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Private Sector Wheat Imports

Final Report

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KRANTI ASSOCIATES LIMITED

FOREWORD

The study on the Private Sector Wheat Import is a pace-setter work on the subject. In fact, private sector import of wheat is barely two year old and it is perhaps premature to undertake an evaluation of its impact on wheat trade and industry.

The TOR of the study is very exhaustive in nature. But the time-span of three months stipulated for its execution had been evidently inadequate especially in the context of its embracing a wide range of multi-prong issues and facets required for such a study. Despite such time constraint, as many as 25 thanas were covered under which about 315 representatives of wheat growers, traders, millers (including atta chakki owners), importers, suppliers' agents and premier bakery industries have been interviewed. Besides, representatives of 26 national and international level agencies have also been interviewed to ascertain their attitude towards the prospect of private sector wheat import.

Only a very limited number of studies and literature are available on the prospects of domestic wheat production and growth of wheat market. But these were useful in making an overall pragmatic assessment. The margin of profit at different levels of wheat trade, right from the suppliers' agent upto the retailer, is of utmost importance for the growth of private sector. Mere absence of public sector import of wheat does not automatically make the prospect of private sector brighter unless the profit margin is truly attractive. But absence of a fair competition among the importers and millers because of their small number might impede the growth of private sector wheat import.

The team of resource persons acknowledges with profound appreciation and gratitude the cooperation, guidance and assistance extended by FPMU and the Functional Committee. The team is also thankful to the large number of interviewees for their sincere cooperation that had been immensely helpful for timely completion of the study.

Dr. Mahfuzul Huq
Team Leader

Acronyms

ADP	-	Annual Development Programme
BARI	-	Bangladesh Agricultural Research Institute
BBS	-	Bangladesh Bureau of Statistics
BMCFMA	-	Bangladesh Major and Compact Flour Millers Association
BRTC	-	Bangladesh Road Transport Corporation
BSC	-	Bangladesh Shipping Corporation
C&F	-	Cost and Freight
CARE	-	Cooperation for American Relief Everywhere
CCIE	-	Chief Controller of Import and Export
CFM	-	Compact Flour Mill
CIDA	-	Canadian International Development Agency
CIMMYT	-	International Maize and Wheat Improvement Centre
CSD	-	Central Storage Depot
DGF	-	Director General of Food
EEC	-	European Economic Commission
EEP	-	Export Enhancement Programme
EP	-	Essential Priority
ERP	-	Effective Rate of Protection
FAO	-	Food and Agriculture Organisation of United Nations
FFE	-	Food for Education
FFW	-	Food for Works
FM	-	Flour Mills
FPMU	-	Food Planning & Monitoring Unit
FS	-	Free Sale
FY	-	Fiscal Year
GATT	-	General Agreement on Trade and Tariff
GDP	-	Gross Domestic Product
GOB	-	Government of Bangladesh
HRS	-	Hard Red Spring
HRW	-	Hard Red Winter
IBRD	-	International Bank for Reconstruction and Development
IFPRI	-	International Food Policy Research Institute
LC	-	Letter of Credit
LSD	-	Local Supply Depot
MFM	-	Major Flour Mill
MIS	-	Management Information System
MOF	-	Ministry of Food
MMT	-	Million Metric Ton
MT/mt	-	Metric Ton
NBR	-	National Board of Revenue
NPC	-	Nominal Protection Coefficient
NRR	-	Net Reproduction Rate
OMP	-	Open Market Price

OMS	- Open Market Sale
PFDS	- Public Food Distribution System
PP	- Procurement Price
RCF	- Regional Controller of Food
RFM	- Roller Flour Mill
RMP	- Rural Maintenance Programme
Tk	- Taka
TOR	- Terms of Reference
UNCDF	- United Nations Capital Development Fund
UNDP	- United Nations Development Programme
USAID	- United States Agency for International Development
USDA	- United States Department of Agriculture
VGD	- Vulnerable Group Development
VGFP	- Vulnerable Group Feeding Programme
WFP	- World Food Programme

Glossary

Atta	- Crushed wheat/whole wheat
Atta Chakki	- Small wheat crushing machine seen everywhere in the country turning out atta
Aratdar	- A trader who may be a wholesaler or who operates stores on behalf of Bepari/wholesalers or others or sells on commission basis
Aus	- Rice planted from February to April and harvested in June to August
Boro	- Rice transplanted in December or January and harvested in April or May
B-Aman	- Rice, broadcast in March-April and harvested in Nov-Dec
Compact Wheat/Flour Mill	- Semi-automatic mill. Bigger than Roller type mill with daily output capacity of 10 tons on the average - Flour : Atta : Bran : Filter = 65 : 11 : 22 : 2
Faria/Bepari	- A Primary trader who buys from farmers on his own behalf or on behalf of Aratdars/Wholesalers in a market or from farmer
Maund	- A local unit of weight equivalent to 37.32 kg
Major Wheat/Flour Mill	- Big wheat mill running on modern techniques. Flour : Atta : Bran : Filter = 65 : 10 : 23 : 1
Roller Wheat/Flour Mill	- This is a type of wheat mill with a daily average output of 3.5 to 4.0 MT of wheat products - Flour : Atta : Bran = 68 : 16 : 16
T-Aman	- Rice planted before or during the monsoon and harvested in November or December
Thana	- Sub-district

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Executive Summary

1. *Private sector wheat import in Bangladesh practically took off in 1992-93. The study on this subject has been undertaken to review existing incentives and disincentives for wheat import by the private sector with a view to formulating policy support and extending infrastructural and other related facilities needed to enable it to efficiently handle such import in the coming years.*
2. *Import of rice, the main staple, and wheat had been the government's monopoly over the last few decades. It was also marked by an extensive Public Food Distribution System (PFDS). Wheat constituted around 87% of total foodgrain import, most of it coming as food-aid. Total annual import under commercial and food-aid categories stand at around 1.5 MMT. This quantum, coupled with the domestic production of nearly 1.1 MMT, catered to the country's wheat demand. A significant part of the domestic demand generated from the food distribution requirements (around 0.8 MMT) to support programmes like Food for Works (FFW), Vulnerable Group Development (VGD) and certain other forms of relief operations. Government imports (under food-aid and commercial purchase) also purveyed to the requirements of the flour mills and chakkis. The country's wheat market is operated by Farias/Beparis, wholesalers, Aratdars, importers, millers and chakki owners, bakers and confectioners and retailers. At present there are over 12,000 chakkis and flour mills in the country.*
3. *Recent changes in GOB's food management policy brought about substantial curtailment in the scale of PFDS operation. Decision for such reduction might ostensibly have stemmed from GOB's assessment of the need to further continue with PFDS. However, such scaling down of PFDS activities have provided a congenial environment for a larger involvement of the private sector in the foodgrain trade inclusive of imports.*
4. *Foodgrain trade has been liberalised by withdrawal of certain GOB regulations (para 1.15). In 1992-93, private sector wheat import was 335,000 MT while that of the following year was 238,821 MT. Imports by Flour Millers Association, traders and agents of foreign export houses had certain impact on domestic trade of wheat, and other actors in the area namely, the different types of flour mills including the chakki owners, wholesalers, retailers and the wheat growers. To assess the impact of private import of wheat while the Government refrained from any commercial import, both representative and purposive sample surveys had been undertaken by the Consultants. Apart from them, secondary data that could be accessed had also been analysed to assess current impact and project future private sector import requirements.*
5. *The importers had so far been doing reasonably good business although the investment for bulk-import of 25-30 thousand MT of wheat per shipment was as high*

as Tk 120-130 million (more than US \$ 3 millions). Suppliers' agents were making a profit of US\$ 1.5 per MT besides commission from their principals. Millers Association showed no profit as their policy was to import and distribute at cost on a no-profit basis. Participating millers were sharing in this cooperative import with the quantum in a wide 50-3000 MT range per shipment.

6. There had been commercial importers as well who made bulk imports. Their profit of US\$ 5-6 per MT was around 3.14% of the cost. Performance of the private importers has been commendable. Ship shortage (para 6.9) and transit losses in the private sector are significantly lower than that in the public sector. The private importers suffered little or no demurrage - rather in cases they earned despatch money for quick clearance of the ship (para 6.4).

7. The importers did not experience substantive difficulties in importing wheat. They only complained about the relatively high import duty of 15%, advance income tax of 2.5% (para 6.12), high L/C margin that sometimes go up to 20% (para 6.15), and inadequate storage facilities. However, they could sell wheat even from the mother ship and also from the port. Sale of the entire quantity of imported wheat did not usually take more than a month. Around 1.5-2 months time were required for the ship to arrive at the port after opening of L/C. Alongside this, formalities in connection with opening of L/C also took some time.

8. One group that appears to have suffered from this bulk private import is the chakki owners, numbering over 11,000 in the country. While they did not get regular supply from PFDS, they could not either lay hands on the imported wheat which was distributed mostly among the millers and wholesalers operating in major milling centres. Consequently their (chakki owners') business considerably suffered (para 5.16 - 5.20).

9. A section of the consumers appears to have undergone a new experience. When wheat was available in the retail channels or PFDS, whole wheat (atta) was available at a difference of Tk. 1.0 per kg. above wheat price. Now, the big millers are producing fine atta under brand names and the difference has increased to Tk. 3.5 per kg. This product may be considered superior to whole wheat (atta) as it is refined, well packed and has a better keeping quality and therefore, a convenient item for the consumers. These factors might explain part of the price mark-up of the brands.

10. Abolition of rationing system has now made it difficult to buy wheat in the urban areas, particularly in major cities. Therefore, the ordinary consumers do not have the choice to procure whole wheat at a relatively low cost by custom milling of wheat in the local chakkis. There might have been some loss of nutritional value in the process of switching from whole wheat to fine atta. Import of wheat at a price reduced by around US\$ 20/MT in 1993-94 did not reach the consumers in the form of lower price of wheat products. This possibly reflects an oligopolistic market structure in the wheat import trade and milling.

11. *Private import of wheat depends on the market demand for wheat and its price. Market supply/demand consists of net domestic production minus procurement by GOB + monetized PFDS + private import + 25-50% of leakages from non-monetized targeted distribution of wheat. Consumption from non-monetized targeted distribution of wheat under PFDS is excluded from the market demand. It has been found in one study that wheat consumption by non-targeted group is around 2 kg/head/ month while targeted group consumed around 5 kg/head/month.*

12. *Import is substantially influenced by population growth (urban and rural), income growth, income elasticities (urban 0.20, rural 0.13), high price elasticity of wheat (around -1.0), cross-price elasticity of wheat in terms of rice (around 1.5) etc. Private import is also influenced by the extent of food-aid received by the public sector.*

13. *High price elasticity of wheat and cross price elasticity of wheat in terms of rice explain the projected drastic fall in wheat import consequent upon implementation of the proposed GATT stipulations.*

14. *Domestic production is stagnant at around 1.1 MMT and without any major technological breakthrough, increase in production does not appear plausible in the near future.*

15. *Several scenario have been drawn with 3 alternative population growths, 5% real income growth, 25% and 50% leakages from PFDS, income elasticity, and 0.8 MMT of wheat under food-aid.*

16. *With these assumptions, private wheat import requirements vary from 890 thousand MT to (-)194 thousand MT by the year 2006 under the most favourable and worst favourable scenario respectively (para 4.79 and 4.80). However, it may be hoped that Bangladesh, as an LDC, could avoid the GATT stipulations on phasing out agricultural subsidies for some more time. This may keep import price for Bangladesh at a level low enough through concessional programmes like EEP to allow a higher extent of import.*

17. *Consequent upon the consultants' efforts of a profound scanning of the country's wheat import standing and its analyses from different viewpoints, a set of recommendations are given below reflecting on the germane issues of the study's objectives:*

- i) *Donors and GOB should enable the private sector of Bangladesh to continue wheat import under concessional terms like EEP.*
- ii) *As the minimum import of wheat in one bottom ship is 25000-30000 MT, the required investment is around Tk 130 million; it needs a substantial amount as L/C margin. So the maximum margin may preferably be fixed at 10% for the convenience of importers since any higher L/C margin will in fact be a disincentive to such private import.*

- iii) *Price of domestic wheat is lower than imported wheat, even after adjustment for quality differences and EEP concessions. Hence, 15% import duty may be reduced to 10% in 1994-95 and all the proceeds should be fully used for funding R&D on wheat. Rates for future years may be determined on the basis of the domestic and import parity price projected in the respective years.*
- iv) *The import duty on wheat should be decided in the budget session and incorporated in the 'Finance Act'; there should not be any change of the duty (after passing of the budget) through SRO which might jeopardise the profitability of private import.*
- v) *With the reduction of PFDS, the surplus godowns of the Food Department in Dhaka and Chittagong may be rented/leased/sold out to the private wheat importers. This shall help the prospective importers solve their problems of inadequate storage facilities (para 6.13).*
- vi) *Ministry of Food should maintain food security reserve and operate price stabilization measures mainly through open market sale (OMS) of paddy/rice and wheat at a price which does not offer disincentive to domestic production while not discouraging private import of wheat.*
- vii) *GOB should try to obtain food-aid of around 800,000 MT annually for the targeted programmes and counterpart generation.*
- viii) *The Food Situation Room set up in the FPMU should be provided with necessary equipment, logistics and manpower to provide effective assistance to the private sector wheat importers, specially in the field of market intelligence (para 6.30).*
- ix) *Ministry of Food should constantly monitor the performance of private sector and take appropriate steps to ensure a competitive market structure in the wheat trade and industry. The interests of the chakkis and small flour mills, particularly in respect of availability of wheat, should be monitored by MOF.*

The Study

General

1.1 In fulfilment of the Agreement with the Ministry of Food for the study on Private Sector Wheat Imports, this report has been prepared and presented by Kranti Associates Ltd.

1.2 In the context of wheat import by private sector, the government of Bangladesh felt the need to launch a study on the subject. The Ministry of Food undertook the study under USAID technical assistance grant to FPMU. Kranti Associates Ltd. was commissioned to implement the study. The study commenced as scheduled, effective from 1st April, 1994 and was completed by June 1994.

Structure of the Report

1.3 The report is divided into seven sections. **Section-1** provides the background and objectives of the study. **Section-2** deals with the review of literature. **Section-3** outlines the methodology adopted for implementation of the study. **Section-4** provides information on demand, supply and import of wheat. **Section-5** gives an analysis of comparative advantage of private sector wheat import. **Section-6** outlines the constraints and possibilities of private sector wheat import while **Section-7** provides the conclusions and recommendations drawn on the basis of findings.

Background

1.4 In Bangladesh production, marketing, distribution and import of foodgrains have been under Government intervention with different objectives :

- i) Research and extension programmes for evolving and adoption of high yielding varieties (HYV) and improved cultural practices have been actively promoted and funded by Government to reduce/eschew food deficit.
- ii) Agricultural inputs i.e. chemical fertilizers, HYV seeds, irrigation equipment, pesticides etc. were supplied by Government agency at a subsidized price.
- iii) Paddy/rice and wheat were procured by Government agency at the support price to ensure fair return to the growers to sustain the tempo of increased production.

- iv) An elaborate Public Food Distribution System (PFDS) was operated by Government to ensure food availability to all sections of the people.
- v) As a measure of price stabilization heavy stock of rice and wheat was maintained by Government supported by a network of storage facilities set up at different levels.
- vi) Government was the sole importer of foodgrains; external procurement was made by Government to meet the food deficit as well as to build up food security reserve.
- vii) Foodgrain trade was subject to myriad of regulations i.e. licensing, submission of reports and returns to Government agency, restrictions on storage, movement, bank financing etc. with the ostensible purpose of controlling the undesirable activities, especially hoarding and profiteering by the traders.

1.5 Bangladesh annually produces nearly 20 MMT of foodgrains including one MMT of wheat. Total demand for foodgrains in the country is about 19.6 MMT for 1993-94. Compared to net availability of 18 MMT the country has a deficit of around 1.5 MMT. Average annual foodgrain imports in Bangladesh for the last 13 years is about 1.72 MMT of which rice is 0.2 MMT and wheat is 1.5 MMT or about 90% of the total imported foodgrains.

