2000.

d)15 crore Taka of wage payments in the **ADP project with the Water Development Board** could be paid in rice using **11,500 MTs** in February 2000.

In addition, **approximately 1 lakh MTs OMS rice sales**, currently programmed for December 1999 through February 2000 would need to be realized, necessitating a **reduction in the OMS sales price from 13.0 Tk/kg to 10.0 to 11.0 Tk/kg**, depending on the size of the aman harvest.

If all these channels are used, **total additional rice distribution** would be **2.265 lakh MTs, and no rice stocks need exceed 8 months of age. Additional rice distribution in January and February 2000** through the WFP Flood Rehabilitation FFW program and the Water Development Board is particularly **important to avoid storage losses** in these months.

If increased distribution through these channels is not feasible, open market sales or sales by auction may be necessary. In terms of fiscal effects, **VGF distribution is most costly** since the government receives no additional revenues from the sales. **Swapping rice for wheat**, if the swap is done at the rate of 1 rice for 1.32 MTs, (equal to the ratio of the approximate cost of rice and wheat for the government), **would involve little additional financial costs**.

Market prices for rice are likely to be low, however, given the expected good 1999/2000 aman harvest. If the harvest is equal to the target of 9.55 million MTs, wholesale market national average prices of coarse rice are projected to average 11.6 to 12.0 Tk/kg, (about 6.4 to 6.7 Tk/kg for paddy). If production reaches 10.0 million MTs, prices are projected to average 10.0 to 10.8 Tk/kg (about 5.6 to 6.0 Tk/kg for paddy).

In the event of a large aman harvest, the government may wish to consider encouraging **private sector rice exports** by letting the private sector know that exports will be permitted and through providing assistance in **locating potential importers** (through commercial officers located in embassies in rice importing countries).

At current low world rice prices (**export parity is estimated at about 10.0 Tk/kg**), such exports would not result in substantial increases in domestic prices. **Domestic prices**, (11.8 Tk/kg for boro HYV coarse rice and 12.4 Tk/kg for aman HYV coarse rice in the second week of November, [DAM data]), are about **2.0 Tk/kg higher than** estimated **export parity**, so there is **no incentive for private sector exports**.

Low rice prices in the short term are not a problem for everyone: households that are net purchasers of rice benefit from low consumer prices. Farmers' losses are on average partially offset by their increased production of rice. Yet, there is a legitimate concern that low prices will reduce incentives for production and rural incomes in the long run.

A long-term solution, if rice surpluses are a recurring phenomena, is to develop rice export facilities, including adoption of grades and standards for rice quality. In this year of low world prices of government warehouses filled to capacity, **a significant price decline appears unavoidable if the aman rice harvest is as good as indicated by early reports**.

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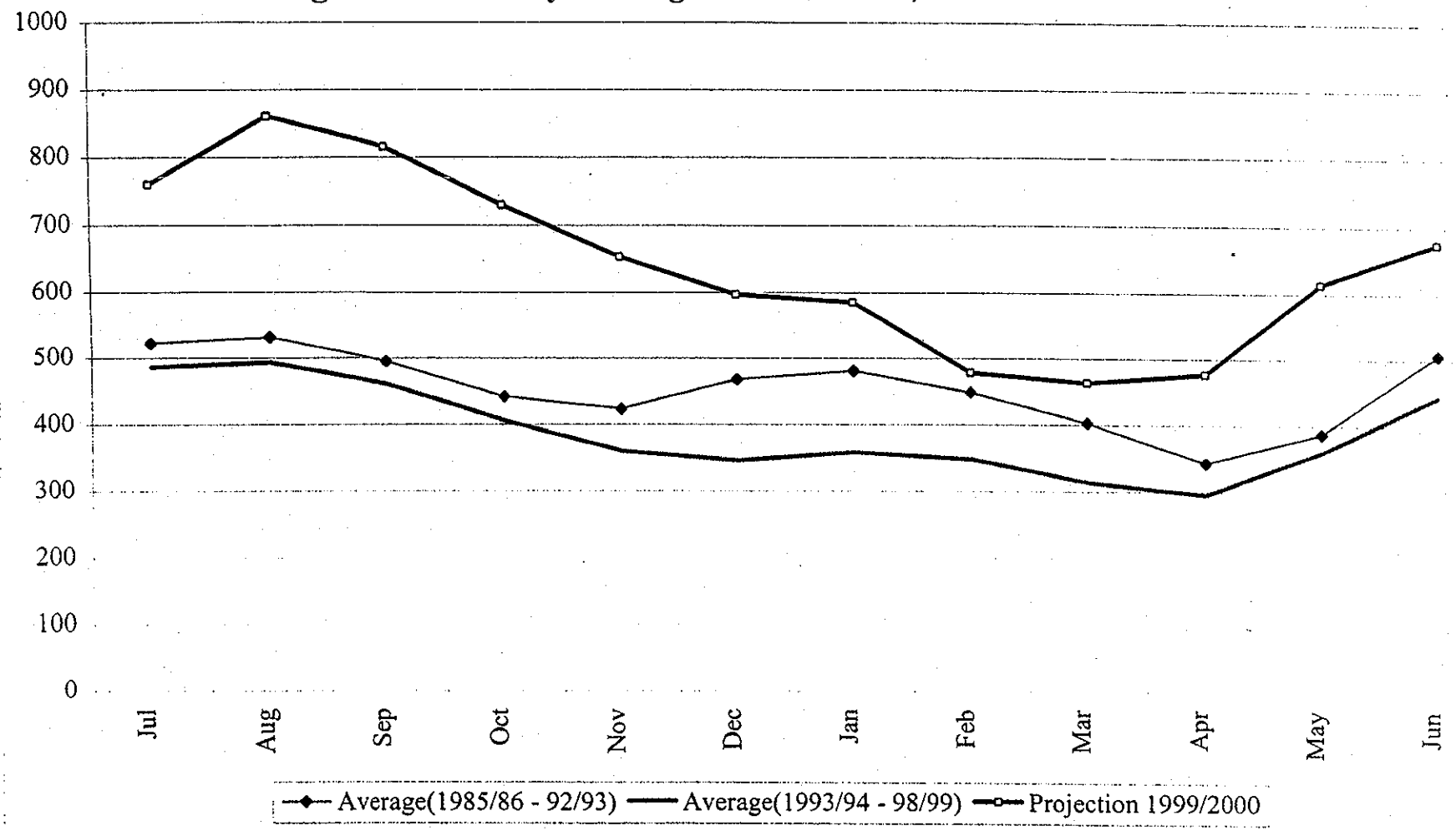
[i] Note that due to storage constraints, this year most of boro paddy procured was milled as soon as procurement stopped in each region, (about August 1999). Only about 15,000 MTs of paddy (approximately 10,000 MTs of rice equivalent) remains in government godowns as of mid-November. This small amount of paddy, (which can be stored longer than rice) does provide a small margin of flexibility in avoiding the stock losses discussed in this memo.

Table 1: Public Foodgrain Stocks and Distribution: 1985/86 to 1999/2000

	Average Monthly Closing Stocks			Distribution			Average Stocks / Distribution (%)		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total
1986	416	486	902	372	1169	1541	111.8	41.6	58.5
1987	205	509	714	495	1625	2120	41.4	31.3	33.7
1988	386	725	1111	468	2035	2503	82.5	35.6	44.4
1989	490	640	1130	690	2251	2941	71.0	28.4	38.4
1990	660	541	1201	675	1489	2164	97.8	36.3	55.5
1991	547	513	1060	971	1401	2372	56.3	36.6	44.7
1992	478	326	804	760	1585	2345	62.9	20.6	34.3
1993	595	594	1189	476	598	1074	125.0	99.3	110.7
1994	259	475	734	350	1026	1376	74.0	46.3	53.3
1995	176	397	573	529	1244	1773	33.3	31.9	32.3
1996	427	489	916	593	1202	1795	72.0	40.7	51.0
1997	551	399	950	739	653	1392	74.6	61.1	68.2
1998	296	448	744	529	1092	1621	56.0	41.0	45.9
1999	423	557	981	526	1603	2129	80.5	34.8	46.1
2000	643	704	1347	708	1011	1719	90.8	69.6	78.4
Ave 1986-92	455	534	989	633	1651	2284	74.8	32.9	44.2
Ave 1994-99	355	461	816	544	1137	1681	65.0	42.6	49.5
Difference	-99	-73	-173	-89	-514	-603	-9.8	9.7	5.3
% Difference	-21.8%	-13.7%	-17.5%	-14.0%	-31.1%	-26.4%			