1.6 Because of lower price and availability Bangladesh traditionally imported wheat under aid programme through the public sector. Table 1.1 indicates the extent of total foodgrain imports in Bangladesh. The highest volume of foodgrain imported was 2.92 MMT in 1987-88 and the lowest was 0.83 MMT in 1992-93. Correspondingly, the highest wheat import was 2.33 MMT in 1987-88 and the lowest amount was in 1992-93 at 0.81 million tons. Wheat as a percentage of total foodgrain import in the country ranged from 73% in 1984-85 to 98% in 1992-93.

Table 1.1 : Foodgrain Imports and Share of Wheat

('000' MT)

Year	Total Import			Wheat as % of Total	Wheat import	
	Rice	Wheat	Total		Aid	Commercial
1980-81	84	992	1076	92	732	260
1981-82	114	1111	1255	89	1111	0
1982-83	317	1527	1844	83	845	682
1983-84	179	1877	2056	91	1324	553
1984-85	690	1899	2589	73	1181	718
1985-86	37	1163	1200	97	1060	103
1986-87	261	1507	1768	85	1317	190
1987-88	593	2329	2922	80	1595	734
1988-89	61	2077	2138	97	1316	61
1989-90	300	1234	1534	80	908	326
1990-91	10	1567	1577	99	1530	37
1991-92	39	1525	1564	97	1375	150
1992-93	19	809	828	98	716	93

Source : Ministry of Food

1.7 The consumption of wheat has been increasing since the mid-sixties when wheat was introduced as a cereal. At the early stage wheat was popularized particularly in the rural areas by deliberate pricing and distribution policies of the government which helped in forced consumption of wheat. It is increasingly becoming popular in recent years as a convenience food both in urban and rural areas. The demand for wheat is mostly met through the PFDS the stock of which is mainly made available under different food aid programmes. Available statistics reveal that the highest volume of food aid to Bangladesh was in 1987-88 when it received 1.8 MMT of which some 90% was constituted by wheat to meet emergency due to flood.

1.8 The aided food has been the main source of GOB's food stock which the Government of Bangladesh very generously distributed for many years among various groups of people under PFDS (details shown in Appendix - 1.1 & 1.2; page 1- 8 & 1- 9). Distribution of wheat through the priced and non-priced channels has served as an incentive to the growth of wheat processing industry. At present, there are over 12,000 wheat mills (including major, compact, roller and chakkis) in the country. These outfits have, in the past, largely utilized wheat from the Government sources.

1.9 Due to the dramatic rise in food production and subsequent fall in foodgrain prices, the need for PFDS has declined. But the demand for wheat, independent of its substitutability for rice, still exists because of change in consumers' preference with income growth and urbanization, and multiple uses of wheat. The exact market demand for wheat is not firmly known since a large part of wheat imported under aid has been distributed through PFDS on account of relief including FFW and VGD involving transfer of real income to meet social want rather than effective demand. However, its estimate can be indirectly arrived at by deducting the volume so distributed from the volume of consumption at national level in a more or less normal year free from natural hazards. Thus in 1985-86 consumption of wheat per capita was 51.7 gm/day or 1.87 MMT for the country as a whole per year according to the household expenditure survey of 1985-86. In the same year 0.55 MMT were distributed through PFDS on above account. While a part of this quantity leaks into the market it can be fairly said that in 1985-86 effective demand was around 1.5 MMT against the current domestic output of 1 million ton. With income elasticity of wheat of 0.13 for rural households and 0.20 for urban households effective demand for wheat could not but have increased in recent years with GDP growth. In the long run current income transfer in the shape of relief distribution has to be replaced by income generation affecting higher demand for wheat. This process may also be affected by the rice export policy of the Government.

1.10 Bangladesh has agronomic advantages for growing wheat in certain regions; its production once peaked at 1.46 MMT in 1984 and remained more or less static around 1.0 million ton during 1989-90 to 1992-93. In 1989-90 it reached to its lowest and again marginally increased and reached to 1.17 MMT in 1992-93. (Table 1.2). This fluctuating nature of production over the last couple of years is mainly attributable to various weather and technological reasons. On the contrary, the demand for wheat has been increasing in the country as mentioned earlier. Thus, according to all plausible estimates, there will be a growing need for wheat imports provided the local

production remains static, and subsidy on wheat exports is not drastically reduced by the exporting countries.

Table 1.2 : Domestic Wheat Production

Year	Production ('000' MT)
1981-82	967
-	-
1984-85	1464
-	-
1989-90	890
1990-91	1004
1991-92	1065
1992-93	1176

Source : Ministry of Food

1.11 Another important development in the distribution of foodgrains in the country has been the rise in the price of wheat. The price of wheat in the recent years increased and atta price came to the level of rice prices. It was partly due to upward adjustments of official prices and partly due to rising demand for wheat. Between 1985-86 and 1989-90 harvest prices of wheat increased at the annual rate of 7.9 percent against 4.0 percent rise in the price of rice.

An analysis of domestic and international prices reveals that Government domestic procurement and sale prices of wheat were respectively, about 19.33% and 28.34%, higher than the international market prices for US No.1 (hard) wheat. In the recent years, the international wheat prices dropped significantly largely due to ample supplies of foodgrains adversely affecting the opportunity cost of domestic production. The comparison between domestic and international wheat prices is presented in Table-1.3.

Table 1.3 : Domestic Procurement, OMS and International Export Price of Wheat

(US\$/MT)

Year	Domestic procurement price	Government OMS price	International Export Price (FOB)	
			US No.1(hard)	US No. 1(soft)
1981-82	175.50	166.82	170	169
1984-85	167.18	177.20	148	148
1987-88	180.00	190.46	123	120
1990-91	165.00	190.37	118	112
1991-92	167.67	179.92	150	147
1992-93	160.00	190.00	144	143

Source : Ministry of Food

1.12 The GOB heavily depends on wheat imports under various aid programmes as it uses the grain for price stabilization and security stock against any impending food crises. In the backdrop of falling rice prices affecting the urgency for the stabilization

of prices and food security at aggregate level in Bangladesh, the pressure on the Government has substantially eased .

1.13 Major problems with importation of wheat through the public sector are:

- i) Government imports have proven to be more costly due to management inefficiency, higher handling and incidental cost;
- ii) Lack of timeliness in import and domestic supply/distribution due to longer lead time and time lag by the decision process; and
- iii) Problem of adjusting of aid arrivals and official purchase in case of crop failure or any other emergencies.

1.14 With the above fundamental changes and constraints on the public sector the responsibility of meeting wheat demand can be shifted to the private sector, reducing Government's budgetary cost and management anxieties when the country will come to increasingly depend on wheat imports due to foodgrain shortages, especially of wheat grain. The private sector with its relatively untapped resources will expectedly be in a better position to determine short and medium term demand and supply situation as well as the delivery systems in the country. It will also be able to respond quickly to emergent situation and mobilize its resources for timely imports and distribution of wheat in the country to meet the demand of millers and traders.

1.15 Recently, the Government has been encouraging private sector to participate in wheat trade. Various incentives include :-

- i) inclusion of wheat in OGL in import policy,
- ii) authorization of commercial banks to extend loan to the foodgrain traders and importers,
- iii) likely unloading preference in port handling and
- iv) eligibility for EEP benefit given by USDA
- v) suspension of regulations like anti-hoarding laws, restrictions on movement of foodgrains, etc.

1.16 In 1992-93 total imports of wheat by the private sector stood at 335,000 tons at a value of about US\$ 48 million. For the coming year also, the private importers are expected to fully play their role in importing wheat.

Context of the Study

1.17 For the last several years, the GOB has adopted a policy of gradually moving away from the urban based rationing system to the targeted food distribution system. This policy shift has left overall supply and price stabilization to the market forces. The Government has also sought the participation of the private sector in this regard. The processors and millers, who had been denied wheat import earlier, are allowed, since 1991-92, to import wheat on their own.

1.18 Previously too, there was a serious weakness in the Government system of allotment to relief and other channels and a large volume of relief wheat found its way illegally to mills. The opening up of the wheat trade to the private sector has ensured a fair degree of transparency and open market structure as well as improved efficiency.

1.19 Again the disposal of Government stocked grain through the usual and open market sales (OMS) was difficult even at subsidized rate. The Government disposed its stocks at higher cost than the private sector. It is expected that this situation will continue as the private sector will receive same liberal US concession, namely EEP benefits, which the GOB enjoyed in its commercial purchase.

1.20 The performance of the private sector in wheat import in 1992-93 and 1993-94 has been quite encouraging. This has slowed down offtake under PFDS indicating thereby better consumer satisfaction. However, instead of leaving the private sector free to decide on the basis of trade balance and prices in the domestic and international markets, tariff was imposed at 7.5% which was raised to 15% within a very short period of time in 1992-93. The rationale for the tariff rate has been examined later.

1.21 The expected volume of wheat import and the total resources required to meet the deficits as well as the current constraints to public sector in the importation of wheat, have also raised the need for private sector's support for resource mobilization for import of wheat and its distribution. However, the scale and importance of this major policy shift warrants a serious and detailed study to review and assess the consequent implications in the socio-economic context of the country. The major areas that are felt to be of concern are forecasting future demand for wheat particularly in the short to medium terms. This will include the assessment of domestic production potential, identifying future import need in the context of the current regulations and procedures and formulation of a package of incentives which will stimulate the private sector to participate in the relevant undertakings in a way that will lead eventually to welfare gain.

Objectives of the Study

1.22 The objectives of the study are :

- i) to estimate the gross and core requirement of wheat import by analysing production and demand;
- ii) to analyse and compare the historical world price against domestic prices of wheat and wheat products and to find the marketing margins at different stages of trading;
- iii) to review existing incentives and disincentives for wheat import by private sector and
- iv) to formulate policy for the support of wheat import by private sector.

Duration of the Study

1.23 The study period was 3 months from April 1, 1994 to June 30, 1994.

Limitations of the Study

1.24 The time period of 3 months allotted for completion of the study is considered to be too short. The field of study being comparatively new, it took time to organise the team of consultants specially in the event of sudden non-availability of the Team Leader. However, the new Team Leader was made available after about a week.

1.25 Many interviewees particularly the importers, millers and traders were reluctant to give correct reply about their business operations, specially the profit margin. So the interview took considerable time for rapport building to obtain meaningful replies. Absence of proper record keeping by the traders was also a major problem faced for prompt replies in a study such as this. Consequently computer runs of data and their analysis took longer time.

1.26 Interview of persons of national and international level agencies produced opinions often not supported by records/documents. These necessitated cross-checking of information which took more time than originally visualized.

1.27 At the outset, the focus of the study was thought to be on the problems of private wheat import. However, Functional Committee at a later stage laid emphasis on such rigorous analysis of production possibilities and consumption projection of wheat. The Committee also required the consultants to conduct extra surveys of growers in Jessore and Chuadanga and also of traders survey in Narayanganj beyond which was submitted in the Inception Report.

Appendix Table 1 : Distribution of Foodgrains Under PFDS (1981-82 to 1992-93)

('000' MT)

Year	Rice	Wheat	Total	% of Total	
				Rice	Wheat
1980-81	514	1028	1542	33	67
1981-82	772	1295	2067	37	63
1982-83	496	1439	1935	26	74
1983-84	503	1548	2051	25	75
1984-85	400	2162	2562	16	84
1985-86	372	1169	1541	24	76
1986-87	495	1625	2120	23	77
1987-88	468	2035	2503	19	81
1988-89	692	2251	2943	24	76
1989-90	675	1489	2164	31	69
1990-91	971	1401	2372	41	59
1991-92	759	1586	2345	31	69
1992-93	475	598	1073	40	60

Source : D.G. Food

Appendix Table 2 : Channel-wise Foodgrains (Rice and Wheat) Distribution under PFDS During 1988/89 -1992/93

('000' MT)

Channels	1988-89	1989-90	1990-91	1991-92	1992-93
Monetized					
i) Statutory Rationing (SR)	203	156	235	171	55
ii) Modified Rationing (MR)	333	0	0	0	0
iii) Palli Rationing (PR)	0	432	479	216	0
iv) Palli Chakki (PC)	0	111	88	88	40
v) Essential Priority (EP)	137	141	143	149	155
vi) Other Priority (OP)	423	279	207	210	15
vii) Large Employers (LEI)	40	35	41	58	13
viii) Open Market Sale (OMS)	125	47	87	274	72
ix) Market Operation (MO)	0	0	0	0	18
x) Flour Mills	255	168	282	254	87
xi) Free Sale (FS)	0	3	11	0	0
Sub-Total (i to xi) :	1516	1372	1573	1420	456
Non-Monetized					
i) Food for Work (FFW)	611	457	458	495	368
ii) Vulnerable Group Development (VGD)	506	187	215	231	133
iii) Test Relief /Gratuitous Relief (TR /GR)	309	148	125	199	116
Sub-Total (i to iii)	1426	792	798	925	617
Grand Total	2942	2164	2371	2345	1073

Source : D.G. Food

Review of Literature

2.1 In this chapter, some current and relevant reports/literature pertaining to food and agriculture sector focusing the objective of the study have been studied and their findings analysed. Private sector wheat imports, being new area, the number of relevant studies/reports is limited.

2.2 The major reports/studies/literature etc. reviewed are listed below:

- i) Bangladesh Food Policy Review : Adjustment to the Green Revolution, World Bank, February 28, 1992
- ii) Evaluating the Gains from Trade : Exporting Rice and Importing Wheat in Bangladesh, June 1991, IFPRI/Dhaka
- iii) Foodgrains and Bangladesh : Past Trends and Projection to Year 2000, Golletti and R.U. Ahmed, March, 1990
- iv) Wheat Production in Bangladesh - An Agronomic Profile, 1988 by Mustaq Ahmed et al.
- v) The Structure and Conduct of Bangladesh's Wheat Markets : Some Emerging Insights, Nuimuddin Chowdhury, August, 1993
- vi) Production and Consumption of Wheat in Bangladesh by M. Abdul Aziz, CIDA
- vii) Impact of Crop Management Research in Bangladesh, Craig A. Meisner, February, 1992, CIMMYT
- viii) Comparative Advantage of Wheat in Bangladesh : Technological, Economic and Policy Issues, Nuimuddin Chowdhury, Michael Morris and Craig Meisner, July, 1994

2.3 The World Bank in its report, Food Policy Review : Adjustment to the Green Revolution, have recommended that the growing domestic demand for wheat should be met by import. Profitability analysis for wheat indicates that only limited parts of the country are suitable for efficient production of wheat and that large scale wheat production would be costly and inefficient use of resources. Continued reliance on food aid to fulfill a large portion of wheat demand has also been recommended.

2.4 In the paper - Evaluating the Gains from Trade: Exporting Rice and Importing Wheat in Bangladesh, June 1991, IFPRI, Dhaka it was found that in the current situation of foodgrain production Bangladesh may face a problem of surplus rice at least for a temporary period forcing the country to explore foreign markets for export of rice. But export of rice from Bangladesh will become a problem and import of wheat will turn to be an irrelevant proposition under that situation.

2.5 Goletti and R. U. Ahmed in their report on Foodgrains in Bangladesh-Past Trends and Projections to year 2000 (IFPRI, March, 1990) have mentioned about the possibility of a moderate expansion in wheat production upto 1.5 million tons by 2000 but there would be a wheat deficit of about 2.2 million tons under high population growth, low production growth and high calorie scenario.

2.6 Mustaq Ahmed in his report on Wheat Production in Bangladesh - An Agronomic Profile (BARI, May, 1988) has reported that although 7.7 million acres of agricultural land are suitable for wheat cultivation all potential area cannot be brought under wheat as there are other competing crops for rabi season land use.

2.7 The report of Nuimuddin Chowdhury shows that there are thousands of wheat traders, millers (including chakki owners) and bakeries in the wheat market of the country - three fourth of which were located in four terminal markets at Dhaka, Narayanganj, Chittagong and Khulna. They were all doing thriving business. Their sources of supply of wheat were : (i) leakages off PFDS channels, (ii) DGF allotment (iii) marketed surplus of domestic production and (iv) private imports. Wheat milling was an year-round industry and not seasonal or spasmodic. There was however seasonal ebb and flow in the volume of business. Availability of domestic wheat was limited mostly to harvesting period but the imported wheat was available all the year round.