Source: FPMU, Ministry of Food.
StockMemo.17Nov99.xls

Figure 1 - Monthly Closing Stock of Rice[a], 1985/86 - 1999/2000

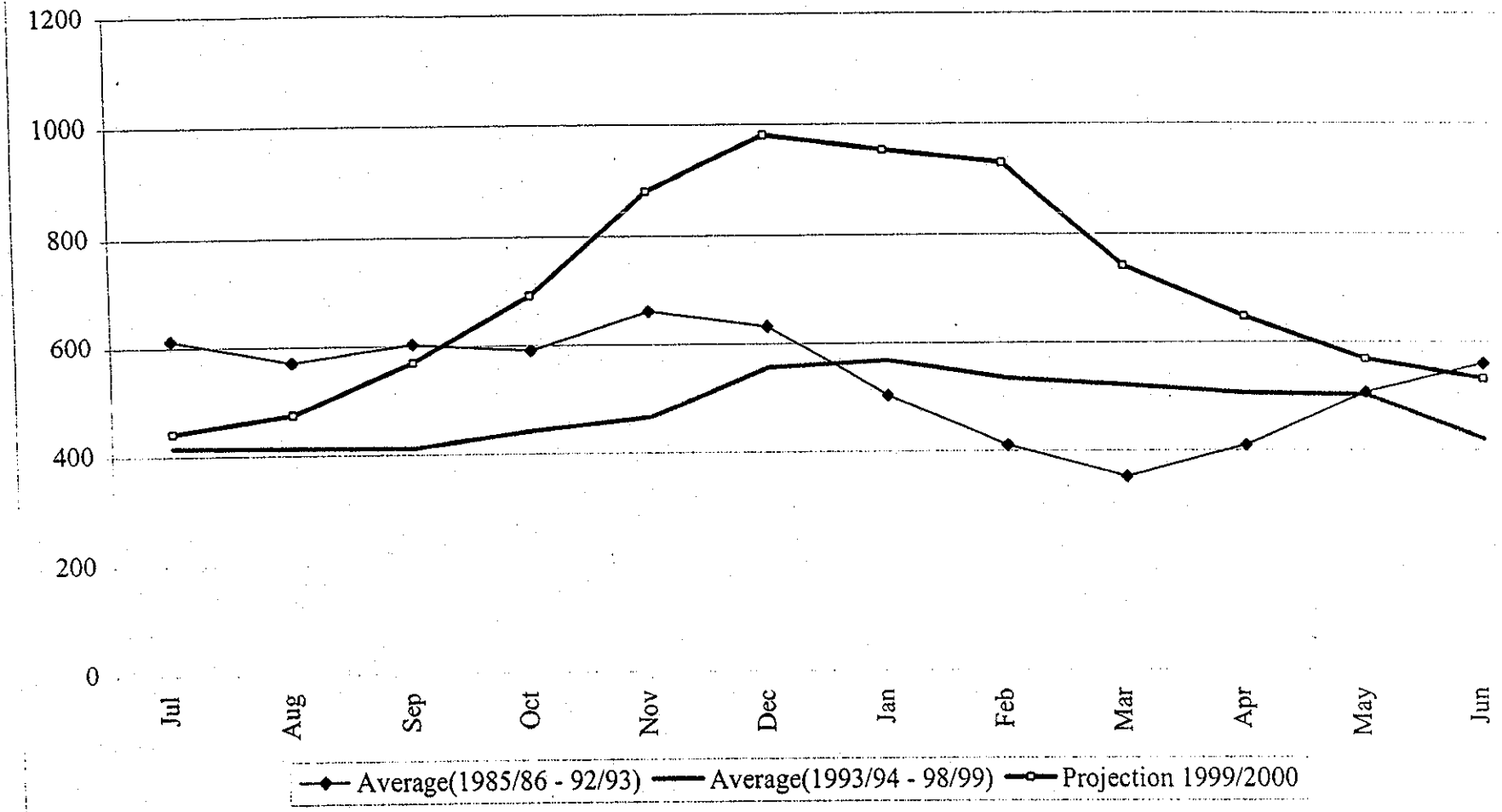


[a] Gross rice stocks

Source : FPMU, MIS DG Food.

E: \paul\Seminar Handouts\Closing Stock.xlsStock Chart 1

Figure 2 - Monthly Closing Stock of Wheat[a], 1985/86 - 1999/2000



[a] Gross wheat stocks

Source : FPMU, MIS DG Food.

E: \paul\Seminar Handouts\Closing Stock.xlsStock Chart 2

Table 2: Projected Quantity and Age of Rice Stocks, 1999-2000

	End Stock Rice Total	End Stock Rice > 6 months	End Stock Rice > 7months	End Stock Rice > 8months
July '99	745	62	0	0
August	846	92	14	0
September	801	88	33	0
October	715	88	0	0
November	644	255	16	0
December	587	290	148	0
January '2000	555	241	158	16
February	464	247	100	17
March	449	248	233	85
April	462	237	235	220
May	599	224	224	222
June	661	261	211	211

Note: Old stock is defined as old stock in addition to the projected typical 0.7 thousand MTs of rice storage losses per month.

Source: Ministry of Food, FPMU.

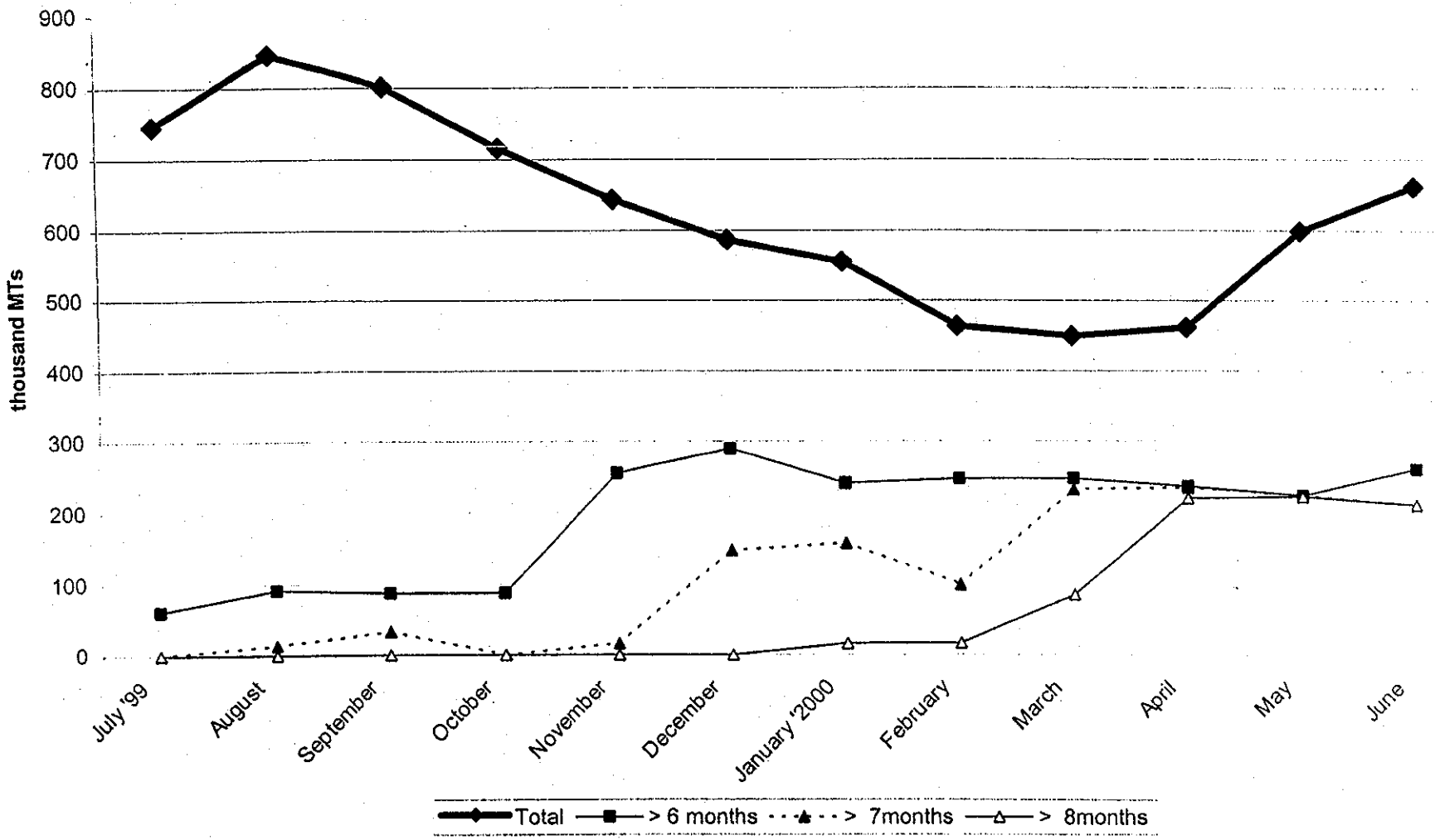
Table 3: Projected Quantity and Age of Wheat Stocks, 1999-2000

	End Stock Wheat Total	End Stock Wheat > 6 months	End Stock Wheat > 7months	End Stock Wheat > 8months
July '99	412	0	0	0
August	405	0	0	0
September	499	53	0	0
October	622	144	0	0
November	811	174	68	0
December	912	153	89	0
Jan '2000	884	39	37	0
February	859	0	0	0
March	672	0	0	0
April	578	0	0	0
May	498	41	0	0
June	462	171	0	0

Note: Old stock is defined as old stock in addition to the projected typical 1.0 thousand MT of wheat storage losses per month.

Source: Ministry of Food, FPMU.

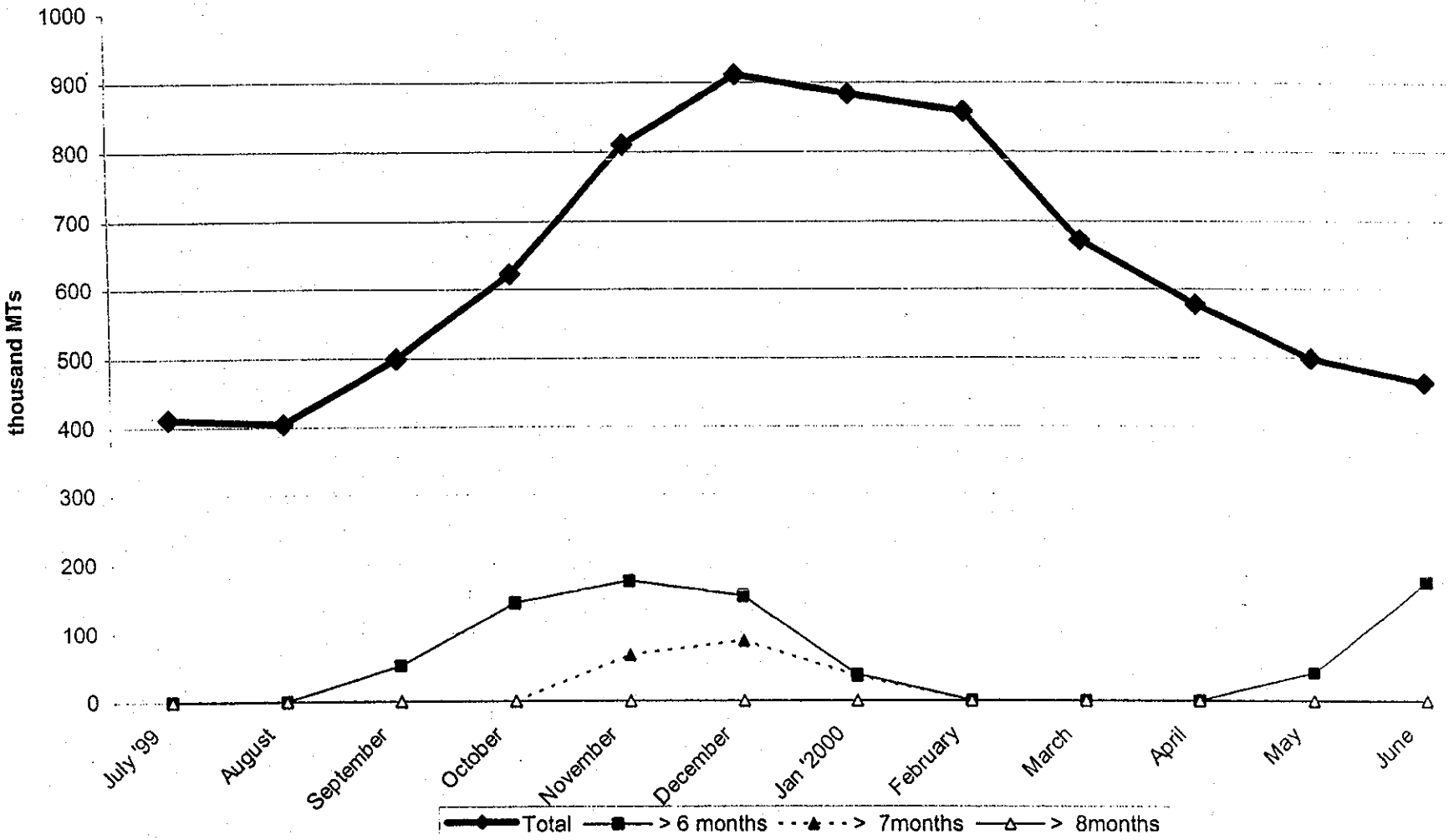
Figure 3: Projected Quantity and Age of Rice Stocks,[a] 1999-2000



[a]Stocks are net of transit deduction.

Source: FPMU.

Figure 4: Projected Quantity and Age of Wheat Stocks,[a] 1999-2000



[a]Stocks are net of transit deduction.

Source: FPMU

Table 2a: Projected Quantity and Age of Rice Stocks under Option 1, 1999-2000

	End Stock Rice Total	End Stock Rice > 6 months	End Stock Rice > 7months	End Stock Rice > 8months
July '99	745	62	0	0
August	846	92	14	0
September	801	88	33	0
October	715	88	0	0
November	644	255	16	0
December	587	290	148	0
January '2000	540	226	143	1
February	417	201	53	0
March	313	111	96	0
April	235	10	9	0
May	372	0	0	0
June	435	35	0	0

Note: Old stock is defined as old stock in addition to the projected typical 0.7 thousand MTs of rice storage losses per month.

Source: Ministry of Food, FPMU.

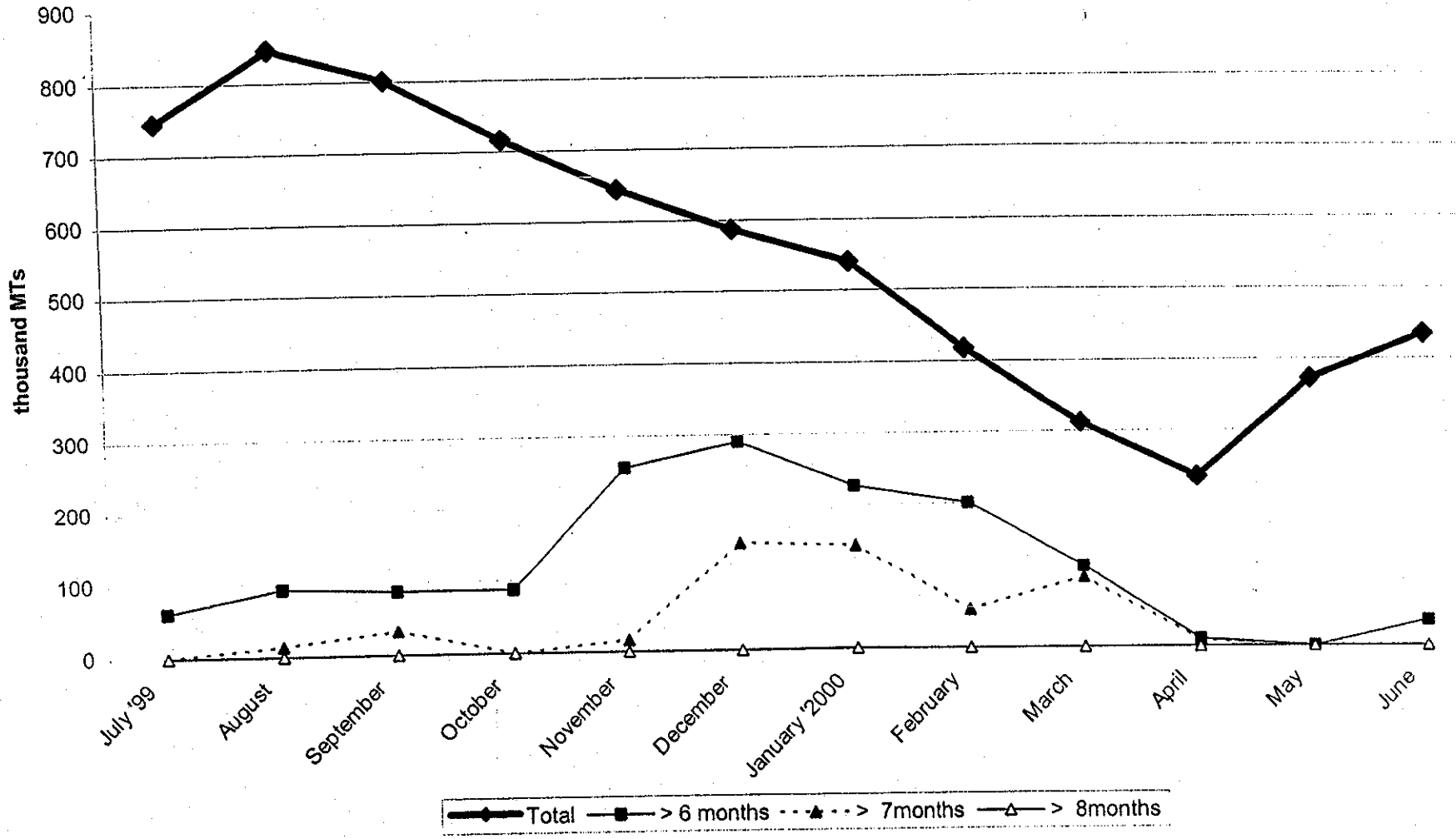
Table 3a: Projected Quantity and Age of Wheat Stocks under Option 1, 1999-2000

	End Stock Wheat Total	End Stock Wheat > 6 months	End Stock Wheat > 7months	End Stock Wheat > 8months
July '99	412	0	0	0
August	405	0	0	0
September	499	53	0	0
October	622	144	0	0
November	811	174	68	0
December	912	153	89	0
Jan '2000	884	39	37	0
February	859	0	0	0
March	705	0	0	0
April	644	0	0	0
May	564	107	0	0
June	528	237	51	0

Note: Old stock is defined as old stock in addition to the projected typical 1.0 thousand MT of wheat storage losses per month.

Source: Ministry of Food, FPMU.