2.8 M. Abdul Aziz in his report on Production and Consumption of Wheat in Bangladesh shows that in the analysis of cropping sequence wheat does not seem to compete with Boro. In some areas where both the crops could be grown wheat cannot be competitive with Boro even if Boro price drops to a very low level. Wheat production has not been found to be sufficiently responsive to price and its price has not been kept artificially low by government distribution policy.

2.9 According to a report prepared by CIMMYT, technology has been developed in the country to substantially increase wheat yields in Bangladesh. The growers do not perceive any substantial problems with wheat production apart from shortage of cash or lack of credit facilities to purchase additional inputs.

2.10 In the report of Chowdhury, Morris and Meisner, it has been concluded that many farmers' decision to grow wheat are influenced by non-economic factors such as household food security. Wheat is mainly grown in north-western, north-central, central and south-western regions of the country where reliable irrigation services are absent for boro paddy cultivation. In areas which are unsuited for boro rice rain fed wheat is often very competitive. Should growth in rice production stabilize at a rate which will ensure national self-sufficiency, Bangladesh will continue to enjoy a comparative advantage in wheat production in non-irrigated areas in North east, north central, south central and south west and irrigated areas in south central. Should rice production increase to such an extent that the nation becomes a consistent exporter of rice the comparative advantage in wheat production will extend to irrigated areas in north-central and south west as well. That is the reason why the farmers persist in growing wheat despite frequent pronouncements by analysts that the crop is unprofitable. The above findings suggest that from the perspective of economic efficiency wheat production should be promoted most forcefully in areas

unsuited for boro production. The producer prices for wheat remain considerably below import parity-levels, possibly as the result of continuing high levels of food aid and subsidized commercial imports. Since low prices undermine financial incentives to grow wheat, increased production might be promoted through the introduction of measures designed to strengthen wheat producer prices. One effective approach might be to restrict imports of wheat aid in order to generate upward pressure on domestic prices. However, since a significant portion of imported wheat food aid is distributed to the poor, steps would have to be taken to ensure the access of poor to food. One possibility would be to request that food aid donors replace wheat with rice or other cereals.

2.11 It thus appears that conflicting views exist about the prospect of growth of domestic wheat production. With the passage of time, wheat production trends will be influenced inter alia by consumer demand, own price elasticity of wheat, cross-price elasticity of wheat in terms of rice, income and population growths. But it is apparent that the rate of growth of wheat production will not be remarkable in the near future, requiring import of wheat.

The Methodology

General

3.1 The methodology adopted for the study includes stages of desk-work, planning and design of work, sampling procedure, implementation of survey, data analysis and output generation.

3.2 The study investigated into the following major issues which directly or indirectly influenced the import of wheat by private sector :

- i) the growth in consumption of wheat;
- ii) level/limit of substitution of wheat by rice;
- iii) domestic production possibilities of wheat and its randomness;
- iv) Government role in stabilization of foodgrain market price;
- v) private sector's speculative behaviour;
- vi) Government import policies and formalities;
- vii) world price in relation to domestic price and international trade incentive structure.

3.3 Import of wheat by private sector has influencing role in domestic production behaviour of the farmers and other actors connected with wheat trade and processing like the traders, millers, chakki owners and intermediate users of wheat product such as the confectioneries, bakeries, restaurants, hotels and fast food shops where demand for wheat based food items are growing continuously. This study has addressed all these issues in an integrated fashion.

Approach to Work

3.4 To conduct the study the method of investigations was separated into three distinct stages viz, *Stage One : Desk-work, Stage Two : Field Work and Stage Three : Analysis and Reporting.*

Stage One : Desk-work

3.5 This stage involved primarily activities pertaining to planning of the work which included desk review, conceptualization of the study and its methodology for implementation, mobilization of work, programming field visits and monitoring. During this stage, the team members were engaged in the following activities :

- Establishing liaison with FPMU/MOF/IFPRI/USAID/World Bank/WFP/FAO/MOA, etc.

- Collection of different documents as appropriate and relevant to the study;
- Collection of the list of importers of wheat;
- Collection of the list of wheat millers (major, compact and roller) ;
- Refinement and modification of different questionnaires for collection of information and data from the field and other secondary sources;
- Collection of literature for review;
- Determining the nature of interview of the various agencies directly or indirectly connected with wheat imports and their movement, storage and distribution;
- Monitoring/reporting system of the study;
- Preparation of inception report; and
- Planning of the field survey and conducting interviews.

3.6 Structured questionnaires listed below for interviewing wheat growers, traders, millers, atta chakki owners and private importers were used. Besides, checklists were also used to interview the officials in the government, autonomous bodies, national and international organizations. The names of national and international organizations/agencies/individuals interviewed are shown in Annex-II.

Instrument - I	:	Questionnaire for interviewing growers
Instrument - II	:	Questionnaire for interviewing traders
Instrument - III	:	Questionnaire for interviewing millers
Instrument - IV	:	Questionnaire for interviewing chakki owners
Instrument - V	:	Questionnaire for interviewing private importers

Copies of the structured questionnaires are given in Annex-III.

Stage Two : Field Work

3.7 In this stage the following field works were undertaken for the survey and evaluation :

- Selection and training of field staff
- Reconnaissance field trips for testing the questionnaires
- Revision and codification of the questionnaires
- Listing of Field Staff
- Listing of sampled importers, traders, millers, chakki owners and growers
- Mobilization of Field Staff
- Collection of data/information through questionnaires and checklists
- Interview of high level officials.

3.8 The field investigators went to the project/survey areas and carried out their assignments under close and continued supervision of the Key Supervisors/Team Members. Senior officials, policy makers and importers were interviewed by the consultants.

Stage Three : Analysis and Reporting

3.9 This stage included intensive desk-work involving the data coding/entry, processing, synthesis and analysis using computer software and presentation in appropriate format for use in the report. The primary data generated by the field survey were processed and eventually analyzed by using relevant scientific methods to prepare a data base for facilitating evaluation at any point of time and finalization of all the reports.

Approach of Analysis

General

3.10 The methods of investigation followed in the study were based on collection of secondary documents and data, consultation with the relevant government officials and the food aid donors and collection of the primary data through questionnaires. Macro as well as micro analysis and the synthesis of macro-micro relationships have been carried out. Most of the macro analysis and some of the micro analysis have been done with secondary data. Some of the micro analysis have been made with primary data.

Production of Wheat in Bangladesh

3.11 Production of wheat in Bangladesh is around 1 million tons. The agronomic, physical, climatic, technological and economic constraints responsible, if any, for stagnation in the growth of wheat production have been examined. The analysis was carried out mostly through secondary data and examination of different studies that were carried out in the past in this respect by the Ministry of Agriculture, International Food Policy Research Institute (IFPRI), CIDA, CIMMYT etc. The analysis has been supplemented by the results obtained from the grower survey in selected locations of wheat production.

Consumption of Wheat in Bangladesh

3.12 Consumption of wheat in Bangladesh has two components: market demand and non-market/non-monetized demand. The market demand component is influenced by the relative price of wheat with respect to rice and gradual inclusion of wheat in the consumption basket of Bangladesh. The non-market demand of wheat is created through policy variables of targeted distribution of wheat. This wheat is geared to satisfying "social want". An analysis of consumption has been made through secondary data and consultation with different studies conducted in this

field. Discussions were held with different government organizations and food aid donors regarding their policy changes on targeted distribution and commodity composition. It has been felt that mere projection of wheat consumption through income-elasticity of demand for wheat would not be fully appropriate for this analysis. In addition to income-elasticity, the social want aspect will have to be built into the analysis. These facets of the analysis might tend to make the study in this segment somewhat theoretical and tentative. But these considerations could not be avoided.

Public Sector Import of Wheat

3.13 Public sector import of wheat has several considerations. Filling the food-gap with food-aid for price stabilization used to be the principal aim, which has now been somewhat relegated with emerging self-sufficiency in the main staple, rice. However, targeted distribution for the VGD, FFW and newly introduced Food for Education (FFE) requires importation of wheat under food-aid.

Private Sector Import of Wheat

3.14 Import of wheat by the private sector is a recent phenomenon. This study searched to find ways and means to facilitate the importation of wheat by the private sector. Recent import of wheat by the private sector has been mostly made under the programme like Export Enhancement Program (EEP) of the exporting countries. Under the programme the importer got favourable price terms. In view of recent GATT agreement it was examined whether Bangladeshi importer would continue to get such favourable price benefit. Impact of the GATT agreement on the import price of wheat has been analysed to see its effect on domestic production and price, and possibility and extent of substitution of wheat by rice.

3.15 Analysis of domestic and international price behaviour of wheat : An analysis of domestic and international price behaviour of wheat has been made. Impact of non-monetized distribution of wheat on the domestic price of wheat has also been assessed which provided some insights on the profitability of private sector import of wheat.

3.16 The issues discussed under private sector : Import of wheat by the private sector being recent phenomenon, promoted in line with policy of market economy being pursued by the Government of Bangladesh, the following questions were raised to analyse the issues relevant for its proper functioning:

- i) who are the private sector importers ?
- ii) how much are they importing ?
- iii) when are they importing ?
- iv) from where are they importing
- v) when are they selling ?
- vi) who they are selling to ?
- vii) what time does it take to sell the imported wheat ?

- viii) are the existing import formalities and import duty impeding wheat import by the private sector ?
- ix) Is there any need of storage by the private sector for importing wheat ?
- x) is there any need for their institutional support ?
- xi) what steps are needed for development of the full potentials of the private sector in the import of wheat ?

Interview of National/International Organizations/Agencies/Individuals Covered

3.17 Under this category, the consultants interviewed a large number of organizations and individuals concerned with wheat production, trade and imports. A list containing the names of the respondents is provided in Annex-II.

Sampling of the Respondents

I. Wheat Importers

3.18 Study and analysis of the above questions (para 3.16) needed collection of the list of importers. Of the total about 20 importers¹, 50% were interviewed with structured questionnaire and/or with checklist. Most of the importers were found in Dhaka and Chittagong. Table 3.1 shows the sample size of importers by division.

Table 3.1 : Number of Importers Interviewed

	Dhaka	Chittagong	Rajshahi	Total
Importers	7	2	1	10

3.19 In this connection, questions were also asked about infrastructure facilities like port handling, storage, movement and marketing facilities available for the private sector in the country.

3.20 Port facilities at Chittagong and Mongla were critically examined in terms of access to the required unloading logistics and storage facilities. Within the hinterlands of the two ports (or in two regions), the prospective wheat wholesale buyers, millers and processors were interviewed. Framed interview schedule and formats were designed for this purpose. Unloading, lightering, vaccubating, stevedoring, draft survey, warehouse facilities were also studied. The examinations included comparative advantage of and access to public and private uses, cost, duration and overall environment for private users.

3.21 Concerned persons in the port office, customs department, shipping office, inspection office, carrying contractors, bay crossing barges, stevedore associations, contractors, loading & unloading agents, coolie agents were also interviewed.

¹ The term 'importer' includes purely importer, importer-cum-miller, importer-cum-wholesaler and importer-cum-miller-wholesaler.

Institutional Support

3.22 Investigation in all relevant places and institutions were carried out to identify disincentives and bottlenecks which might deter the private sector importers in the fields like,

- i) Foreign exchange availability and LC opening;
- ii) Performance guarantee;
- iii) Negotiations with overseas and local sellers/agents;
- iv) Availability and timely hiring of ships - difficulties in mutual agreements under national and international maritime laws;
- v) Eligibility for concessional rate of EEP benefit (usually provided by USDA);
- vi) Anchorage and berthing facility, lighterage and port space facility, vaccubator facility, crane availability, clearance facilities, inspection, quality control certificate, quarantine (phyto sanitary) certificate;
- vii) Access to institutional credit facilities.

II. Wheat/Flour Millers

3.23 As the major users, wheat mills are expected to play the most important role in the private sector import of wheat either directly importing wheat on their own account individually or in groups or through their association, or using the services of commercial importers who may not own any mill. It is therefore essential to ascertain from wheat mills the sources of their supply of wheat to their mills or whether they are importing their own requirement of wheat. If the millers are not importing themselves, it is desirable to ascertain their present relationship with the commercial importers and the prospect of private sector import ensuring adequate supply of quality wheat according to their requirement and at a reasonable price.

3.24 In Bangladesh there are over 700 wheat mills consisting of 445 roller mills, 196 compact mills, 53 major mills, and a few roller and major, and roller and compact mills. As shown in the glossary, these mills differ in the products or proportion of products turned out by them. It is, therefore, necessary to cover all types of wheat mills to ascertain their comparative profitability. The profit margin enjoyed by them would be of interest to the policy makers who have the welfare of consumers in mind.

3.25 Lists of wheat mills were obtained from the Divisional Offices of DGF. Samples were drawn from each division to capture regional dimension.

3.26 In all, 53 samples of different types of mills were studied, consisting of 22 roller mills (5% sample), 13 compact mills (7% sample), 16 major mills (about one-third of total number) and 2 R³ and major mills. Larger samples of major mills have been covered because of their smaller number and greater importance. In all cases a

structured questionnaire was used to collect information on their operational characteristics, profit margin, problems in conducting the business and the impact of privatisation of wheat import. Divisionwise distribution of the sample mills is shown in Table 3.2.

Table 3.2 : Distribution of sample wheat mills covered under the study

Division	Type of Mills				Total
	Major	Compact	Roller	R ³ and Major	
Dhaka	3	6	6	-	15
Chittagong	2	2	5	-	9
Rajshahi	6	3	7	2	18
Khulna	3	2	-	-	5
Barisal	2	-	4	-	6
Total	16	13	22	2	53

III. Wheat Traders

3.27 In all, 57 wheat traders were interviewed as per structured questionnaire under the study. These respondents were from wholesale markets cum milling centres viz Dhaka, Narayanganj, Chittagong and Khulna and assembly markets in the wheat growing areas of greater Jessore, Kushtia, Pabna, Rajshahi, Rangpur, Dinajpur, Mymensingh and Comilla districts. The samples were selected on purposive basis. Out of 57 respondents 17 were wholesalers and 40 were Faria/Beparis.

Confectionery and Bakers

3.28 Case studies were made of two premier confectioneries and bakeries (Haque & Nabisco) selected on a purposive basis to see how they received flour and atta supplies over the years and if private import of wheat was making any difference to their availability of wheat flour or atta.

IV. Chakki Owners

3.29 With targeted distribution of wheat chakkis grew up all over the country, presently numbering over 11,000. A multi-stage random sample of the chakkis was taken. Two districts from each division, 2 thanas from each district were selected. The investigators prepared a list of the chakkis in each thana and drew a random sample of 3 chakki owners from each thana. Thus there were 60 chakkis selected for interview with a structured questionnaire. The chakki owners are intimately

connected with availability of wheat, both domestic and imported. Therefore their reactions to wheat import have also been assessed.

3.30 Names of sample districts and Thanas and the number of chakkis covered under the study are shown in Table 3.3.

Table 3.3 : List of Sample Districts and Thanas for Chakkis

Division	District	Thana	Sample Size
Dhaka	Dhaka	City (2 thanas)	6
		Jamalpur	3
		Melandah	3
	Sub-total		
Chittagong	Chittagong	Roujan	3
		Panchlaish	3
		Comilla	3
	Comilla	Kotowali	3
		Muradnagar	3
Sub-total			12
Rajshahi	Dinajpur	Kotwali	3
		Hakimpur	3
		Serajgonj	3
	Serajgonj	Kamarkhanda	3
		Shahjadpur	3
Sub-total			12
Khulna	Jessore	Jhikargacha	3
		Navaron	3
		Kushtia	3
	Kushtia	Bheramara	3
		Daulatpur	3
Sub-total			12
Barisal	Barisal	Kotwali	3
		Gournadi	3
		Patuakhali	3
	Patuakhali	Patuakhali	3
		Amtali	3
Sub-total			12
Grand-total			60

V. Wheat Growers

3.31 The possibility of wheat production was tested under this study. In this context, a census of wheat growing farmers was first made in 3 villages in the districts of Rangpur, Naogaon and Rajshahi; Porsha of Naogaon was selected to see decision making process of a marginal wheat growing area. However, in the meeting of the Functional Committee on the Bi-monthly Progress Report decision was taken to cover

two more villages in two intensive wheat growing districts namely Chuadanga and Jessore. The final sample size by district is shown in Table 3.4; in all 140 growers were covered under the study in 5 districts. The census ensured that wheat growers of different land ownership characteristics (i.e. large, medium and small), nature of irrigation (i.e. wheat cultivation under irrigation and without irrigation) have been covered. These sample villages have been selected in consistence with the objective of the study, and in consultation with the District and Thana Agriculture Officers. The data collected through this survey highlighted on their production decision, disposal pattern and marketing behaviour.