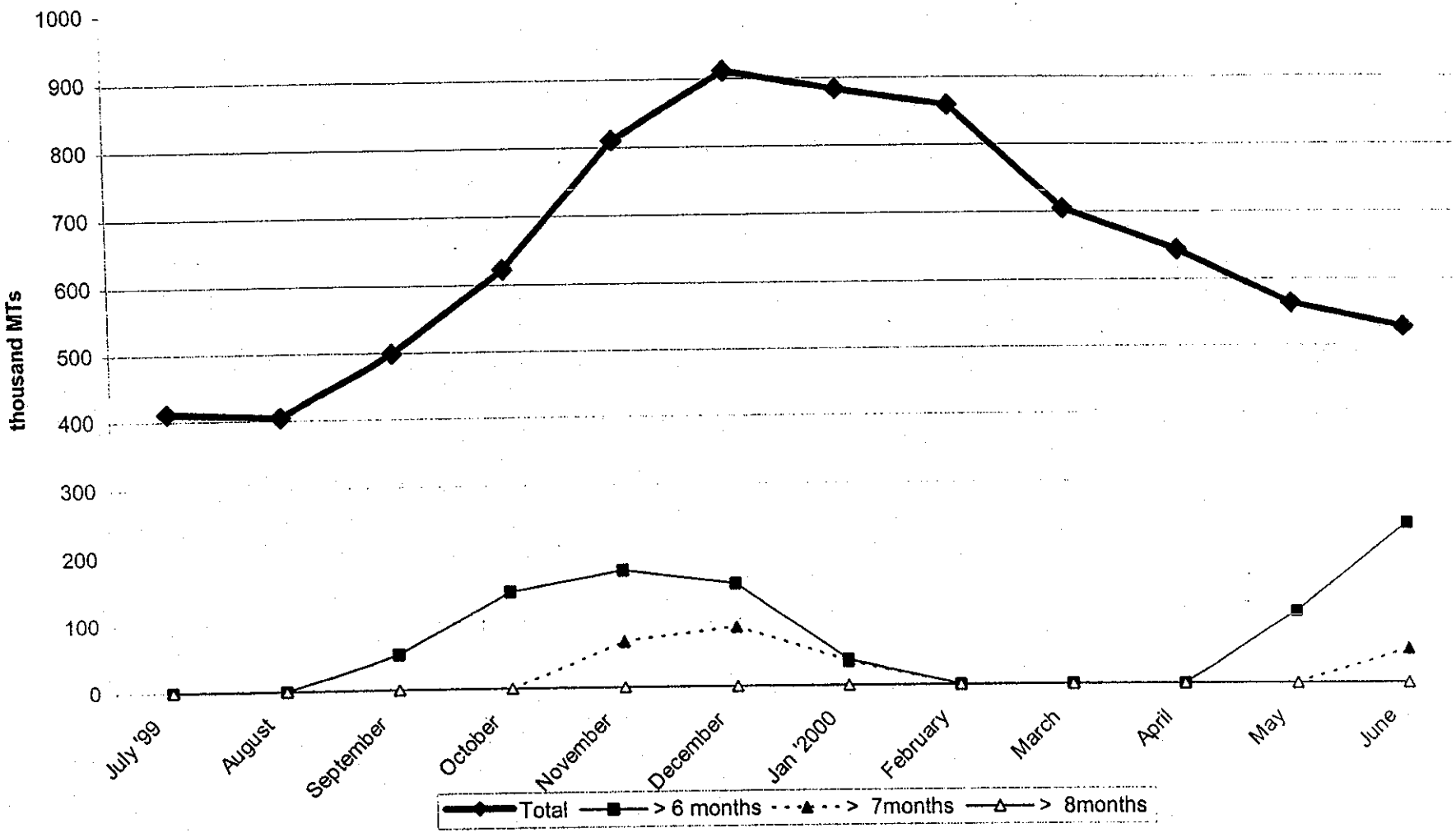
Figure 3a: Projected Quantity and Age of Rice Stocks under Option 1,[a] 1999-2000



[a]Stocks are net of transit deduction.

Source: FPMU.

Figure 4a: Projected Quantity and Age of Wheat Stocks under Option 1,[a] 1999-2000



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Assumptions:

1. Base period for calculations: 1996/97 aman season:
   (rice production = 9.55 mn MTs; price = 9.57 Tk/kg).
2. No private sector imports for December 1999 - April 2000 period.
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Notes:

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In per capita terms, 9.55 mn MTs of aman rice production in 1996/97 is equivalent to 10.02 mn MTs of aman rice production in 17 Nov, 1999

RiceEquil10.xls

FPMU

Monthly Projection of Govt. Stock, Procurement, Import, Offtake of Rice & Wheat during 1999/2000

23-11-1999

('000 MT)

MONTH	OPENING STOCK			ADDITION									TOTAL ADDI-TION	OFF-TAKE																								Total OFF-TAKE	Stock net of transit deduct			
				Domestic Procurement			Import							RICE													WHEAT																
							Food Aid		Commercial		Total Import			Priced				Non-Priced								Rice Total	Priced					Non-Priced								Wheat Total				
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Rice	Wheat	Rice	Wheat	Total	OMS/ FPC	OP	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Others	Total		OMS/ FPC	OP/FM	LEI	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Other	Total			Rice	Wheat	Total
July '99	#####	504	1,199	83	2	85	0	9	0	0	0	0	0	85	0.0	0.6	10.4	11.0	0.0	5.5	0.0	0	0.0	0.4	0.3	6.3	17.3	1.2	1.2	1.0	6.6	9.9	3.9	9.2	0.0	0.0	0.0	0.2	0.0	13.3	23.3	40.5	745	412	1157	J
August	760	482	1,242	148	0	148	0	7	0	0	0	7	7	155	0.1	0.7	10.9	11.7	0.0	14.6	0.0	0	15.8	0.6	4.1	35.1	46.7	3.0	1.1	0.8	7.4	12.3	0.4	0.2	0.0	0.0	0.2	0.3	0.0	1.1	13.4	60.1	846	405	1250	A
Septem	861	475	1,335	14	0	14	1	109	0	0	1	109	110	124	0.1	0.7	10.7	11.4	1	16.2	0.0	0	22.6	1.3	6.3	47.2	58.6	2.3	1.5	0.0	6.5	10.3	0.3	0.1	0.0	0.0	0.2	1.5	1.0	3.2	13.4	72.0	801	499	1301	S
October	816	569	1,386	0	0	0	2	191	0	0	2	191	193	193	0.6	0.7	10.8	12.1	0	11.3	35.7	3	19.5	2.5	3.2	74.9	87.0	3.7	1.5	0.9	7.9	14.0	3.7	24.4	21.6	0.2	2.5	0.3	0.1	52.8	66.8	153.8	715	622	1338	O
Novem	730	692	1,423	0	0	0	0	264	0	0	0	264	264	264	0.0	1.0	9.7	10.7	0	5.0	30.0	0	20.0	0.0	5.0	60.3	71.0	10.0	1.0	2.0	8.0	21.0	0.0	10.0	20.0	20.0	0.0	0.0	3.8	53.8	74.8	145.8	644	811	1455	N
Decem	659	881	1,540	50	0	50	0	186	0	0	0	186	186	236	30.0	0.0	10.2	40.2	24	4.0	33.0	0	0.0	0.0	5.1	66.1	106.3	10.0	1.0	2.0	8.0	21.0	12.0	6.0	20.0	25.0	0.0	0.0	0.2	63.2	84.2	190.5	587	912	1498	D
Janu '2000	602	982	1,583	100	0	100	0	88	0	0	0	88	88	188	29.0	0.0	10.9	39.9	50	4.0	33.0	0	0.0	0.0	4.0	91.0	130.9	10.0	1.0	2.0	9.0	22.0	60.0	0.0	6.0	25.0	0.0	0.0	2.0	93.0	115.0	245.9	555	884	1439	J
February	570	954	1,524	50	0	50	0	50	0	0	0	50	50	100	40.0	1.0	11.6	52.6	50	3.0	18.0	0	0.0	15.0	2.2	88.2	140.8	10.0	2.0	1.0	9.0	22.0	50.0	0.0	0.0	0.0	0.0	0.0	2.0	52.0	74.0	214.8	464	859	1322	F
March	479	929	1,407	0	30	30	0	0	0	0	0	0	0	30	0.0	1.0	10.6	11.6	0	0.0	0.0	0	0.0	0.0	2.0	2.0	13.6	10.0	2.0	1.0	9.0	22.0	140.0	20.0	33.0	0.0	0.0	0.0	1.0	194.0	216.0	229.6	449	672	1121	M
April	464	742	1,206	25	80	105	0	0	0	0	0	0	0	105	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	10.0	2.0	1.0	10.0	23.0	95.0	20.0	33.0	1.0	0.0	0.0	1.0	150.0	173.0	185.0	462	578	1039	A
May	477	648	1,124	150	23	173	0	0	0	0	0	0	0	173	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	0.0	1.0	1.0	10.0	12.0	35.0	20.0	33.0	0.0	0.0	0.0	2.0	90.0	102.0	114.0	599	498	1097	M
June	614	568	1,182	75	20	95	0	0	0	0	0	0	0	95	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	0.0	1.0	1.0	8.0	10.0	0.0	10.0	33.0	0.0	0.0	0.0	2.0	45.0	55.0	67.0	661	462	1123	J
Total				694	155	849	3	895	0	0	3	895	898	1747	100	9	126	234	125	64	150	3	78	20	35	474	708	70	16	14	99	199	400	120	200	71	3	2	15	811	1011	1719				

July '99 - Dec'99	294	2	296	3	757	0	0	3	757	760	1056	31	4	63	97	25	57	99	3	78	5	24	290	387	30	7	7	44	88	20	50	62	45	3	2	5	187	276	663	723	610	1333
Jan-June 2000	400	153	553	0	138	0	0	0	138	138	691	69	5	63	137	100	7	51	0	0	15	11	184	321	40	9	7	55	111	380	70	138	26	0	0	10	624	735	1056	532	659	1190
																							474	708					199									1011	1719	627	634	1262

FPMU

Monthly Projection of Govt. Stock, Procurement, Import, Offtake of Rice & Wheat during 1999/2000

Option 1: Additional Rice Distribution through FFE, VGF and FFW

23-11-1999

('000 MT)

MONTH	OPENING STOCK			ADDITION									TOTAL ADDI-TION	OFF-TAKE																					Total OFF-TAKE	Stock net of transit deduct			
				Domestic Procurement			Import							RICE													WHEAT												
							Food Aid		Commercial		Total Import			Priced				Non-Priced								Rice Total	Priced					Non-Priced							Wheat Total				
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Rice	Wheat	Rice	Wheat	Total	OMS/ FPC	OP	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Others	Total		OMS/ FPC	OP/FM	LEI	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Other	Total			Rice	Wheat	Total
July '99	695.46	504	1,199	83	2	85	0	0	0	0	0	0	0	85	0.0	0.6	10.4	11.0	0.0	5.5	0.0	0	0.0	0.4	0.3	6.3	17.3	1.2	1.2	1.0	6.6	9.9	3.9	9.2	0.0	0.0	0.0	0.2	0.0	13.3	23.3	40.5	745	412	1157	J
August	760	482	1,242	148	0	148	0	7	0	0	0	7	7	155	0.1	0.7	10.9	11.7	0.0	14.6	0.0	0	15.8	0.6	4.1	35.1	46.7	3.0	1.1	0.8	7.4	12.3	0.4	0.2	0.0	0.0	0.2	0.3	0.0	1.1	13.4	60.1	846	405	1250	A
Septem	861	475	1,335	14	0	14	1	109	0	0	1	109	110	124	0.1	0.7	10.7	11.4	1	16.2	0.0	0	22.6	1.3	6.3	47.2	58.6	2.3	1.5	0.0	6.5	10.3	0.3	0.1	0.0	0.0	0.2	1.5	1.0	3.2	13.4	72.0	801	499	1301	S
October	818	569	1,386	0	0	0	2	191	0	0	2	191	193	193	0.6	0.7	10.8	12.1	0	11.3	35.7	3	19.5	2.5	3.2	74.9	87.0	3.7	1.5	0.9	7.9	14.0	3.7	24.4	21.6	0.2	2.5	0.3	0.1	52.8	66.8	153.8	715	622	1338	O
Novem	730	692	1,423	0	0	0	0	264	0	0	0	264	264	264	0.0	1.0	9.7	10.7	0	5.0	30.0	0	20.0	0.0	5.0	60.3	71.0	10.0	1.0	2.0	8.0	21.0	0.0	10.0	20.0	20.0	0.0	0.0	3.8	53.8	74.8	145.8	644	811	1455	N
Decem	659	881	1,540	50	0	50	0	186	0	0	0	186	186	236	30.0	0.0	10.2	40.2	24	4.0	33.0	0	0.0	0.0	5.1	66.1	106.3	10.0	1.0	2.0	8.0	21.0	12.0	6.0	20.0	25.0	0.0	0.0	0.2	63.2	84.2	190.5	587	912	1498	D
Janu '2000	602	982	1,583	100	0	100	0	88	0	0	0	88	88	188	29.0	0.0	10.9	39.9	65	4.0	33.0	0	0.0	0.0	4.0	106.0	145.9	10.0	1.0	2.0	9.0	22.0	60.0	0.0	6.0	25.0	0.0	0.0	2.0	93.0	115.0	260.9	540	884	1424	J
February	555	954	1,509	50	0	50	0	50	0	0	0	50	50	100	40.0	1.0	11.6	52.6	82	3.0	18.0	0	0.0	15.0	2.2	119.7	172.4	10.0	2.0	1.0	9.0	22.0	50.0	0.0	0.0	0.0	0.0	0.0	2.0	52.0	74.0	246.4	417	859	1276	F
March	432	929	1,361	0	30	30	0	0	0	0	0	0	0	30	0.0	1.0	10.6	11.6	20	0.0	25.0	0	45.0	0.0	2.0	92.0	103.6	10.0	2.0	1.0	9.0	22.0	140.0	20.0	0.0	0.0	0.0	0.0	1.0	161.0	183.0	286.6	313	705	1017	M
April	328	775	1,102	25	80	105	0	0	0	0	0	0	0	105	0.0	1.0	10.0	11.0	20	0.0	25.0	0	45.0	0.0	1.0	91.0	102.0	10.0	2.0	1.0	10.0	23.0	95.0	20.0	0.0	1.0	0.0	0.0	1.0	117.0	140.0	242.0	235	644	879	A
May	250	714	964	150	23	173	0	0	0	0	0	0	0	173	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	0.0	1.0	1.0	10.0	12.0	35.0	20.0	33.0	0.0	0.0	0.0	2.0	90.0	102.0	114.0	372	564	936	M
June	387	634	1,021	75	20	95	0	0	0	0	0	0	0	95	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	0.0	1.0	1.0	8.0	10.0	0.0	10.0	33.0	0.0	0.0	0.0	2.0	45.0	55.0	67.0	435	528	963	J
Total				694	155	849	3	895	0	0	3	895	898	1747	100	9	126	234	211	64	200	3	168	20	35	700	935	70	16	14	99	199	400	120	134	71	3	2	15	745	945	1880				
July '99 - Dec'99				294	2	296	3	757	0	0	3	757	760	1056	31	4	63	97	25	57	99	3	78	5	24	290	387	30	7	7	44	88	20	50	62	45	3	2	5	187	276	663	723	610	1333	
Jan-June 2000				400	153	553	0	138	0	0	0	138	138	691	69	5	63	137	187	7	101	0	90	15	11	411	548	40	9	7	55	111	380	70	72	26	0	0	10	558	669	1217	385	697	1082	
																															199								945	1880	554	654	1208	

Option 1: Additional Rice Distribution through FFE, VGF and FFW — Additional Rice Distribution

a) VGF rice: March and April, 2000; 2.5 million cards @ 18/kg/card/month = 45,000 MTs rice/month; 90.0

b) FFW through ADB project with Water Development Board: 15 crore Tk @13.0 Tk/kg = 11,538 MTs of ric 11.5

c) FFW through WFP Flood Rehabilitation: 75,000 MTs of rice (instead of 100,000 MTs of wheat)
(Jan: 15.0 ; Feb 20.0; Mar 20.0; Apr 20.0) 75.0

d) FFE swap rice for wheat at a ration of 1:1.32 in March and April, 2000 (March 25.0; April 25.0) 50.0

Total additional rice distribution: 226.5

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FMRSP/FPMU memo
1 December, 1999

Aging Stocks and Options for Increased Foodgrain Distribution

Large inflows of food aid, coupled with domestic procurement and only moderate levels of wheat distribution, have resulted in a build-up of wheat stocks, which will deteriorate in quality if not distributed soon.

As of 31 October, 1999, **104,500 MTs of wheat had deteriorated in quality to the grade DSD-2**, one grade lower than optimal quality (DSD-3). Another 27,500 MTs had deteriorated even further to DSD-1. Moreover, much of the DSD-2 wheat will likely deteriorate to DSD-1 within the next several months unless it is distributed before then.

The rice stock situation is similar, but less urgent. Following the bumper boro harvest of April to June, 1999, the GOB procured 602 thousand MTs of rice, (of which 98 thousand MTs of rice equivalent was procured as paddy).[i]

Since rice distribution from July through October was only 210 thousand MTs, government rice stocks remain high, but consideration should be given to increasing rice distribution in the coming months so as to **avoid possible substantial storage losses in the second quarter of 2000.**

A possible solution to the wheat stock problem is to sell 1 lakh MTs of wheat to flour mills in the next few months, (December 1999 through February 2000). In order for these sales to be attractive to mills, the price will need to be about 9.0 – 9.5 Tk/kg, given current average wholesale market prices in Dhaka, (9.1 Tk/kg in mid-November, DAM data).

At a price of 9.5 Tk/kg, these sales involve a subsidy of 1.65 Tk/kg compared to the economic price (the average cost of wheat to the government) of 11.15 Tk/kg. The total financial subsidy to the government would be 16.5 crore Taka, but the alternative is an even greater financial loss if the wheat deteriorates further in quality.

In addition to the sales to flour mills, 15 crore Taka of wage payments in the **ADP project with the Water Development Board** could be paid in wheat, **13,453 MTs** in February 2000.

The rice stock problem is not critical yet, but action should be considered so that a huge problem does not occur later in the year. Net rice stocks were 6.82 lakh MTs at the start of July 1999. Current distribution plans call for only 3.87 lakh MTs of rice distribution from July through December 1999. Thus, at least **3.20 lakh MTs of the rice** in government godowns will be **more than six months old as of 31 December 1999.**

Under current distribution plans, the problem will become even more serious in early 2000: by the end of **April 2000, at least 2.60 lakh MTs will be more than eight months**

old. By the end of **June 2000, at least 1.95 lakh MTs of rice will be more than 10 months old.** Rice distribution or sales may thus need to be increased by approximately this amount if substantial storage losses are to be avoided.

Several alternative rice distribution channels are possible:

a) **VGF distribution** of 2.5 million cards @ 18 kgs/card for March and April would use 45,000 MTs of rice per month, **90,000 MTs** in total.

b) **Swapping rice for wheat in FFE** at a ratio of 1:1.32 in March and April 2000 would increase rice distribution by 25,000/month, **50,000 MTs** in total.

c) Rice could be used instead of wheat in the proposed **WFP Flood Rehabilitation FFW program**, increasing rice distribution by **75,000 MTs** in total from January through April 2000.