Table 3.4 : List of Sample Districts/Thanas /Villages for Wheat Growers

District	Thana	Village	Sample Size
Rangpur	Pirganj	Pirgacha	25
Rajshahi	Putia	Kanaipara	20
Naogaon	Porsha	Palashbari	15
Chuadanga	Damurhuda	Shyampur	42
Jessore	Sharsha	Porabari	38
Total			140

Implementation of the Survey

General

3.32 Consistent with the requirements of the TOR, interviews were held with the national level importers, millers, chakki owners, traders and growers. Persons of appropriate background and experience were employed to hold the interviews at various levels. The senior consultants provided the needed guidance and leadership to elicit appropriate and authentic responses. The team leader and other senior consultants also held interview at the national level, where required.

Field Reconnaissance

3.33 In order to devise appropriate approach to the survey, a field reconnaissance was conducted on 25th and 26th of April, 1994 at the wheat market at Moulvi Bazar, Dhaka and Savar Bazar. Traders and wheat millers were consulted at Moulvi Bazar, Dhaka while at Savar, the consultants held discussion with wheat traders and chakki owners.

Review and Pre-testing of the Questionnaire for Refinement

3.34 During the reconnaissance survey, the senior consultants of the Kranti Associates Ltd. conducted the interview by using the questionnaires provided in the technical proposal. Based on the field experience, the consultants made necessary modifications/amendments in the questionnaires.

Selection of Investigators and Supervisors

3.35 Based on experience of field reconnaissance, it was felt that this survey could be adequately implemented by 15 field investigators under the supervision of 5 Supervisors. The investigators were engaged to undertake the field survey while their work were closely supervised by the supervisors. The supervisors kept themselves in touch with the senior consultants to report the progress of the survey.

Training of Supervisors/Investigators

3.36 The training of the Supervisors/Investigators had been organized in the last week of April, 1994. The training programme included :

- i) details of the objectives of the millers, traders, growers and chakki owner survey;
- ii) purpose and scope of the survey along with the importance of the work, the function to be performed and the way the survey will be conducted;
- iii) definition of survey terms, terminology, coding and recording system;
- iv) data requirement; types of data required and to be collected, the important relationship among data items and constitution of complete data;
- v) job and responsibility of the supervisors and investigators; and
- vi) orientation to the location of survey area.

3.37 The supervisors and investigators were informed about the scope of the questionnaire designed for the national level importers with a view to enlightening them of the scope of the survey. However, it was understood that senior level consultants will interview the national level importers.

3.38 Trainers both from government and non-government organizations who have exposure to food management and agro-economic surveys had been engaged to impart training in addition to the resource staff of Kranti Associates Ltd. The investigators and supervisors were taken to Moulvi Bazar (Dhaka) and Savar Bazar.

Supervision and Data Collection

3.39 The questionnaires designed for the study had been again modified in accordance with the advice of the Functional Committee. The investigators and supervisors had been deployed for field survey immediately after the acceptance of the inception report. The work simultaneously started in all the areas. The grower survey had been coordinated with the Block Supervisors.

3.40 During the field data collection, investigators had been supervised intensively by the Supervisors with a view to :

- i) ensuring that the investigators were actually doing their work properly,
- ii) assisting in handling and solving problem, and

- iii) ensuring that the investigator's relationship with the respondents was good and cordial so that the quality data could be collected.

3.41 Supervisors collected the completed questionnaires from the field and checked for their consistency and correctness and then sent them to the Head Office weekly for perusal and checked by the consultants and subsequent entry into the computer.

Data Processing and Analysis

General

3.42 Collected data had been organized, processed, analyzed and consolidated at programme level. Finally, data have been presented in the report in a synthetic form.

Quality Control

3.43 The consultants intended to ensure the use of quality data. To achieve this objective, entry of data had been controlled in a manner to prevent undesirable intrusion. To achieve this, the computer input programming have been appropriately designed. This method has also been supplemented by manual scrutiny/editing of the print outs of the computers. This combined method of cross checking ensured use of quality data.

Establishment of a Data Base

3.44 The survey included such areas as production, disposal and marketing decisions of growers, the marketing behaviour of the importers and traders and the sources of supply to the millers/ chakkis and their processing and marketing behaviour.

3.45 Keeping this objectives in mind, the consultant used Microsoft word for inventorization and dBase IV programming language for the analysis required for the evaluation of services.

3.46 Surveyed data have been stored (i.e. data base) for quick and diversified statistical analysis and for future use. The databases would be stored permanently and some index files would be created and stored for sorting databases according to different important parameters.

3.47 Some of the questions in the questionnaire were open-ended. These were codified later on the basis of replies for smooth entry into the computer programme. Following the completion of coding the data were processed.

Output Generation

3.48 This phase covered the activities like printing output, previously designed and developed according to important parameters. Some of the important outputs have been stored for future application and could be provided on request.

Meeting with FPMU

3.49 As the FPMU, M/O Food has been the key point of interaction, several meetings between the consultants and the relevant officials of FPMU were arranged in order to

- (i) have proper guideline and resolution of the problems faced by the consultants,
- (ii) share the experiences,
- (iii) monitor the progress of the work and
- (iv) seek necessary advice.

Output

3.50 In accordance with the provision of the TOR and subject to the observations in the preceding paragraphs, the project output were :

- a. Estimation of demand and supply of wheat in short and long runs identifying the amount of wheat to be imported.
- b. Comparison of the historical world price and domestic market price of wheat and wheat products focusing the profit margin of Importers, Millers and Traders.
- c. Identification of disincentives and the bottlenecks of private sector wheat imports and suggestions for measures to remove such disincentives.
- d. List of incentives provided by the wheat exporting countries and international principals of wheat trade.
- e. Policy implementation needed to rationalize the private and public sector wheat imports.

Demand-Supply Balance and Projection of Private Sector Import of Wheat in Bangladesh

4.1 Consumption of wheat in Bangladesh consists of 2 parts, i.e. one satisfying market demand and the other satisfying non-market demand.

Market Demand

4.2 Market Demand has 3 components, i.e.

- i) highly subsidized market demand;
- ii) non-subsidized public distribution demand and
- iii) complete free market demand.

4.3 The above, except highly subsidized market, is governed mostly by the forces of supply and demand, though price in the second market is mostly pre-determined by GOB.

Non-Market Demand

4.4 Supply for the non-market demand is targeted to the poor and the vulnerable. A part of it is given as wage or remuneration to the unskilled worker, both male and female, in exchange of work (Food For Works Programme, FFW). Another part is given to the poor and the needy under vulnerable Group Development (VGD) programme. These people would not consume the amount of wheat they are consuming under the programmes if they had the freedom to do so through alternative income earnings.¹

A. MARKET SUPPLY OF WHEAT

4.5 Market Supply of wheat comes from :

- Net domestic production minus domestic procurement
- Monetized distribution of PFDS
- Private import
- Leakages from non-monetized distribution.

4.6 Domestic production is estimated to remain at 1.1 MMT with net availability of around 1.0 MMT upto the end of the century. It is apparent that domestic procurement of wheat by the GOB does not significantly change market supply of

¹ Akhtar Ahmed in his report on Food Consumption and Nutritional Effects of Targeted Food Interventions in Bangladesh (June 1993), has shown that the VGD beneficiaries consume 5.1 kg wheat per month per head against non-VGD consumers who consume 2.0 kg/month per head.

wheat. Monetized public distribution of wheat is gradually declining with the reforms in PFDS (Col 6. Table 4.1). Nevertheless, there may remain the EP and the OMS in the monetized distribution of PFDS.

Table 4.1 : Sources of Market Supply and Consumption of Wheat

(000 MT)

Year	Production	Net Prodn ²	Domestic Procurement	Domestic Supply	Distribution Monetized	Distribution Non-monetized	Private Import	Total Supply ³	Population (MIL)	Per Capita Wheat (Kg)
1	2	3	4	5	6	7	8	9	10	11
1972-73	91.44	82.00	0.00	82.00	2411.00	207.00	0.00	2545.05	74.26	34.27
1973-74	110.75	100.00	0.00	99.68	1676.00	52.00	0.00	1788.68	76.06	23.52
1974-75	117.00	105.30	0.00	105.30	1595.00	161.00	0.00	1741.55	77.88	22.36
1975-76	218.00	196.20	7.00	189.20	1443.00	226.00	0.00	1688.70	79.75	21.17
1976-77	259.00	233.10	3.00	230.10	1274.00	199.00	0.00	1553.85	81.65	19.03
1977-78	348.00	313.20	11.00	302.20	1562.00	285.00	0.00	1935.45	83.57	23.16
1978-79	394.00	354.60	51.00	303.60	1535.00	261.00	0.00	1903.85	85.52	22.26
1979-80	823.00	740.70	126.00	614.70	1905.00	497.00	0.00	2643.95	87.50	30.22
1980-81	1093.00	983.70	176.00	808.00	692.00	339.00	0.00	1584.45	89.52	17.70
1981-82	967.00	870.30	13.00	857.00	930.00	528.00	0.00	1879.05	91.60	20.51
1982-83	1095.00	985.50	24.00	962.00	952.00	906.00	0.00	2035.75	93.50	21.77
1983-84	1212.00	1090.80	121.00	970.00	1020.00	550.00	0.00	2121.80	95.50	22.22
1984-85	1464.00	1317.60	215.00	1103.00	1267.00	688.00	0.00	2596.10	97.60	26.60
1985-86	1042.00	937.80	130.00	808.00	618.00	1097.00	0.00	1563.30	99.60	15.70
1986-87	1091.00	981.90	51.00	931.00	936.00	1256.00	0.00	2038.90	101.50	20.09
1987-88	1048.00	943.20	87.00	856.00	939.00	688.00	0.00	2069.45	103.40	20.01
1988-89	1022.00	919.80	52.00	868.00	993.00	1256.00	0.00	2174.80	105.50	20.61
1989-90	890.00	801.00	42.00	759.00	802.00	688.00	0.00	1733.00	107.50	16.12
1990-91	1004.00	903.60	56.00	848.00	796.00	604.00	0.00	1794.60	109.60	16.37
1991-92	1065.00	958.50	77.00	882.00	752.00	834.00	0.00	1842.00	111.60	16.51
1992-93	1176.00	1058.40	0.00	1058.00	345.00	253.00	335.00	1801.25	113.60	15.86

² Net production has been arrived at by deducting 10% for seed, wastage and losses.

³ Net production - domestic procurement + monetized PFDS + 0.25Xnon-monetized distribution + private import

4.7 Table 4.1 shows the sources of supply of wheat in Bangladesh from 1972-73 to 1992-93. The table shows in the last column that per capita market supply of wheat has been declining since 1988-89.

4.8 **Leakage from PFDS :** A portion of non-monetized food distribution is leaked into the market. There are various estimates of such leakages. Vulnerable Group Development Programme leakage is estimated by World Food Programme (WFP) at about 8% and by International Food Policy Research Institute (IFPRI) at about 14%. The estimate of leakage in the CARE-run FFW projects is 36% consisting of 26% due to under-completion and 10% for under-payment of workers. WFP's estimate of leakage in the FFW projects run by it is about 15%, while BIDS/IFPRI estimate is about 28% consisting of 7% for under-completion and 21% for underpayment of workers. Weighted average estimate of leakage over time would therefore vary with the change of weightage of these two programmes in total non-monetized distribution but centers around 25%. (There are other assumptions of leakage of non-monetized distribution of over 50%).

4.9 Private import is fast assuming an important role in the supply of marketed wheat in the country. The reasons are as follows :

- i) GOB used to supply wheat to the flour mills from the PFDS. Since 1988, GOB was encouraging the flour millers to import wheat. GOB has been reducing supply of wheat to flour mills as a general policy of containing PFDS and encouraging private participation in wheat import.
- ii) In 1992-93, private sector import first took place. A quantity of 335,000 MT was imported by the private sector. Meanwhile, GOB also is restraining from importing wheat on commercial basis.
- iii) Wheat has already established a place in the consumption basket of the households. As monetized distribution from PFDS is gradually phasing out, the role of private sector import to meet the supply-demand gap is increasingly assuming importance.

The effect of selling of food-aid at the port of entry and replacement of kind-based non-monetized programme by cash-based programme

4.10 Food-aid comes both for monetized and non-monetized distribution. If food-aid designated for monetized distribution is sold at the port, it is likely to increase private trade in wheat. However, GOB's storage and distribution profile over the year could have a better stabilizing effect on the seasonal markets. This seasonality characteristics may be somewhat disturbed unless the import and sale of food-aid are properly planned.

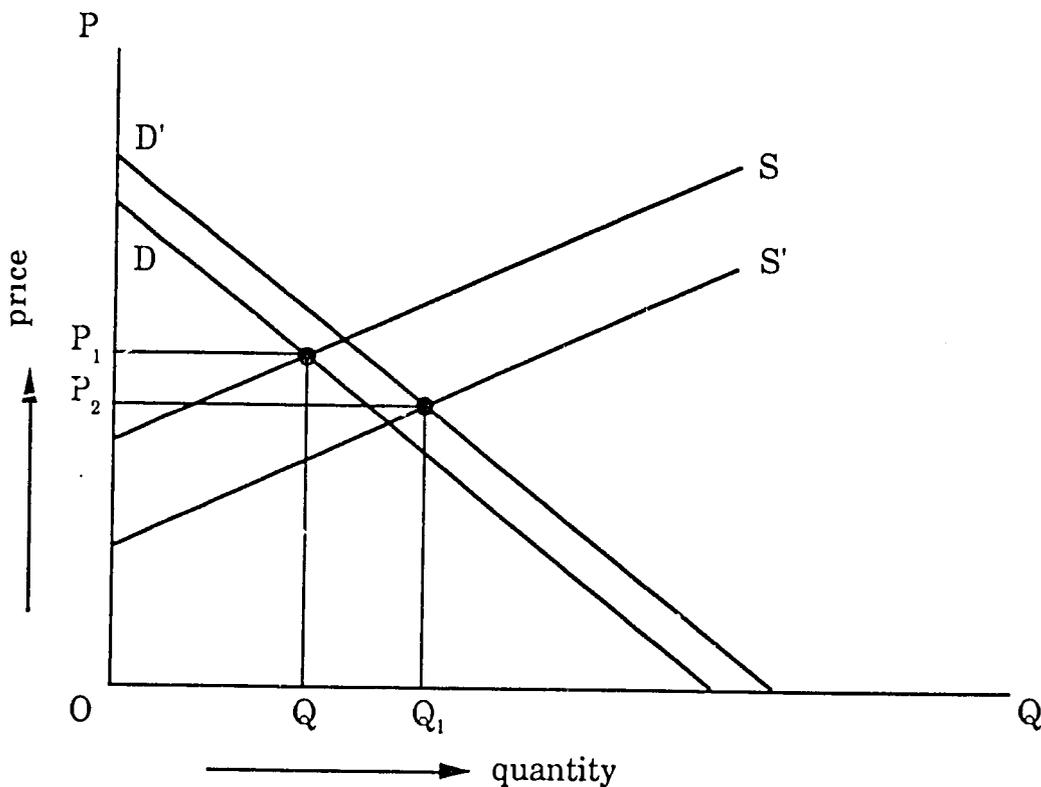
4.11 Currently, there is a thinking on replacing the kind-based programme by selling the food aid at the port of entry to the private sector. This will have dual effect.

Selling of wheat designed for non-monetized distribution at the port and replacing non-monetized distribution by cash distribution will create some complexities.