If all these channels are used, **total additional rice distribution** would be **2.15 lakh MTs.**

In addition, **approximately 1 lakh MTs OMS rice sales**, now tentatively programmed for March through May, 2000 are needed. For these sales to take place, however, there will need to be a reduction in the OMS sales price from the current level (13.0 Tk/kg) to a price near the market price at that time, perhaps about 10 to 11 Tk/kg. There is no need to decide on a new OMS sales price until February 2000, however.

If increased distribution through these channels is not feasible, open market sales or sales by auction may be necessary. In terms of fiscal effects, **VGF distribution is most costly** since the government receives no additional revenues from the sales. **Swapping rice for wheat**, if the swap is done at the rate of 1 rice for 1.32 MTs, (equal to the ratio of the approximate cost of rice and wheat for the government), **would involve little additional financial costs.**

Market prices for rice are likely to be low, however, given the expected good 1999/2000 aman harvest. If the harvest is equal to the target of 9.55 million MTs, wholesale market national average prices of coarse rice are projected to average 11.6 to 12.0 Tk/kg, (about 6.4 to 6.7 Tk/kg for paddy). If production reaches 10.0 million MTs, prices are projected to average 10.0 to 10.8 Tk/kg (about 5.6 to 6.0 Tk/kg for paddy).

In the event of a large aman harvest, the government may wish to consider encouraging **private sector rice exports** by letting the private sector know that exports will be permitted and through providing assistance in **locating potential importers** (through commercial officers located in embassies in rice importing countries).

At current low world rice prices (**export parity is estimated at about 10.0 Tk/kg**), such exports would not result in substantial increases in domestic prices. **Domestic prices,** (11.8 Tk/kg for boro HYV coarse rice and 12.4 Tk/kg for aman HYV coarse rice in the

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second week of November, [DAM data]), are about **2.0 Tk/kg higher than** estimated **export parity**, so there is **no incentive for private sector exports**.

Low rice prices in the short term are not a problem for everyone: households that are net purchasers of rice benefit from low consumer prices. Farmers' losses are on average partially offset by their increased production of rice. Yet, there is a legitimate concern that low prices will reduce incentives for production and rural incomes in the long run.

A long-term solution, if rice surpluses are a recurring phenomena, is to develop rice export facilities, including adoption of grades and standards for rice quality. In this year of low world prices of government warehouses filled to capacity, **a significant price decline appears unavoidable if the aman rice harvest is as good as indicated by early reports.**

Summary: Policy Options

In order for the Ministry of Food to avoid large stock losses in the first half of 2000, the following measures, (or alternative means of increased distribution) are needed:

1. Sell 1 lakh MTs of wheat to flour mills in the next few months, (December 1999 through February 2000). In order for these sales to be attractive to mills, the price will need to be set at prices near market prices, about 9.0 – 9.5 Tk/kg.

2. Replace 15 crore Taka of wage payments in the **ADP project with the Water Development Board** by **13,453 MTs** wheat in February 2000.

3. Increase rice distribution to avoid quality deterioration of rice stocks from April 2000, onwards. Options include:

   a) **VGF distribution** of 2.5 million cards @ 18 kgs/card for March and April would use 45,000 MTs of rice per month, **90,000 MTs** in total.

   b) **Swap rice for wheat in FFE** at a ratio of 1:1.32 in March and April 2000 would increase rice distribution by 25,000/month, **50,000 MTs** in total.

   c) Use rice instead of wheat in the proposed **WFP Flood Rehabilitation FFW program**, increasing rice distribution by **75,000 MTs** in total from January through April 2000.

If all these channels are used, **total additional rice distribution** would be **2.15 lakh MTs**.

4. Distribute **approximately 1 lakh MTs of rice through OMS** from March through May, 2000.

5. **Lower the OMS sales price** from the current level (13.0 Tk/kg) to a price near the market price at that time, perhaps about 10 to 11 Tk/kg. There is **no need to decide on a new OMS sales price until February 2000, however**.

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[i] Note that due to storage constraints, this year most of boro paddy procured was milled as soon as procurement stopped in each region, (about August 1999). Only about 15,000 MTs of paddy (approximately 10,000 MTs of rice equivalent) remains in government godowns as of mid-November. This small amount of paddy, (which can be stored longer than rice) does provide a small margin of flexibility in avoiding the stock losses discussed in this memo.

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Table 1: Public Foodgrain Stocks and Distribution: 1985/86 to 1999/2000

	Average Monthly Closing Stocks			Distribution			Average Stocks / Distribution (%)		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total
1986	416	486	902	372	1169	1541	111.8	41.6	58.5
1987	205	509	714	495	1625	2120	41.4	31.3	33.7
1988	386	725	1111	468	2035	2503	82.5	35.6	44.4
1989	490	640	1130	690	2251	2941	71.0	28.4	38.4
1990	660	541	1201	675	1489	2164	97.8	36.3	55.5
1991	547	513	1060	971	1401	2372	56.3	36.6	44.7
1992	478	326	804	760	1585	2345	62.9	20.6	34.3
1993	595	594	1189	476	598	1074	125.0	99.3	110.7
1994	259	475	734	350	1026	1376	74.0	46.3	53.3
1995	176	397	573	529	1244	1773	33.3	31.9	32.3
1996	427	489	916	593	1202	1795	72.0	40.7	51.0
1997	551	399	950	739	653	1392	74.6	61.1	68.2
1998	296	448	744	529	1092	1621	56.0	41.0	45.9
1999	423	557	981	526	1603	2129	80.5	34.8	46.1
2000	643	704	1347	708	1011	1719	90.8	69.6	78.4
Ave 1986-92	455	534	989	633	1651	2284	74.8	32.9	44.2
Ave 1994-99	355	461	816	544	1137	1681	65.0	42.6	49.5
Difference	-99	-73	-173	-89	-514	-603	-9.8	9.7	5.3
% Difference	-21.8%	-13.7%	-17.5%	-14.0%	-31.1%	-26.4%			

Source: FPMU, Ministry of Food.
StockMemo.17Nov99.xls

Table 2: Projected Quantity and Age of Rice Stocks, 1999-2000

	End Stock Rice Total	End Stock Rice > 6 months	End Stock Rice > 7months	End Stock Rice > 8months	End Stock Rice > 10months
July '99	745	62	0	0	0
August	846	92	14	0	0
September	801	88	33	0	0
October	715	88	0	0	0
November	644	255	16	0	0
December	617	320	178	0	0
January '2000	614	300	217	75	0
February	563	346	199	116	0
March	518	317	302	154	0
April	502	277	275	260	30
May	599	224	224	222	60
June	661	261	211	211	195

Note: Old stock is defined as old stock in addition to the projected typical 0.7 thousand MTs of rice storage losses per month.

Source: Ministry of Food, FPMU.

Table 3: Projected Quantity and Age of Wheat Stocks, 1999-2000

	End Stock Wheat Total	End Stock Wheat > 6 months	End Stock Wheat > 7months	End Stock Wheat > 8months
July '99	412	0	0	0
August	405	0	0	0
September	499	53	0	0
October	622	144	0	0
November	811	174	68	0
December	912	153	89	0
Jan '2000	884	39	37	0
February	859	0	0	0
March	672	0	0	0
April	578	0	0	0
May	498	41	0	0
June	462	171	0	0

Note: Old stock is defined as old stock in addition to the projected typical 1.0 thousand MT of wheat storage losses per month.

Source: Ministry of Food, FPMU.

Table 2a: Projected Quantity and Age of Rice Stocks under Option 1, 1999-2000

	End Stock Rice Total	End Stock Rice > 6 months	End Stock Rice > 7months	End Stock Rice > 8months	End Stock Rice > 10months
July '99	745	62	0	0	0
August	846	92	14	0	0
September	801	88	33	0	0
October	715	88	0	0	0
November	644	255	16	0	0
December	617	320	178	0	0
January '2000	599	285	202	60	0
February	528	311	164	81	0
March	393	192	177	29	0
April	287	62	60	45	0
May	384	9	9	7	0
June	446	46	0	0	0

Note: Old stock is defined as old stock in addition to the projected typical 0.7 thousand MTs of rice storage losses per month.

Source: Ministry of Food, FPMU.

Table 3a: Projected Quantity and Age of Wheat Stocks under Option 1, 1999-2000

	End Stock Wheat Total	End Stock Wheat > 6 months	End Stock Wheat > 7months	End Stock Wheat > 8months
July '99	412	0	0	0
August	405	0	0	0
September	499	53	0	0
October	622	144	0	0
November	811	174	68	0
December	882	123	59	0
Jan '2000	814	0	0	0
February	745	0	0	0
March	591	0	0	0
April	530	0	0	0
May	450	0	0	0
June	415	124	0	0

Note: Old stock is defined as old stock in addition to the projected typical 1.0 thousand MT of wheat storage losses per month.

Source: Ministry of Food, FPMU.