4.12 Main complexities may be as follows :

The supply curve will shift towards right to the extent of the wheat sold. The demand curve will shift upward to the right. Here it should be noted that these "former non-market forced consumers of wheat", under new consumer freedom would consume less wheat than they would have consumed earlier. The recipient of the former non-monetized programme will although consume less wheat yet register a market demand for more wheat. Ahmed (1993) has shown that per capita consumption of recipients of VGD wheat is 5.10 kg/month while non-VGD consumption is only 2.00 kg/month. Exact fall in consumption may not be precisely ascertained without empirical evidence.

Figure 4.1 : Market Supply-Demand Scenario Under Cash For Work Situation



4.13 Cash based programme, therefore, will lead to increase in the market demand for wheat but not to the extent of the supply of wheat. Thus, there will be a fall in the price of wheat from P_1 to P_2 in the diagram above. Therefore, the profitability of import of wheat is likely to be affected. To ensure unchanged private sector profitability, the private import will have to be reduced, other things remaining the same.

Production Possibilities of Wheat

4.14 Significant wheat production in Bangladesh started from the mid-seventies with the introduction of high yielding variety (HYV) of wheat. Before that, local variety of wheat was grown in the country which almost made no mark on foodgrain supply.

4.15 Wheat production grew at the rate of 27% per annum between 1973-74 and 1984-85. It, of course, started from a low base of 0.1 MMT and increased to 1.4 MMT just for one year, 1984-85. After 1984-85, production fell to 1.1 MMT and remained static there. Table-4.2 shows these developments.

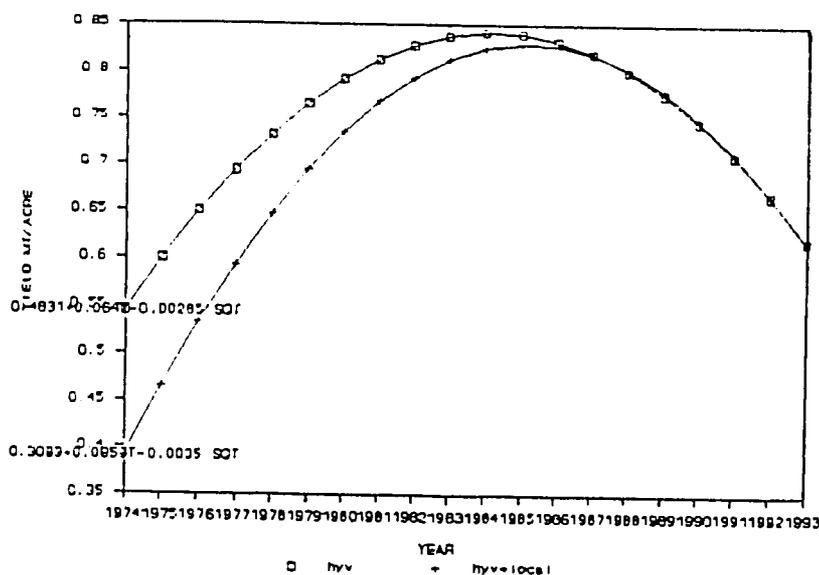
Table 4.2 : Area, Production and Yield of Wheat by Variety (Area in thousand Acres, Production in Thousand Tons, Yield in Ton/Acre)

Year	Area			Production			Yield		
	Local	HYV	Total	Local	HYV	Total	Local	HYV	Average
1973-74	233	72	305	68	24	109	0.29	0.57	0.36
1974-75	230	82	312	68	47	115	0.30	0.57	0.37
1975-76	153	218	371	45	170	215	0.29	0.78	0.58
1976-77	108	288	396	30	228	258	0.28	0.79	0.65
1977-78	78	389	467	23	325	348	0.29	0.84	0.75
1978-79	71	583	654	20	473	493	0.28	0.80	0.75
1979-80	55	1015	1070	18	803	821	0.33	0.79	0.77
1980-81	49	1412	1461	15	1077	1092	0.31	0.76	0.75
1981-82	43	1276	1319	14	953	967	0.33	0.75	0.73
1982-83	52	1231	1285	20	1075	1096	0.38	0.87	0.85
1983-84	47	1253	1300	18	1174	1192	0.38	0.94	0.92
1984-85	49	1622	1671	18	1444	1462	0.37	0.89	0.87
1985-86	44	1291	1291	18	1024	1042	0.41	0.79	0.87
1986-87		1445	1445		1091	1091		0.76	0.76
1987-88		1476	1476		1048	1048		0.71	0.71
1988-89		1384	1384		1021	1021		0.74	0.74
1989-90		1463	1463		879	879		0.60	0.60
1990-91		1480	1480		1004	1004		0.68	0.68
1991-92		1419	1419		1065	1065		0.75	0.75
1992-93		1574	1574		1176	1176		0.75	0.75

Source : BBS, Year Book of Agricultural Statistics of Bangladesh (various issues) and Monthly Statistical Bulletin (various issues)

4.16 The production of wheat of 1.40 MMT in 1984-85 can be treated as an outlier because wheat production of preceding two years was 1.1 MMT which was also true for the subsequent years. Thus, barring aside 1984-85, wheat area, production and yield fluctuated marginally around a stable mean. HYV wheat area remained almost unchanged. The contribution of local wheat just ceased to exist since 1985-86. During the last two decades, the yield curve of wheat in Bangladesh has taken an inverted V-shape (Figure 4.2). Out of 13 years since 1980-81, in 12 years production remained around 1.0-1.1 MMT.

Figure -4.2 : Smoothened Yield Curve of Wheat



Source : Aziz, M.A. - Production and Consumption of Wheat in Bangladesh

4.17 Since the mid-80s, it has been observed that when area under wheat increased, yield almost often declined. The question that naturally crops up here is how to increase yield, area and production of wheat.

Growers' Response to Wheat Production

4.18 A detailed questionnaire was administered on wheat growers in 5 districts. The main findings shown in Appendix-4.1 reveal that wheat cultivation is sufficiently market oriented. Around 60% of the production is sold, keeping 40% for consumption and seed; of the marketed amount, two-thirds are sold to Farias and Beparis and one-third to Aratdars and Wholesalers who are relatively bigwigs in the market. Irrigation and HYV seeds are almost universally used in wheat cultivation.

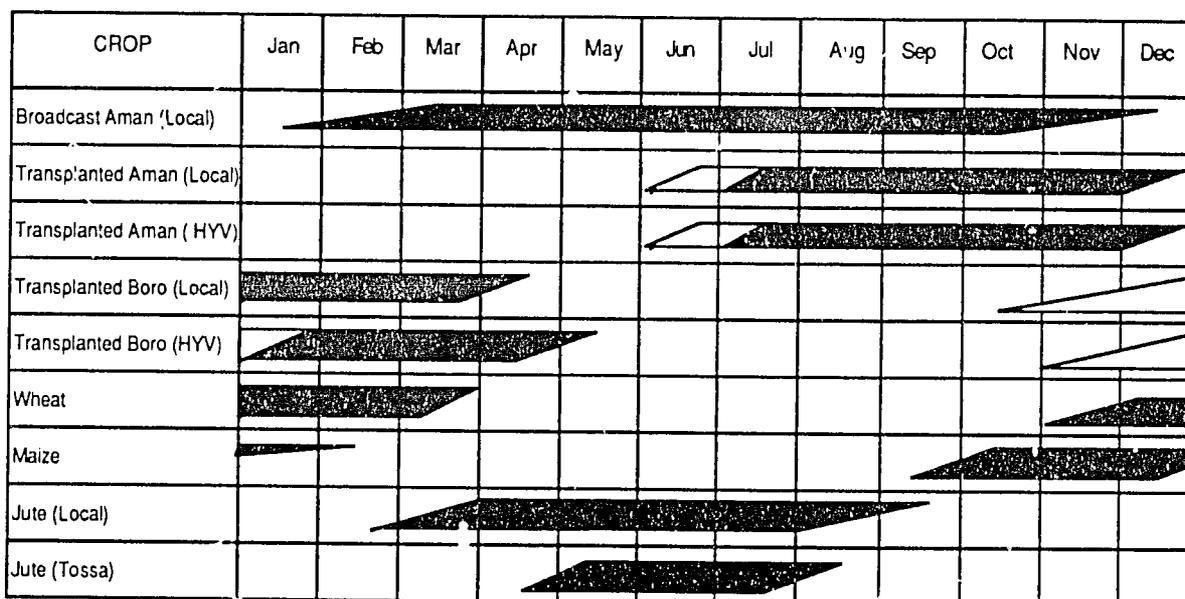
4.19 And yet the production remained static which the CIMMYT euphemistically called stable. The farmers' responses might shed some light in this connection. 90% of the growers found other crops such as rice and pulses more profitable than wheat. Complaints about lack of proper irrigation are voiced by 63% and lack of HYV seeds by 61%. Growers also mentioned about the lack of interest by the Department of

Agriculture in wheat cultivation at the non-progressive areas. Some of the difficulties are not unavoidable but the situation remained static/stable for the last one decade.

Constraints to Wheat Production

4.20 Expansion of boro area may appear to a casual observer to be a constraint to wheat production. Close observation shows that the sources of supply of land to boro and sources of supply of land to wheat have only a small intersection in the cropping pattern (Figure 4.3).

Figure - 4.3 : Crop Calendar of Bangladesh



4.21 The main sources of supply of land to boro now seems to be T-Aman land. Harvest of T-Aman does not leave enough time to prepare the land for wheat. The sources of land for wheat are Aus, jute, and B-Aman. It is now well-known that B-Aman and Boro are mutually exclusive in the cropping pattern as B-Aman is grown mostly in the low-lying areas. There is a possibility that wheat and Boro may compete for that land which are released by Aus and jute. However, after the harvest of Boro, these land will not be available for jute and Aus again in the next cropping sequence. But wheat being harvested earlier can accommodate jute and Aus in the next cropping sequence. Under the circumstances, in a situation when area under Aus, B-Aman and jute are falling the scope of increasing wheat area does not seem promising.

4.22 If, however, cropping sequence of wheat *plus* jute or wheat *plus* Aus or wheat *plus* B-Aman become more profitable than that of the single sequence of Boro or Boro *plus* T-aman, then there is a possibility of increasing wheat production.

4.23 Choudhury, Morris and Meisner (1994) found the minimal overlap between wheat and Boro.⁴ They have found that close to 50% of all wheat crops were involved in

⁴ Choudhury, Morris, Meisner, Comparative Advantage of Wheat in Bangladesh : Technological, Economic and Policy Issue, p30.

a wheat - Aman rotation. But they did not specify the varieties of Aman involved. It has been shown in the crop calendar above that both local and HYV T-Aman do not leave enough time for seeding of wheat, nor can Boro follow wheat in the cropping sequence.

4.24 Current cost benefit estimates do not lend support to such an eventuality. This will require new technology in wheat, Aus and jute opposed to Boro and T-Aman. Choudhury et al have shown that in 4 ecological zones wheat is never profitable compared to Boro. Experience shows that technological improvement has been taking place in Boro and T-Amar rather than in Aus or jute.

4.25 B-Aman which may help the adoption of wheat in the cropping sequence does not also offer any scope of substantial break through in technology. It has also been noticed in Table 4.2 that wheat yield has been slowly but perceptibly falling since the mid-eighties. No significant effort is still visible for yield augmenting technology. Discussion with CIMMYT and local experts of repute also does not indicate any prospect of increases in wheat production in the coming years. Surveys of the wheat growers also confirmed that the extension services provided by the GOB were not presently perceptible in the wheat sector.

4.26 **Irrigation and Wheat** : Wheat has a favourable aspect. Boro is a very water-intensive crop compared to wheat. As water becomes increasingly scarce, irrigated wheat may tend to be favoured over Boro in near future. Cost-benefit indicators of irrigated wheat and its sequence against Boro will determine such a change and possible extension of wheat area. Nonetheless, Boro is still so profitable, so much so that cultivation of irrigated wheat in place of Boro does not appear promising in the near future. The situation, though promising in future, is not ripe for a guess.

4.27 **Price Support** : Under the emerging condition in Bangladesh and in the world, there appears no scope for increasing wheat production in Bangladesh through price support either in the product market or in the input market. Under present technological conditions, price support is unlikely to expand production of wheat in Bangladesh as may be seen in Table 4.3.

Table 4.3 : Change of Area, Production, Yield and Real Price of Wheat in Different Periods (in percent)

Period	Percentage Change of			
	Area	Production	Wheat Yield	Real Price
74/77-82/85	294.44	537.59	61.64	-7.46
82/85-89/92	2.52	-21.37	-23.29	2.12

Source : Aziz, Production and Consumption of Wheat in Bangladesh (1993).

4.28 The table shows that between 1974-77 and 1989-92, there were 2 sub-periods. In the first period, 1974-77 to 1982-85, there was technological improvement in wheat production. In the second period, technological change demurred. During the first

period, production was contributed by area and yield increases even at negative changes in real price. In contrast, in the second period, production decreased mainly due to declining yield even though real price of wheat increased. It has been estimated that colossal relative price changes have to take place to make wheat profitable to Boro, which appears to be unlikely.⁵ This finding is also corroborated by Chowdhury, Morris, Meisner (1994)⁶

Prospect of Increased Wheat Production

4.29 From the above analysis, it seems reasonable to conclude that future production of wheat will remain static around 1.1 MMT. This is further supported by the fact that area increase after 1984-85 was accompanied by yield decline, giving credence to the suspicion that increasingly marginal land was being brought under wheat or it was cultivated after the optimum sowing period of early December. Discussion with CIMMYT and local experts appeared to suggest that to a certain extent wheat is a "bonus crop" which grows when some typical opportunities offer themselves for cultivation.

4.30 Alternative Projections by World Bank showed domestic production of 1.47 MMT provided better adapted, heat resistant varieties are available. Ahmed and Golletti also came to the same conclusion. Both these studies have concluded that about 1.5 MMT of wheat could be produced by the turn of this century without furnishing any elaborate analysis for their conclusions.

4.31 The consultants however feel that if there is no major technological break through in wheat, production is expected to remain at 1.1 MMT by the turn of the century.

Production Functions of Wheat

4.32 An attempt has been made to estimate the production function of wheat with a mathematical model. The consultants have estimated the supply responsiveness of wheat. The functional form of the model is as follows :

$$\text{LnYt} = a + b\text{LnPt-1} + c\text{LnYt-1} + d.D$$

Where :

Yt = Area under wheat at time t

Yt-1 = Area under wheat at time t-1

Pt-1 = Real harvest price of wheat at time t-1

D = Dummy (0 for the period 1973-75 and 1986-87 to 1992-93; 1 for all other years)

Ln = Natural logarithm

⁵ Aziz, M.A. (1993), "Production and Consumption of Wheat in Bangladesh". pp5-6.

⁶ Op cit-pp71-74.

4.33 The models were estimated for 2 sets of real prices : (i) nominal harvest price of wheat was deflated by the rural cost of living index; (ii) nominal harvest price of wheat was deflated by the index of Boro prices.

4.34 Stepwise regression procedures were followed in order to see the effects of different independent variables.

4.35 It appears from the table below that the price co-efficients except in one case have never been significant. The relevant significant case is the regression no. I where the coefficient of the real price of wheat (deflated by the rural cost of living index) appeared significant. In all the 6 regression equations the co-efficient of real price were not of expected sign. One should expect the sign of the co-efficients to be positive, but these are negative. Explanatory power of the price variables were not also high.

4.36 In all the equations, the co-efficients of the lagged acreage variable for wheat are highly significant and of expected sign. Inclusion of lagged variable in the equations increases the R² value to a very high level (over 90%).

4.37 The dummy variable has the expected sign in the estimated equations but is not statistically significant. Its inclusion as an explanatory variable improves the value of the R².

Table 4.4 : Regression Measuring the Price Response of Wheat Acreage

	Constants	Price of Wheat (Pt-1)	Lagged Area of Wheat (Yt-1)	Dummy	R ²
Steps for Real Price of Wheat at Rural Cost of Living Index					
I	18.6387	-1.6401** (0.6358)	-	-	0.2813
II	1.2382	-0.0592 (0.2315)	0.8924*** (0.0698)	-	0.9359
III	0.8256	-0.0151 (0.2294)	0.8985 (0.0686)**	0.0971 (0.0751)	0.9423
Steps for Real Price of Wheat at Boro Price Index					
I	7.8161	-0.2828 (0.9124)	-	-	0.001
II	2.9816	0.2828 (0.2282)	0.9050 (0.0565)	-	0.9413
III	2.5712	-0.2358 (0.2294)	0.9036** (0.0560)	0.845 (0.0730)	0.9461

Figure in the parenthesis are the standard errors.