Table 4: Estimated Wholesale Coarse Rice Prices under Alternative Assumptions

		Estimated National Average Wholesale Price (Tk/kg)[a]		
Aman Harvest (mn MTs)	% change in per cap demand	Own-price elasticity of rice demand -0.20	-0.25	-0.30
9.55	-2.38%	12.05	11.76	11.58
10.00	2.11%	10.78	10.79	9.96
10.50	7.11%	7.58	8.12	8.50

Assumptions:

1. Base period for calculations: 1996/97 aman season:
   (rice production = 9.55 mn MTs; price = 9.57 Tk/kg).
2. No private sector imports for December 1999 - April 2000 period.
3. Change in private stock equals 1/6 of total availability for December 1999-April 2000.
4. Inflation rate between 1996/97 and 1999/2000 (non-food CPI): 13.0%.

[a] Price estimates shown are for December 1999 through April 2000.

Notes:

The 1996/97 aman price of 9.57 Tk/kg is equivalent to 10.82 Tk/kg in expected December 1999 - April 2000 current prices.

In per capita terms, 9.55 mn MTs of aman rice production in 1996/97 is equivalent to 10.02 mn MTs of aman rice production in 17 Nov, 1999

RiceEquil10.xls

FPMU

Monthly Projection of Govt. Stock, Procurement, Import, Offtake of Rice & Wheat during 1999/2000

1 Dec 1999

('000 MT)

MONTH	OPENING STOCK			ADDITION									TOTAL ADDI-TION	OFF-TAKE																				Total OFF-TAKE	Stock net of transit deduct			
				Domestic Procurement			Import							RICE												WHEAT													
							Food Aid		Commercial		Total Import			Priced				Non-Priced								Priced					Non-Priced									
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Rice	Wheat	Rice	Wheat	Total	OMS/ FPC	DP	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Others	Total	Rice Total	OMS/ FPC	OP/FM	LEI	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Other	Total	Wheat Total		Rice	Wheat	Total	
July '99	695	504	1,199	83	2	85	0	0	0	0	0	0	0	85	0.0	0.6	10.4	11.0	0.0	5.5	0.0	0	0.0	0.4	0.3	6.3	17.3	1.2	1.2	1.0	6.6	9.9	3.9	9.2	0.0	0.0	0.0	0.2	0.0	13.3	23.3	40.5	745	412	1157	J
August	760	482	1,242	148	0	148	0	7	0	0	0	7	7	155	0.1	0.7	10.9	11.7	0.0	14.6	0.0	0	15.8	0.6	4.1	35.1	46.7	3.0	1.1	0.8	7.4	12.3	0.4	0.2	0.0	0.0	0.2	0.3	0.0	1.1	13.4	60.1	846	405	1250	A
Septem	861	475	1,335	14	0	14	1	109	0	0	1	109	110	124	0.1	0.7	10.7	11.4	1	16.2	0.0	0	22.5	1.3	0.3	47.2	58.6	2.3	1.5	0.0	6.5	10.3	0.3	0.1	0.0	0.0	0.2	1.5	1.0	3.2	13.4	72.0	801	499	1301	S
Novem	730	692	1,423	0	0	0	0	264	0	0	0	264	264	264	0.0	1.0	9.7	10.7	0	5.0	30.0	0	20.0	0.0	5.0	60.3	71.0	10.0	1.0	2.0	8.0	21.0	0.0	10.0	20.0	20.0	0.0	0.0	3.8	53.8	74.8	145.8	644	811	1455	N
Decem	659	881	1,540	50	0	50	0	186	0	0	0	186	186	236	0.0	0.0	10.2	10.2	24	4.0	33.0	0	0.0	0.0	5.1	66.1	76.3	10.0	1.0	2.0	8.0	21.0	12.0	6.0	20.0	25.0	0.0	0.0	0.2	63.2	84.2	160.5	617	912	1528	D
Janu '2000	632	982	1,613	100	0	100	0	88	0	0	0	88	88	188	0.0	0.0	10.9	10.9	50	4.0	33.0	0	0.0	0.0	4.0	91.0	101.9	10.0	1.0	2.0	9.0	22.0	60.0	0.0	6.0	25.0	0.0	0.0	2.0	93.0	115.0	216.9	614	884	1498	J
February	629	954	1,583	50	0	50	0	50	0	0	0	50	50	100	0.0	1.0	11.6	12.6	50	3.0	18.0	0	0.0	15.0	2.2	88.2	100.8	10.0	2.0	1.0	9.0	22.0	50.0	0.0	0.0	0.0	0.0	0.0	2.0	52.0	74.0	174.8	563	859	1421	F
March	578	929	1,506	0	30	30	0	0	0	0	0	0	0	30	30.0	1.0	10.6	41.6	0	0.0	0.0	0	0.0	0.0	2.0	2.0	43.6	10.0	2.0	1.0	9.0	22.0	140.0	20.0	33.0	0.0	0.0	0.0	1.0	194.0	216.0	259.6	518	672	1190	M
April	533	742	1,275	25	80	105	0	0	0	0	0	0	0	105	29.0	1.0	10.0	40.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	41.0	10.0	2.0	1.0	10.0	23.0	95.0	20.0	33.0	1.0	0.0	0.0	1.0	150.0	173.0	214.0	502	578	1079	A
May	517	648	1,164	150	23	173	0	0	0	0	0	0	0	173	40.0	1.0	10.0	51.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	52.0	0.0	1.0	1.0	10.0	12.0	35.0	20.0	33.0	0.0	0.0	0.0	2.0	90.0	102.0	154.0	599	498	1097	M
June	614	568	1,182	75	20	95	0	0	0	0	0	0	0	95	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	0.0	1.0	1.0	8.0	10.0	0.0	10.0	33.0	0.0	0.0	0.0	2.0	45.0	55.0	67.0	661	462	1123	J
Total				694	155	849	3	895	0	0	3	895	898	1747	100	9	126	234	125	64	150	3	78	20	35	474	708	70	16	14	99	199	400	120	200	71	3	2	15	811	1011	1719				
July '99 - Dec'99				294	2	296	3	757	0	0	3	757	760	1056	1	4	63	67	25	57	99	3	78	5	24	290	357	30	7	7	44	88	20	50	62	45	3	2	5	187	276	633	728	610	1338	
Jan-June 2000				400	153	553	0	138	0	0	0	138	138	691	99	5	63	167	100	7	51	0	0	15	11	184	351	40	9	7	55	111	380	70	138	26	0	0	10	624	735	1086	576	659	1235	

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FPMU

Monthly Projection of Govt. Stock, Procurement, Import, Offtake of Rice & Wheat during 1999/2000

Option 1: Additional Rice Distribution through FFE, VGF and FFW; Additional Wheat FFW and Flour Mill Sales

1 Dec 1999

('000 MT)

MONTH	OPENING STOCK			ADDITION									TOTAL ADDI-TION	OFF-TAKE																										Total OFF-TAKE	Stock net of transit deduct			
				Domestic Procurement			Import							RICE												WHEAT																		
							Food Aid		Commercial		Total Import			Priced				Non-Priced								Priced					Non-Priced														
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Rice	Wheat	Rice	Wheat	Total	OMS/ FPC	DP	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Others	Total	Rice Total	OMS/ FPC	DP/FM	LEI	EP	Total	FFW	VGD	FFE	TR	VGF	GR	Other	Total	Wheat Total		Rice	Wheat	Total
July '99	695	504	1,199	83	2	85	0	0	0	0	0	0	0	85	0.0	0.6	10.4	11.0	0.0	5.5	0.0	0	0.0	0.4	0.3	6.3	17.3	1.2	1.2	1.0	6.6	9.9	3.9	9.2	0.0	0.0	0.0	0.2	0.0	13.3	23.3	40.5	745	412	1157	J
August	760	482	1,242	148	0	148	0	7	0	0	0	7	7	155	0.1	0.7	10.9	11.7	0.0	14.6	0.0	0	15.8	0.6	4.1	35.1	46.7	3.0	1.1	0.8	7.4	12.3	0.4	0.2	0.0	0.0	0.2	0.3	0.0	1.1	13.4	60.1	846	405	1250	A
Septem	861	475	1,335	14	0	14	1	109	0	0	1	109	110	124	0.1	0.7	10.7	11.4	1	16.2	0.0	0	22.6	1.3	6.3	47.2	58.6	2.3	1.5	0.0	6.5	10.3	0.3	0.1	0.0	0.0	0.2	1.5	1.0	3.2	13.4	72.0	801	499	1301	S
October	818	565	1,383	0	0	0	2	101	0	0	2	101	103	103	0.0	0.7	10.8	12.1	0	11.3	35.7	3	10.5	2.5	3.2	74.8	87.0	3.7	1.5	0.8	7.5	14.0	3.7	24.4	21.6	0.2	2.5	0.3	0.1	52.8	66.8	153.8	715	622	1338	O
Novem	730	692	1,423	0	0	0	0	264	0	0	0	264	264	264	0.0	1.0	9.7	10.7	0	5.0	30.0	0	20.0	0.0	5.0	60.3	71.0	10.0	1.0	2.0	8.0	21.0	0.0	10.0	20.0	20.0	0.0	0.0	3.8	53.8	74.8	145.8	644	811	1455	N
Decem	659	881	1,540	50	0	50	0	186	0	0	0	186	186	236	0.0	0.0	10.2	10.2	24	4.0	33.0	0	0.0	0.0	5.1	66.1	76.3	10.0	31.0	2.0	8.0	51.0	12.0	6.0	20.0	25.0	0.0	0.0	0.2	63.2	114.2	190.5	617	882	1498	D
Janu '2000	632	952	1,583	100	0	100	0	88	0	0	0	88	88	188	0.0	0.0	10.9	10.9	85	4.0	33.0	0	0.0	0.0	4.0	106.0	116.9	10.0	41.0	2.0	9.0	62.0	60.0	0.0	6.0	25.0	0.0	0.0	2.0	93.0	155.0	271.9	599	814	1413	J
February	614	884	1,498	50	0	50	0	50	0	0	0	50	50	100	0.0	1.0	11.6	12.6	70	3.0	18.0	0	0.0	15.0	2.2	108.2	120.8	10.0	32.0	1.0	9.0	52.0	63.5	0.0	0.0	0.0	0.0	0.0	2.0	65.5	117.5	238.3	528	745	1273	F
March	543	815	1,358	0	30	30	0	0	0	0	0	0	0	30	30.0	1.0	10.6	41.6	20	0.0	25.0	0	45.0	0.0	2.0	92.0	133.6	10.0	2.0	1.0	9.0	22.0	140.0	20.0	0.0	0.0	0.0	0.0	1.0	161.0	183.0	316.6	393	591	984	M
April	408	661	1,069	25	80	105	0	0	0	0	0	0	0	105	29.0	1.0	10.0	40.0	20	0.0	25.0	0	45.0	0.0	1.0	91.0	131.0	10.0	2.0	1.0	10.0	23.0	95.0	20.0	0.0	1.0	0.0	0.0	1.0	117.0	140.0	271.0	287	530	817	A
May	302	600	902	150	23	173	0	0	0	0	0	0	0	173	40.0	1.0	10.0	51.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	52.0	0.0	1.0	1.0	10.0	12.0	35.0	20.0	33.0	0.0	0.0	0.0	2.0	90.0	102.0	154.0	384	450	834	M
June	399	520	919	75	20	95	0	0	0	0	0	0	0	95	0.0	1.0	10.0	11.0	0	0.0	0.0	0	0.0	0.0	1.0	1.0	12.0	0.0	1.0	1.0	8.0	10.0	0.0	10.0	33.0	0.0	0.0	0.0	2.0	45.0	55.0	67.0	446	415	861	J
Total				694	155	849	3	895	0	0	3	895	898	1747	100	9	126	234	200	64	200	3	168	20	35	689	923	70	116	14	99	299	414	120	134	71	3	2	15	759	1058	1982			
July '99 - Dec'99				294	2	296	3	757	0	0	3	757	760	1056	1	4	63	67	25	57	99	3	78	5	24	290	357	30	37	7	44	118	20	50	62	45	3	2	5	187	306	663	728	605	1333	
Jan-June 2000				400	153	553	0	138	0	0	0	138	138	691	99	5	63	167	175	7	101	0	90	15	11	399	566	40	79	7	55	181	394	70	72	26	0	0	10	572	753	1319	440	591	1030	
																															299												

Proposed Additional Rice Distribution through FFE, VGF and FFW

a) VGF rice: March and April, 2000; 2.5 million cards @ 18/kg/card/month = 45,000 MTs rice/month; 90.0 thousand MTs

b) FFW through WFP Flood Rehabilitation: 75,000 MTs of rice (instead of 100,000 MTs of wheat)
(Jan: 15.0 ; Feb 20.0; Mar 20.0; Apr 20.0) 75.0 thousand MTs

c) FFE swap rice for wheat at a ration of 1:1.32 in March and April, 2000 (March 25.0; April 25.0) 50.0 thousand MTs

Total additional rice distribution: 215.0 thousand MTs

Proposed Additional Wheat Distribution:

a) Sales to flour mills at 8.5 Tk/kg: 1 lakh MTs; (December 30; January 40; February 30) 100.0 thousand MTs

b) FFW through ADP project with Water Development Board: 15 crore Tk @11.15 Tk/kg = 13,453 MTs of 13.5 thousand MTs

Total additional wheat distribution 113.5 thousand MTs

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FMRSP/FPMU memo
2 December, 1999

Prospects for Additional U.S. 416b Food Aid for Bangladesh

Bumper wheat crops in the U.S. and low world prices have again raised the possibility of additional U.S. 416b food aid to Bangladesh in U.S. fiscal year 1999-2000 (October 1999 – September 2000). However, the September 1999 GOB request for an additional 2 lakh MTs of food aid was not granted. This memo outlines various considerations regarding the potential benefits and costs of again requesting additional food aid at this point.

The September 1999 Appeal for Additional Food Aid

In September 1999, the GOB requested an additional 2 lakh MTs of food aid through the US 416b program. The appeal was based essentially on two major grounds: 1) the contribution of additional food aid to total foodgrain availability, especially in light of uncertainty regarding the 1999-2000 aman rice crop; and 2) the value of food aid in providing resources that increase the access to food by the poor.

Ultimately, the request for additional food aid was denied because it appeared that foodgrain availability in Bangladesh would likely be satisfactory given projected production, other food aid, and government stocks. The GOB projections of the 1999/2000 food gap[1] in September 1999 was 1.2 million MTs, based on a net foodgrain production target of 20.16 million MTs (with an aman target of 9.5 million MTs). Note that the average annual food gap in the 1990s was 2.2 million MTs.

The September 1999 appeal also noted that projected food aid for 1999/2000 was 807,000 MTs including 300,000 MT under U.S. Agriculture Act 416B, 100,000 MTs under the WFP's EMOP and 50,000 MT from the European Union that were deferred from the 1998/99 program. Therefore, the new inflow of food aid for 1999/2000 is only 357,000 MTs. This amount is below the trend food aid over 600,000 to 700,000 MT annually that Bangladesh received in the recent past.

[1] The food gap is calculated as the difference between net foodgrain production (gross production less a ten percent allowance for seed, feed and wastage) and a target foodgrain consumption of 454 grams/person/day.

Changes in Estimates of Bangladesh Food Availability Since September 1999

Three major changes have occurred in the food availability situation since September 1999. First, the aman harvest has begun and initial production estimates suggest that the harvest will be good: perhaps 9.5 to 10.0 million MTs. Thus, the fears of serious flood damage in 1999 were not realized. Second, consistent with the good prospects for aman, rice prices have fallen somewhat, from 12.26 Tk/kg national average wholesale coarse rice price in the first week of September 1999 to 11.83 Tk/kg in the second week of November (DAM data). Finally, due largely to 5.64 lakh MTs of food aid arrivals, net wheat stocks have risen from 4.05 lakh MTs at the end of August to about 8.11 lakh MTs at the end of November. In short, **the food availability situation appears better than it was in September 1999.**

Likelihood of Additional 416b Food Aid if Requested

Given that the apparent improvement in the food availability situation in Bangladesh, the case for additional 416b food aid is weaker now than it was in September. Aman rice production is likely to meet or exceed the target, stocks are high, the government has no plans for commercial imports and market prices are low. The arguments for additional food aid to increase household access to food still stand, of course. They were not strong enough in September 1999 to make the case for additional food aid, however.

The other major determinant of food aid is the U.S. supply situation. For the October 1999 – September 2000 U.S. fiscal year, 3 million MTs of food aid are being made available, world-wide. For the 1998-99 fiscal year, 2.5 million MTs were available. So, the food aid supply situation is better this year by about 5 lakh MTs.

Another consideration should be taken into account. The risk of the GOB losing its credibility in the eyes of donors regarding needs for food aid. Donors responded to appeals for additional food aid during the 1998 flood with 1.08 million MTs for flood relief. The Bangladesh appeal for additional food aid in 1999/2000 cannot rest too strongly on the need to increase foodgrain availability in a year with a substantially better domestic production outlook.

Options

Three broad options exist:

1) Request 2 lakh MTs of wheat food aid, as in September 1999. The appeal could again be made on the usefulness of this food aid for increasing access to food by poor households. The government could request that this wheat arrive some time between June and September 2000.
2) Request a smaller amount of additional wheat food aid, perhaps only 0.5 to 1.0 lakh MTs, acknowledging that the foodgrain supply situation is better now than it was in September 1999. The major rationale for the food aid would still be to increase access to food by the poor.
3) Do not request any additional food aid, stating that the production situation has improved substantially because of a successful aman harvest.

Finally, whatever option is taken, it is imperative that the GOB solve the problem of aging foodgrain stocks satisfactorily. If substantial storage losses occur, the government risks losing its reputation for managing a well-targeted and efficient public distribution system. Donors might then be less willing to increase food aid substantially if another major flood occurs.

Table 1: Foodgrain Production in Bangladesh: 1994/95 – 1999/2000

(million MTs)

Crops	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000 (Target)
Aus	1.791	1.676	1.871	1.875	1.616	1.800
Aman	8.504	8.790	9.552	8.850	7.736	9.500
Boro	6.538	7.221	7.460	8.137	10.000 (Estimate)	9.200
Total Rice	16.833	17.687	18.883	18.861	19.352	20.500
Wheat	1.245	1.369	1.454	1.803	2.000 (Estimate)	1.900
Total Foodgrain	18.078	19.056	20.337	20.664	21.352	22.400
Net Production	16.270	17.150	18.303	18.598	19.217	20.160

FMRSP **Bangladesh**

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

International Food Policy Research Institute

The FMRSP is a 3.5 year Project of the Ministry of Food, Government of the People's Republic of Bangladesh, providing advisory services, training and research, related to food policy. The FMRSP is funded by the USAID and is being implemented by the International Food Policy Research Institute (IFPRI) in collaboration with the Food Planning and Monitoring Unit (FPMU) of the Ministry of Food, the Bangladesh Institute of Development Studies (BIDS), the University of Minnesota and International Science & Technology Institute (ISTI).

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