** = 95% level of significance

*** = 99.5% level of significance

4.38 The above analysis would not lend support to the contention of increasing wheat production through price policy.

4.39 The consultants have estimated a production function for wheat through a Cobb-Douglas type model :

$$Y = AL^a F^b K^c T^j$$

Where :

Y	=	Yield per acre
L	=	Labour, man days per acre
F	=	Fertilizer, Kg per acre
K	=	Irrigation cost, Taka per acre
T	=	Other costs in Taka per acre

4.40 There is one problem in this model pertaining to data on irrigation (K) and other costs (T). Ideally, these should be in physical terms. However, the data were received in taka terms. Irrigation data could not be converted into physical terms because the farmers pay a fixed sum of money to water supplier who in turn determines the number, duration and extent of irrigation. For example, when it rains during the growing period of wheat, less irrigation is required. And yet, the farmer has to pay the contract money. However, the contract money varies from region to region because of the irrigation requirements of the area.

4.41 The production functions have been estimated. These are for 1992-93, 1993-94 and these two years are combined in the third equation through a dummy variable. The results of the estimated equations are as follows :

Table 4.5 : Estimated Production Function

Eq #	Const	Labour	Fertilizer	Irrigation	Other Costs	Dummy	R ²
I (92-93)	0.0729	0.6940*** (0.0233)	-0.0241 (0.0414)	0.0108 (0.0087)	0.0942** (0.0330)	-	0.9491
II (93-94)	0.1543	0.7585*** (0.0429)	0.0663 (0.0563)	0.0108 (0.0137)	-0.0417 (0.0456)	-	0.7744
III (I+II) [92-93=1 93-94=0]	0.532	0.7325*** (0.0219)	0.0193 (0.0355)	0.0106 (0.0080)	0.0288 (0.285)	0.0621 (0.0293)**	0.8939

Figure in the parenthesis are the standard errors.

** = 95% level of significance

*** = 99.5% level of significance

4.42 It appears from the above results that the independent variables have explained between 77% to 95% of the variability of the dependent variable. In equation I, coefficient of labour (in man days) and other costs (in taka) were significant at 99.5% level. The remaining variables were not significantly different from zero. In equation II, labour (in man days) was the only significant coefficient. In equation III, labour and dummy were significantly different from zero. The dummy in equation III indicates that the years 1992-93 and 1993-94 were significantly different from each other in respect of yield of wheat.

4.43 The above result should be examined carefully. It appears that fertilizer and irrigation did not come out as significant variables. These phenomena do not tend to imply that these are not important variables, nor do they imply that fertilizer and irrigation could be manipulated to increase wheat production at the existing level of technology. Perhaps this suggests that production technology has reached a stage where further application of inputs is unlikely to raise yield. Major break through in wheat seed technology is therefore, called for.

B. SCENARIO OF FUTURE CONSUMPTION OF WHEAT IN BANGLADESH

4.44 Projection of wheat consumption in Bangladesh depends on the following important factors:

- a) Initial consumption or bench-mark consumption of wheat and price in 1991 (bench-mark year) ;
- b) Population of 1991 divided into urban and rural segments as there is significant difference between urban and rural consumption of wheat;
- c) Growth of population by urban and rural areas; three alternatives are chosen from BBS;
- d) GDP growth rate by urban and rural areas with consequent urban and rural income elasticity of wheat;
- e) Price elasticity of wheat;
- f) Cross price elasticity of wheat in terms of rice.
- g) Leakages from the non-monetized distribution of wheat from the PFDS;
- h) Changes/reduction of subsidy (EEP) by exporters as a result of new GATT negotiations.

Projection of Market Demand for Wheat

4.45 In projecting future market demand for wheat, it is required to know, among others, current consumption level of wheat, growth of population, growth of income and income elasticity of demand. In this study, most of these information have been taken from secondary data, often published by the Bangladesh Bureau of Statistics (BBS). However, comparative analysis has been undertaken with other published data to justify the prudence of this choice of data where the future projection basis appeared somewhat murky. Alternative values were used to suggest alternative measures of demand. The question of elements of judgment, thus couldn't be avoided. Under the circumstances, judgments were offered for alternative population growth rates, alternative income growth rates, disaggregation of urban and rural growth rates of both population and income. A few of the important demand parameters are discussed below:

Base Year Consumption

4.46 Per capita consumption of wheat differed from year to year both in the rural and urban areas due mostly to the need and availability of wheat aid. Examples may be seen in Table 4.6.

Table 4.6 : Market Supply and per capita Consumption of Wheat

Year	Market Supply ⁷ (000 MT)	Per capita Supply ⁸ (kg/year)	Per capita supply as per HES		
			Rural	Urban	Total
1973-74	1789	23.52	30.92	56.61	
1974-75	1742	22.36	-	-	
1975-76	1689	21.17	17.78	28.29	
1976-77	1554	19.03	-	-	-
1977-78	1935	23.16	-	-	-
1978-79	1904	22.26	-	-	-
1979-80	2644	30.22	-	-	-
1980-81	1584	17.62	-	-	-
1981-82	1879	20.51	19.86	31.10	21.43
1982-83	2036	21.77	-	-	-
1983-84	2122	22.22	22.92	27.01	23.40
1984-85	2596	26.60	-	-	-
1985-86	1563	15.70	18.72	19.82	18.87
1986-87	2039	20.09	-	-	-
1987-88	2069	20.01	-	-	-
1988-89	2175	20.61	21.46	19.38	21.21
1989-90	1733	16.12	-	-	-
1990-91	1795	16.37	-	-	-
1991-92	1842	16.51	-	-	-
1992-93	1777	15.64	-	-	-

4.47 Base year consumption has been set on the basis of 3-year (1990-92) average market consumption of wheat (Column 3 of Table 4.6). The average per capita market consumption of wheat was estimated using the formula : (net production - domestic procurement + monetized PFDS + 0.25 × non-monetized distribution + private import)/population.

⁷ Market supply/demand of wheat has been estimated by the following formula; Net Production + Private Import + Monetized Distribution + 0.25 Non-monetized Distribution - Domestic Procurement. Douglas Currie (1993) is of the opinion that leakage from the non-monetized distribution is about 50%. We think that it is on the high-side. The estimate is also not based on empirical findings.

⁸ Per capita supply/demand has been estimated by dividing total market supply/demand by population of the respective year.

4.48 Column 3 of Table 4.6 shows per capita aggregate consumption of wheat and columns 4 through 6 shows rural urban and average consumption of wheat according to Household Expenditure Surveys (HES) of various years. It is interesting to see that average per capita estimates of HES is always above the ones in column 3. This is expected as the estimates at column 3 show market demand but that of HES does not distinguish market and non-market demand for wheat. HES includes non-monetized targeted distribution of wheat. In disaggregating the rural-urban market demand for wheat, we have used HES data of 1988-89 as the weight. Therefore base consumption or initial consumption for 1991 for rural urban and national average are as follows in Table 4.7.

Table 4.7 : Initial Consumption of Wheat in 1991

Residence	Initial Consumption of 1991 (MMT)	
	25% leakage	50% leakage
Rural	0.32	0.33
Urban	1.50	1.56
National	1.82	1.89

Note : leakage means quantity leaked from non-monetized distribution under PFDS

Projection of Population

4.49 The base year population for 1991 has been taken to be 112.1 million, following BBS. Thereafter 3 alternative growth rates have been accepted. In this exercise we have taken 3 sets of population growth rates of BBS. These are as follows :

Table 4.8 : Projection of Population under Alternative Assumptions

(Population in Million)

Assumption	Mode of Fertility Change	Mode of Mortality	1991	2001	2006
1. Rapid variant with NRR =1 by 2011	First initial decrease	Exponential Change	112.10	127.92	136.04
2. Medium variant with NRR = 1 by 2016	Exponential Change	Slow initial decrease	112.10	131.32	141.10
3. Low variant with NRR=1 by 2021	Linear Change	Linear Change	112.10	133.02	144.50

Source : BBS

Rural-urban Disaggregation of Population

4.50 As there is quite marked difference between urban and rural pattern of wheat consumption income and income elasticities, it was thought advisable to disaggregate population by urban and rural sectors.

4.51 In making rural-urban disaggregation of population, we have assumed that by 2011, the rural-urban population ratio will be 68:32 from the 1991 level of 81:19. Using this ratio, the growth rate of population of rural and urban areas are estimated as follows in Table 4.9.

Table 4.9 : Population Growth Rates (in %)

Residence	Alt-1	Alt-2	Alt-3
Urban	3.94	4.18	4.34
Rural	0.62	0.89	1.02
National	1.34	1.60	1.73

4.52 These are average annual growth rates of population, though population is expected to have a deceleration of growth over the years. However, for the ease of calculation, these average growth rates have been accepted, hoping the alternative ranges will show a sense of realism.

Alternative Income Growth for Urban & Rural Areas

4.53 In the study, per capita income has been assumed to grow by 5 per cent only upto the year 2006. Given the growth of urban and rural population, the income growth rates will look as follows in Table 4.10.

Table 4.10 : Income Growth Rates 1991-2006

Residence	Growth Rate (in %)
Urban	8.1
Rural	4.0
National	5.0

Income Elasticity of Demand for Wheat

4.53 We have several estimates of income elasticities for HES of various years. It is interesting to note that income elasticity both in rural and urban areas were negative in 1988-89. Estimates of income elasticities are more stable for 1983-84 and 1985-86. There were sudden drop of the elasticities in 1988-89.

4.56 Income elasticity assumes an important role in the projection of consumption of a sample or major co-support item. There are several estimates of income-elasticity of foodgrains (rice and wheat) by several authors. Most of these estimates are based on Bangladesh Household Expenditures Surveys which also show different results.

4.57 The literature on income elasticity estimates are quite varied and based on complicated methodology. For a preliminary glimpse one could see the World Bank

Food Policy (1992) and Akhter Ahmed and Yawar Shams (1993). The above are somewhat low, but may be more in tune with the times when rice price has shown a tendency to stabilize or fall.

4.58 It has been sometimes suggested by some authors in this field that HES based elasticities could be reconciled by panel data management. But this procedure appears counter productive. The years of latest HES surveys are : 1983-84, 1985-86 and 1988-89.

4.59 This divergence of the intervening periods and the survey frame make any such panelling of data questionable. If the data were for 2 or 3 consecutive years or regular 1 year intervals, assuming the scientific character of BBS samples, such average income elasticity could be somewhat meaningful.

4.60 Income and expenditure elasticities as estimated by BBS's HES shows a tendency to fall. But this fall is not steady; between the 2 years 1984 to 1986, the urban income elasticity fell by 0.01 while rural income elasticity remain constant at 0.13. On the other hand, between the 3 years, eg 1986-89, urban income elasticity fell by 0.08 and rural by 0.11 units. Expenditure elasticities also fell during the same 3 year period quite sharply, though not in the same proportion as income elasticity.

4.61 The question arises whether we should use the elasticity figures for 1988-89 or make an average of 3 years, particularly when the above 1988-89 elasticity figures appear quite out of line with the figures of only 3 to 5 years earlier. Nothing very crucial has happened during this period to warrant or justify the elasticity figures for 1988-89.

4.62 Under the circumstances, one option could be to reestimate the income-elasticities based on 3 years' HES data. Serious methodological questions arise in this respect. First, nature of the survey frame would not allow treating the respondents as a part of panel data. Secondly, the survey was performed at unequal time intervals, two years between first and second HES and 3 years between second and third HES.

4.63 To be a part of the panel data, the respondents must be the same and the survey should be conducted in successive years. None of these conditions are satisfied. One could venture to estimate a unique elasticity figure putting dummy variables for one intervening year. However, the cost could be more than the current project cost.

Table 4.11 : Income Elasticity of Demand for Wheat

Year	Income Elasticity		Expenditure Elasticity	
	Urban	Rural	Urban	Rural
1983-84	0.21	0.13	0.24	0.15
1985-86	0.20	0.13	0.23	0.14
1988-89	0.12	0.02	0.14	0.10

Source : BBS Household Expenditure Survey 1988-89, P-29

4.64 It could perhaps be possible to identify the respondents in the different years at a prohibitive cost of both time and money. But the second condition cannot be met. Under the circumstances, the consultants decided to use the income elasticities of 1985-86 estimated in the HES of the BBS which are quite close to those of 1983-84. These are as follows :

Urban Income Elasticity of Wheat	0.20
Rural Income Elasticity of Wheat	0.13

Leakage from Non-monetized Distribution of PFDS

4.65 Other important considerations which affect the future market demand for wheat in Bangladesh is the leakage from the PFDS, particularly non-monetized distribution of wheat for the target groups through programs such as FFW and VGD and upcoming Food For Education (FFE). There are several estimates about such leakages ranging from 8% to 50%. The consultants worked out an weighted average of 25%. However, as the matter appeared to be quite sensitive, demand projections are made with 50% leakages also.

4.66 The equations show that if the leakage of the non-monetized channels is changed from 25% to 50%, the size of the elasticities (own and cross) of wheat increases. At the same time the explanatory power of the regression also decreases with the increase in the leakage figures.

4.67 There are various beliefs about the leakage of non-monetized public distribution of wheat ranging from 9% to 50% (the latter being assumed by D. Currie). The above result along with the claim of reduction of poverty by the BIDS studies does not support the contention of high leakage figures.⁹

Future Changes in Price due to Reduction of Subsidy under GATT

4.68 The consultants are dealing with the projection of wheat demand when GATT¹⁰ agreements start being implemented. It is learnt that the subsidy of wheat export is scheduled to be eliminated at the rate of 6% per annum with effect from 1996. This means that in 2001, 34% of the subsidy will be eliminated. By 2006, the extent of elimination of subsidy figures to be about 80%. Assuming the current subsidy (EEP) of US\$ 55/MT and the EEP price of US\$ 120, this GATT measures will imply a wheat price of US\$ 139 in 2001 and US\$ 164 in 2006. Therefore, price increase in 2001 will be 16% while for 2006 it will be 37%.

⁹ IFPRI, OPTIONS FOR TARGETING FOOD INTERVENTIONS IN BANGLADESH (April 1994) have shown leakage in VGD to be between 8-14%. Food For Work (FFW) leakages have been shown to be between 15-36%. The consultants have estimated the leakage to be 25% by taking weighted average of leakage of VGD and FFW. This is the modal value obtained through the exercise.

¹⁰ A short write-up on GATT is shown in Appendix 4.2 (page 4-26 to 4-27)

Wheat Price Elasticity and Cross Elasticity of Wheat in Terms of Rice

4.69 The consultants have estimated the price elasticity of wheat under two scenarios - (i) when 25% of the non-monetized wheat enters into the market supply and (ii) when 50% of the non-monetized wheat enters into the market supply. The general equation estimated is as follows :

$$\text{LnD} = a + b\text{LnPw} + c\text{LnPr}$$

Where :

D = demand for wheat

Pw = real price of wheat at non-food cost of living index, Dhaka

Pr = real price of rice at non-food cost of living index

Ln = natural logarithm

The estimated equation under assumption is :

$$\text{Ln D} = 2.2766 - 0.9662 Pw + 1.4672 Pr \dots\dots\dots (1)$$

(0.3532)*** (0.3799)***¹¹

$$R^2 = 0.6117$$

$$\text{Ln D} = 2.3463 - 1.0937 Pw + 1.4991 Pr \dots\dots\dots (2)$$

(0.3493)*** (0.3735)***

$$R^2 = 0.5684$$

4.70 Own price elasticity of wheat in equation (1) and cross price elasticity of wheat in relation to rice in equation (1) are estimated considering 25% leakage in the non-monetized distribution and in equation (2) are estimated considering 50% leakage. These are as follows :

Equation	Wheat Price Elasticity	Cross Price Elasticity	R ²
I (25% leakage)	0.9662	1.4672	0.6117
II (50% leakage)	1.0937	1.4991	0.5684

¹¹ *** = 99.5% level of significance

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C. IMPORT REQUIREMENTS OF WHEAT BY PRIVATE SECTOR UNDER ALTERNATIVE PROJECTION OF WHEAT CONSUMPTION

Scenario I :

4.71 We have projected consumption and private import of wheat under three scenarios with variable assumption. The first scenario assumes :

- 25% leakage of non-monetized distribution of wheat
- Own price elasticity of wheat , 0.9662
- Cross price elasticity of wheat with respect to rice, 1.4672
- Wheat price increases by 15% between 1991-2001 and 35% between 1991-2006.
- Rice price decreases by 10% between 1991-2001 and increases by 15% between 2001-2006 (meaning 5% increase between 1991-2006)
- GDP increases by 5% per annum (4% in rural area and 8.1% in urban area)
- 3 alternative population growth rates described earlier.

Under the above assumption, wheat consumption in 2001 and 2006 will be as below :

(Million MT)

Residence	Consumption in 2001 at			Consumption in 2006 at		
	Population Growth Rate Scenario			Population Growth Rate Scenario		
	Alt-I	Alt-II	Alt-III	Alt-I	Alt-II	Alt-III
Urban	0.3702	0.3770	0.3817	0.5886	0.6052	0.6164
Rural	1.2159	1.2450	1.2586	1.6143	1.6724	1.7008
National	1.5861	1.6220	1.6403	2.2029	2.2776	2.3172

4.72 Import requirement under the above consumption scenario would vary between 160,000 MT to 215,000 MT in 2001 and 780,000 MT to 890,000 MT in 2006 as shown in Table 4.12.

Table 4.12 : Import Requirement by Private Sector

(Million MT)

Item	2001			2006		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
A. Consumption	1.5861	1.6220	1.6403	2.2029	2.2776	2.3172
B. Supply Excluding Private Import						
i. Domestic Prod.	1.000	1.000	1.000	1.000	1.000	1.000
ii. Monetized Aid Distribution	0.300	0.300	0.300	0.300	0.300	0.300
iii. Leakages from non-monetized distribution (total non mon-aid)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)
Sub-Total (i +ii+iii)	1.425	1.425	1.425	1.425	1.425	1.425
C. Private Import	0.161	0.197	0.215	0.778	0.853	0.892

4.73 Projection of wheat consumption under 50% leakage of non-monetized PFDS are made under the following assumptions :

- Own price elasticity of wheat, (-) 1.0937
- Cross price elasticity of wheat with respect to rice, (+) 1.4991

All other assumptions are as under section 4.71 remain unchanged.

Under the above scenario, wheat consumption in 2001 and 2006 will be as follows :

(Million MT)

Residence	Consumption in 2001 at			Consumption in 2006 at		
	Population Growth Rate Scenario			Population Growth Rate Scenario		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
Urban	0.3743	0.3813	0.3859	0.4414	0.4537	0.4621
Rural	1.2294	1.2588	1.2729	0.2099	1.2536	1.2748
National	1.6037	1.6401	1.6588	1.6513	1.7073	1.7369

The above consumption projections show private sector import in 2001 varies between 54,000 MT and 109,000 MT. It varies between 101,000 MT and 187,000 MT in 2006 (Table 4.13).

Table 4.13 : Private Sector Import of Wheat

(Million MT)

Item	2001			2006		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
A. Consumption	1.6037	1.6401	1.6588	1.6513	1.7370	1.7369
B. Supply Excluding Private Import						
i. Domestic Prod.	1.000	1.000	1.000	1.000	1.000	1.000
ii. Monetized Aid Distribution	0.300	0.300	0.300	0.300	0.300	0.300
iii. Leakages from non-monetized distribution (total non- monetized aid)	0.250 (0.500)	0.250 (0.500)	0.250 (0.500)	0.250 (0.500)	0.250 (0.500)	0.250 (0.500)
Sub-Total (i +ii+iii)	1.550	1.550	1.550	1.550	1.550	1.550
C. Private Import	0.054	0.090	0.109	0.101	0.157	0.187

Scenario -II

4.74 An evaluation of future wheat consumption and private import has been made under alternative scenario of increase in wheat and rice prices. Under this scenario -

- Wheat price increases by 20% between 1991-2001 and 45% between 1991-2006. (It may be repeated again that GATT warrants such an increase)
- Rice price decreases by 15% between 1991-2001 and increases by 20% between 2001-2006 meaning an increase of 5% only during 1991-2006.

4.75 All other assumptions of scenario (under para 4.71) remaining same, the consumption projection of wheat for 2001 and 2006 is shown below, considering 25% leakage.

(Million MT)

Residence	Consumption in 2001			Consumption in 2006		
	Alt-I	Alt-II	Alt-III	Alt-I	Alt-II	Alt-III
Urban	0.3193	0.3253	0.3292	0.3892	0.4002	0.4076
Rural	1.0943	1.0745	1.0865	1.0670	1.0670	1.1243
National	1.3686	1.3998	1.4157	1.4562	1.4562	1.5319

4.76 The above consumption estimates create a situation when no private import is necessary. Rather, it suggests reduction of food aid by around 9,000 to 56,000 MT in 2001 but private sector import of wheat between 31,000 to 107,000 MT in 2006.

Table 4.14 : Private Import of Wheat

(Million MT)

Item	2001			2006		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
A. Consumption	1.3686	1.3998	1.4157	1.4562	1.5061	1.5319
B. Supply Excluding Private Import						
i. Domestic Prod.	1.000	1.000	1.000	1.000	1.000	1.000
ii. Monetized Aid Distribution	0.300	0.300	0.300	0.300	0.300	0.300
iii. Leakages From Non-monetized Distribution (total non non-aid)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)
Sub-Total (i +ii+iii)	1.425	1.425	1.425	1.425	1.425	1.425
C. Private Import	-0.056	-0.025	-0.009	0.031	0.081	0.107

4.77 With 50% leakage assumption, all other assumption of scenario II remaining constant, the consumption projections are as follows :

(Million MT)

Residence	2001			2006		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
Urban	0.3190	0.3248	0.3289	0.3625	0.3755	0.3795
Rural	1.0474	1.0725	1.0783	0.9940	1.0299	1.0472
National	1.3664	1.3973	1.4072	1.3565	1.4057	1.4267

4.78 These consumption projections yield no private import; rather it tends to reduce food-aid by 143 to 184 thousand MT in 2001 and 123 to 194 thousand MT in 2006 as shown below.

(Million MT)

Item	2001			2006		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
A. Consumption	1.3664	1.3973	1.4072	1.3565	1.4057	1.4267
B. Supply Excluding Private Import						
i. Domestic Prod.	1.000	1.000	1.000	1.000	1.000	1.000
ii. Monetized Aid Distribution	0.300	0.300	0.300	0.300	0.300	0.300
iii. Leakages From Non-monetized Distribution (total non mon-aid)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)	0.125 (0.500)
Sub-Total (i +ii+iii)	1.55	1.55	1.55	1.55	1.55	1.55
C. Private Import	-0.184	-0.153	-0.143	-0.194	-0.144	-0.123

D. PUBLIC SECTOR AND OVERALL IMPORT OF WHEAT

4.79 The consultants have so far made the private import projections under different scenarios. Now in this part a comprehensive position of total wheat requirement covering both public and private sectors is shown under two scenarios :

- the one that gives the highest positive private import, and
- the one showing highest negative private import.

Highest Scenario

(in 000 MT)

Import categories	2001			2006		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
1. Public Sector - Food Aid	800	800	800	800	800	800
i. For monetized distribution	300	300	300	300	300	300
ii. For non-monetized distribution	500	500	500	500	500	500
2. Private Sector	161	197	200	780	853	890
Total Import	961	997	1000	1580	1653	1690

Lowest Scenario

(in 000 MT)

	2001			2006		
	Population			Population		
	Alt-1	Alt-2	Alt-3	Alt-1	Alt-2	Alt-3
1. Public Sector - Food Aid	800	800	800	800	800	800
i) For monetized distribution	300	300	300	300	300	300
iii) For non-monetized distribution	500	500	500	500	500	500
2. Private Sector	(-) 184	(-) 153	(-) 143	(-) 194	(-) 144	(-) 123
Total Import	616	647	657	606	636	677

4.80 Under the highest import scenario, total import in 2001 is around 1 MMT and in 2006 around 1.7 MMT. The lowest import scenario indicates total import of 0.6 to 0.7 MMT in both 2001 and 2006 which suggests reduction of aided import in the order of 0.12 to 0.2 MMT.

4.81 However, it is expected that Bangladesh as an LDC could avoid the GATT provision on phasing out agricultural subsidies for sometimes more, and as such import price for Bangladesh will remain low enough through concessional programmes like EEP to allow higher import.

Study on Wheat Growers

The study covered 140 wheat growers in 5 important wheat producing districts viz Jessore, Chuadanga, Rajshahi, Naogaon and Rangpur. Main findings are discussed below :

- i) 66 farms or 47% were small with an area between 0.05 and 2.49 acres, 67 farms or 48% were medium with an area between 2.5 and 7.49 acres and 7 farms or 5% were large farms with an area of 7.5 acres and above. The average size of the farms was 3.52 acres.
- ii) Average area per farm under wheat was 73.7 decimals in 1992-93 as against 69.1 decimals in 1993-94 indicating decline of the area in 1993-94 by over 6%.
- iii) 100% of the wheat areas were irrigated in Chuadanga (42 farms), Jessore (38 farms), Rajshahi (20 farms) and Naogaon (15 farms); in Rangpur out of the 25 farms, 10 farms were irrigated, 7 farms were non-irrigated and 8 farms were partly irrigated.
- iv) Average production of wheat per acre stood at 27.21 maunds in 1992-93 as against 25.65 maunds in 1993-94 indicating reduction in yield by about 6% in 1993-94.
- v) Per farm production of wheat declined from 20.66 maunds in 1992-93 to 17.97 maunds in 1993-94 i.e. by 13% which was contributed by the reduction of area and yield.
- vi) Utilization of the wheat crop for different purposes by the sample growers was as follows :

Use	1992-93		1993-94	
	Maund	% of Total	Maund	% of Total
Quantity sold	13.22	64.0	9.84	54.8
Quantity consumed	6.08	29.4	7.10	39.5
Quantity used as seed	1.36	6.6	1.03	5.7
Total :	20.66	100.0	17.97	100.0

It may be noted that with lower production per farm in 1993-94 the proportion of the quantity sold dropped to 54.8% from 64% in the previous year.

- vii) The growers received higher price for their wheat crop in 1993-94 than in the previous year; farmer level price increased from Tk. 181.98/maund in 1992-93 to Tk. 190.99/maund i.e. by 5%.
- viii) Cost of wheat cultivation per acre was estimated at Tk. 4262 in 1992-93 and Tk. 4,451 in 1993-94 consisting of labour cost (44%), fertilizer and manure cost

(29%), seed cost (14%), irrigation cost (10%), pesticides cost (1.6%) and other costs (2%).

- ix) Per acre gross revenue from the wheat crop was estimated at Tk. 5,819 in 1992-93 and Tk. 5,850 in 1993-94.
- x) Parties to whom sold : The growers sold most of the crop to Farias/Beparis as shown below :

Use	1992-93		1993-94	
	Maund	% of Total	Maund	% of Total
A. Sold as Wheat				
i) Farias/Beparis	8.54	65	4.46	76
ii) Aratdars/Wholesalers	4.68	35	2.39	24
B. Sold as Atta	Nil	Nil	Nil	Nil
Total :	13.22	100	17.97	100

- xi) Place of sale : During the years 97% of the crop was sold in the village markets and only 3% was sold from the farmgate.
- xii) The growers listed the following problems in wheat cultivation :
- less profitable than other crops viz paddy, pulses (90%);
 - inadequacy of irrigation facilities (63%);
 - inadequate supply of HYV seeds (61%) and
 - insect attack and non-availability of insecticides (33%)

(Figures in parentheses show the percentage of respondents listing the problem).

GATT

The General Agreement on Tariff and Trade (GATT) emanated from a conference held in Geneva in 1948 to bargain down the tariff. GATT was envisaged to be a part of International Trade Organization (ITO). But ITO failed to win the acceptance of some big powers of those days. So, the GATT has been working independently ever since its creation.

Three basic principles guide the GATT. These are : (i) not to increase tariff, (ii) not to impose quantitative restrictions (quotas) and (iii) to grant 'Most Favoured Nation' (MFN) status to all other member countries. The philosophy of GATT is that the countries stand to gain from general adoption of free trade policy. It is not possible to gain from the unilateral adoption of free trade policy by a single country. Therefore, GATT always emphasized global agreement on free trade.

Basic GATT Principles seek to restrain increase in trade restrictions and to generalize liberalization of trade. Its achievements since its inception till todate are commendable and enormous in liberalization of world trade. GATT has been using the method of negotiation as the instrument to achieve its ends. The negotiations are, however, long in duration and at times painfully slow. The Tokyo round of GATT took five years to conclude. The Uruguay round of GATT took seven years of negotiation before it was concluded as the Marrakash-declaration in 1994. The time taken in the negotiation process is really long but the underlying complexities of situation may as well justify this.

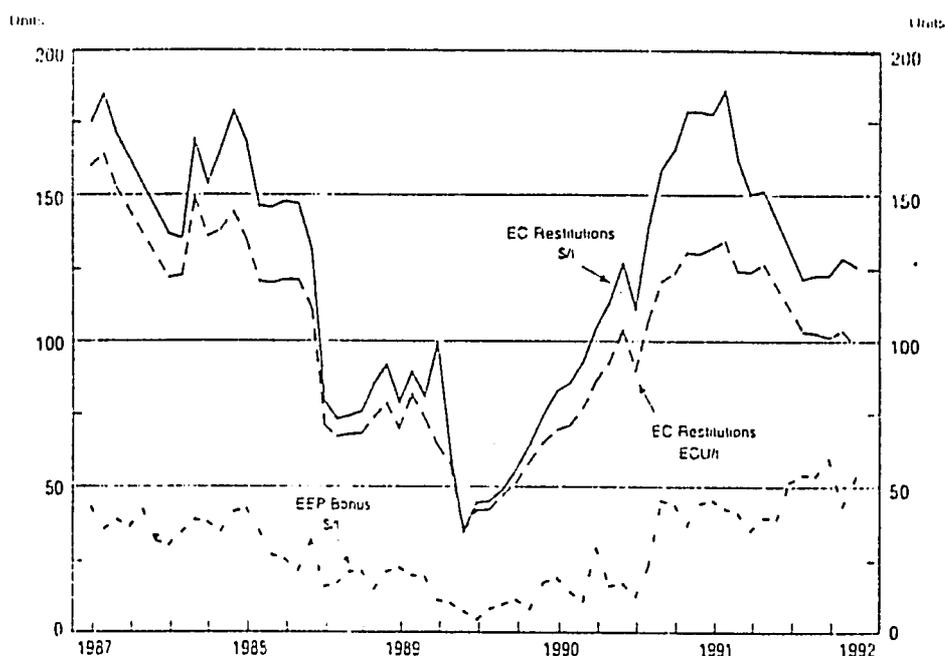
One of the important aspects of the Uruguay round GATT negotiation is the inclusion, among others, the agricultural commodities. Before the current round, seven GAAT agreements were concluded but none of them had the issue of agricultural commodities on its discussion agenda. So for the first time in GATT history, agricultural commodities came in the GATT framework. The issues included subsidy on input in the production process, export subsidy and trade restrictions in the form of closure of the domestic market for international trade. Import subsidy and export subsidy are the features of EEC, USA and Canada. The closure of domestic market is related to the foodgrain market of some important countries like Japan and Korea.

Grounds for the inclusion of agricultural commodity, especially the foodgrain (wheat) in the GATT are many. Export refund on wheat export provided by EEC varies between US\$ 50 and US\$ 75 per MT during 1987 - 1992. Export bonus provided by USA on wheat export through EEP programme varied between US\$ 10 and 50 during the same period. However, the USA has other instruments for producers' assistance such as deficiency payment and the minimum price under export credit programme. Export subsidy provided by EEC and USA can be seen in the figure below :

US and EC wheat export subsidies

This export subsidy support under EEP had become quite large over time. It registered an almost threefold increase in 1991 (US\$ 885 million) against US\$ 289 million in 1990. Expenditure on cereal export refunds in the EEC also increased by 60 percent to ECU 3.601 billion in 1991, compared to 1990. This not only drained public exchequer of the countries providing export subsidy but also caused problems to other low-income exporting countries. The GATT through reduction of tariff and liberalization of import by many countries, will help reduction of public expenditure subsidy and help increase trade. The US and EC wheat export subsidies are shown in the following graph.

Graph : U.S. and EC Wheat Export Subsidies



Sources : USDA, Wheat Situation, November 1991; EC Commission, January 1992.

It has been estimated that there is a possibility of increased trade of US\$ 250 billion as a result of removing tariff and trade barriers, of which 90% will come from agricultural sector.

The reduction of subsidy will be made in a phased manner in order to avoid shocks of adjustments. It is learnt that subsidy will be reduced @ 6% a year, starting from 1996.

Profitability of Private Wheat Import and Its Impact on Existing Institutions

Import of Wheat in the Private Sector

5.1 Bangladesh has been producing wheat, about 1.1 MMT per year over the past one decade, while importing wheat under several types of food aid in the public sector. Government commercial import of wheat was also made in case of shortfall in production and availability due to natural calamities. Government allowed import of wheat in the private sector from early nineties and private sector import actually started from 1992-93. During 1992-93 and 1993-94 private sector import of wheat stood at 335,000 MT and 238,821 MT respectively. Details are shown in Table 5.1.

Table 5.1 : Import of Wheat in the Private Sector

Source	Quantity (MT)	Price C&F Ctg. (US\$/MT)	Remarks
<u>1992-93</u>			
1. USA	198,000	142-143	Under EEP
2. Saudi Arabia	82,000	149	Normal import
3. Turkey	30,000	142	- do -
4. Argentina	25,000	151	- do -
	335,000		
<u>1993-94</u>			
1. USA	167950	124-134	Under EEP
2. Australia	13772	100	Soft and general purpose wheat, low in protein content
3. Canada	57099	-	-
	238,821		

5.2 USA was the main source of supply in both the years because of the quality of the wheat and the lower price under EEP. The wheat of Saudi Arabia, Turkey and Argentina was soft and took a long time to sell. The Australian wheat although very cheap was soft and of low protein content and was therefore not liked by the industry. That was the main reason why most imports were from USA during 1993-94.

5.3 It may be seen that the price of wheat during 1993-94 was cheaper than that of 1992-93 by about US\$ 20/MT. According to USDA the EEP price of wheat is fixed in relation to the international price of wheat.

5.4 Both USDA and US Wheat Association are actively promoting sale of US wheat in Bangladesh for quite a long time. The US No 2 Hard Red Winter (HRW) and Hard Red Spring (HRS) have become quite popular with the traders as well as with the consumers. This hard wheat is somewhat complementary to locally produced soft wheat.

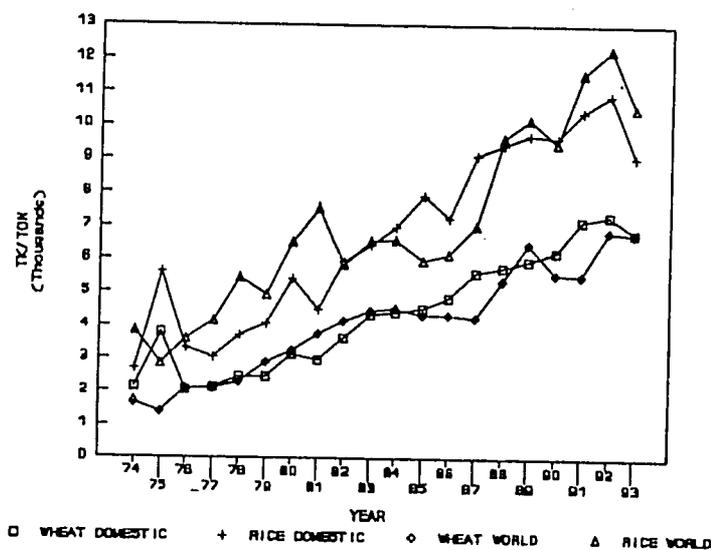
5.5 Suppliers of other countries like Australia, Canada, EEC countries (specially France) are not very keen to sell acceptable quality wheat in Bangladesh. As a result USA has emerged as the main supplier of wheat in Bangladesh and this situation is expected to continue in future as well.

A. PROFITABILITY OF WHEAT IMPORT

Growth Rate of Prices of Rice and Wheat

5.6 It is very important to analyse the price behaviour of rice and wheat in Bangladesh domestic market as well as in international market to assess the profitability of wheat import on commercial basis. Between 1973-74 and 1992-93, domestic wheat price grew at the rate of 6.9% against the international wheat price growth rate of 7.6%. In spite of the higher growth rate of international price of wheat, price of domestic wheat has been mostly higher than the international C&F price during 1984-85 to 1992-93. The opposite situation prevailed in the seventies. Table 5.2 shows the relative position between 1973-74 and 1992-93. Figure - 5.1 shows the relative price of wheat and rice in the domestic and world markets.¹

Figure 5.1 : Prices of Wheat and Rice
At the Domestic and World Markets



¹ International price, World price and C&F price (Chittagong) have been used as synonymous in the subsequent discussions

Table 5.2 : Domestic and International Prices of Rice and Wheat

Year	Domestic wholesale price		Domestic price ratio of Wheat & Rice	Border prices (\$/ton C&F)*		World price ratio of wheat & rice	Import parity price at official Ex-rate		C&F price at official Ex-rate		Official Exchange rate \$/Tk.	Domestic price as % of C&F price*	
	Wheat	Rice		Wheat	Rice		Wheat	Rice	Wheat	Rice		Wheat	Rice
	1	2		3	4		5	6	7	8		9	10
1973-74	2121.96	2692.10	0.7882	211.00	482.00	0.4378	1831.15	4183.00	1680.91	3839.80	7.97	126.24	70.11
1974-75	3774.52	5613.81	0.6724	155.00	319.00	0.4859	1586.44	3265.00	1375.66	2831.19	8.88	274.38	198.28
1975-76	2056.05	3335.66	0.6164	139.00	240.00	0.5792	2361.84	4078.00	2092.52	3612.98	15.05	98.26	92.32
1976-77	2118.21	3031.56	0.6987	135.00	268.00	0.5037	2307.09	4580.00	2082.51	4134.17	15.43	101.71	73.33
1977-78	2451.24	3716.38	0.6596	153.00	361.00	0.4238	2511.57	5926.00	2312.87	5457.16	15.12	105.98	68.10
1978-79	2448.29	4079.68	0.6001	190.00	325.00	0.5846	3182.06	5443.00	2892.39	4947.51	15.22	84.65	82.46
1979-80	3116.23	5396.26	0.5775	209.00	421.00	0.4964	3516.76	7084.00	3237.41	6521.29	15.49	96.26	82.75
1980-81	2959.49	4510.00	0.6562	231.00	465.00	0.4968	4065.60	8184.00	3755.74	7560.25	16.26	78.80	59.65
1981-82	3616.98	5910.00	0.6120	207.00	291.00	0.7113	4648.61	6535.00	4153.50	5838.97	20.07	87.08	101.22
1982-83	4367.16	6440.00	0.6781	188.00	276.00	0.6812	4975.87	7305.00	4473.52	6567.50	23.80	97.62	98.06
1983-84	4447.54	7010.00	0.6345	183.00	265.00	0.6906	5135.74	7437.00	4564.70	6610.08	24.94	97.43	106.05
1984-85	4527.92	7930.00	0.5710	168.00	230.00	0.7304	5026.12	6881.00	4361.85	5971.58	25.96	103.81	132.80
1985-86	4849.43	7280.00	0.6661	145.00	206.00	0.7039	5079.22	7216.00	4333.48	6156.54	29.89	111.91	118.25
1986-87	5599.61	9120.00	0.6140	139.00	230.00	0.6043	4969.55	8223.00	4257.49	7044.76	30.63	131.52	129.46
1987-88	5787.16	9430.00	0.6137	172.00	309.00	0.5566	6098.49	10956.00	5373.66	9653.84	31.24	107.69	97.68
1988-89	5974.71	9710.00	0.6153	202.00	317.00	0.6372	7349.10	11533.00	6492.26	10188.35	32.14	92.03	95.30
1989-90	6242.63	9650.00	0.6469	169.00	288.00	0.5868	6421.41	10943.00	5563.72	9481.36	32.92	112.20	101.78
1990-91	7180.37	10410.00	0.6898	155.00	324.00	0.4784	6310.03	13190.00	5536.80	11573.70	35.72	129.68	89.95
1991-92	7367.91	10930.00	0.6741	180.00	322.00	0.5590	7825.03	13998.11	6866.15	12282.79	38.15	107.31	88.99
1992-93	6832.07	9070.00	0.7533	174.00	270.00*	0.6444	7733.68	12000.54	6786.00	10530.00	39.00	100.68	86.13

* This C&F Price is Commercial Price and does not include EEP.

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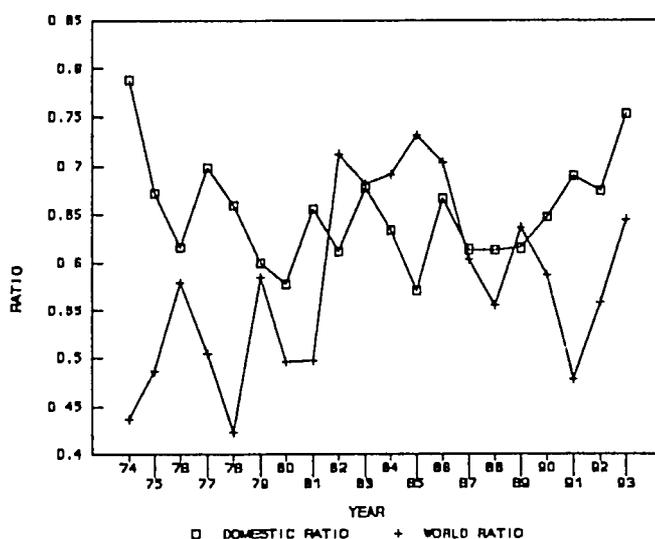
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5.7 Domestic rice price grew at the rate of 6.9% in current prices while international rice prices grew at the rate of 6.4% between 1973-74 and 1992-93. During 1970s domestic price used to be below the international price of rice while in the eighties it was above the international price. In the early 90s, domestic rice price has again gone below the international rice price. (Table 5.2)

Relative Price of Rice and Wheat

5.8 In the international market, the wheat-rice price ratio is in favour of wheat. So is the case in Bangladesh. However, there are degrees of variation. In Bangladesh, in the last 4 years, wheat-rice price ratio varied between 0.65 and 0.75 while in the international market it varied between 0.48 and 0.64. In all these 4 years, the wheat-rice price ratio in the domestic market has always been higher than the international market. Table 5.2 and figure 5.2 show the domestic - international wheat price ratio from 1973-74 to 1992-93.

Figure 5.2 : Wheat-Rice Price Ratios
At the Domestic and World Markets



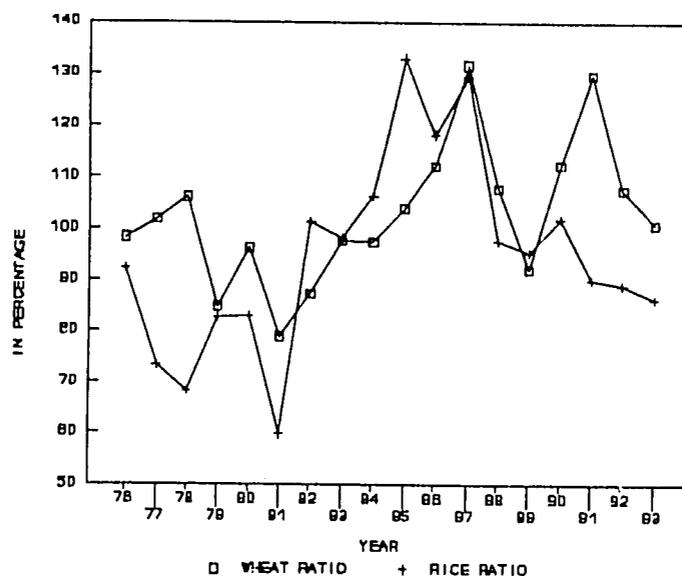
5.9 Under the circumstances, there is a scope for importing wheat profitably. There is also a possibility of exploring the market for rice in some rice importing countries.

5.10 Column 13 of Table 5.2 is an indicator of the profitability of wheat import. This indicator expresses the domestic price of wheat as the percentage of border/C&F price.² It appears that domestic price of wheat has been higher than the C&F price by this indicator during 1984-85 to 1991-92 with the exception of 1988-89 [This can also be visually seen in figure - 5.3]. In the year 1992-93, when the private import started, ratio of domestic to C&F price appeared marginally high in favour of C&F prices. Our

² This C&F price is commercial price and not EEP price.

discussion with the importers show that they made a reasonable profit in 1992-93 and they have also imported and made higher profit during 1993-94. However, one should remember that private sector import of wheat takes the advantage of seasonality of domestic and international prices for making a profit. Again, the profitability of private sector also depends on reaping the benefit of international incentives like EEP which is not shown in Table 5.2.

Figure 5.3 : Domestic-World Price Ratios of Wheat and Rice
At the Domestic and World Markets



B. IMPACT OF RECENT CHANGES OF GOVERNMENT POLICIES ON WHEAT TRADE

(a) Chakki Owners

5.11 It is estimated that there are over 11,000 chakki owners in the country. When substantial quantities of wheat were distributed through the rationing system and to non-monetized target groups, chakkis steadily grew up in the nook and corner of the country. To assess the impact of the private sector wheat import on chakkis, 60 chakki owners were interviewed from 10 districts - 23 from urban areas and 37 from rural areas. The findings are summarized below.

5.12 Out of 60 chakkis surveyed, 45% of the chakkis had been operating for more than 10 years and 32% for 7 to 10 years. 55% of the chakkis were established within the last 10 years (Table 5.3).

Table 5.3 : Distribution of Chakki Owners by Years

Years of Business	Nos. of Chakkis	% of Chakkis
0 -3 years	4	6.70
4 -6 years	10	16.70
7 - 10 years	19	31.70
10+ years	27	45.00
Total	60	100.00

5.13 60% of the chakkis had the milling capacity of 25-50 maunds a day while 11% chakkis had a capacity of less than 25 maunds/day. Another 11% had a capacity of 50-75 maunds a day. Only about 8% had a milling capacity of more than 75 mds/day.

5.14 When asked about the business condition of the chakkis in 1993-94 compared to the previous years, 50% said business condition deteriorated while 11% said business improved. About the same percentage of respondents could not answer the questions. Only 27% felt business condition remained unchanged.

5.15 As much as 72% of the chakkis had a capacity utilisation of upto 20% while 22% reported a capacity utilization of 20-40%. Only 5% had capacity utilization of 80%+. This result is consistent with the above statement on the state of the business.

5.16 Chakki owners mainly operated on custom basis, crushing the wheat of others. Chakki owners surveyed used 47% imported wheat and 53% domestic wheat in 1993-94. The sources from where chakkis received wheat is revealing; almost one fourth of the wheat crushed by chakkis were purchased by the chakki owners themselves while 75% were brought by others for custom milling.

5.17 Urban chakki owners have been more adversely affected than rural chakki owners; 78% of the urban chakkis reported deteriorating business condition against 32% in the rural areas. The reasons for this deterioration has been attributed to the stoppage of government supply under rationing system, relative absence of quality wheat and unavailability of adequate wheat through the private importers' channel. The importers - both commercial and millers - distribute their wheat to relatively large millers and traders. The small chakkis cannot reach these importers.

5.18 The condition of the chakkis in the rural areas is not as bad as in the urban areas. Continuation of VGD/FFW wheat and availability of domestic production ensure somewhat larger supply to the rural chakkis relative to the urban chakkis.

5.19 If the VGD/FFW wheat is sold in the port of entry or wholesale centres and the participants are paid in cash, as sometimes contemplated, the rural chakkis may also face paucity of supply of wheat like the urban chakkis.

5.20 Chakkis will also face product differentiation from the large millers. Already brand names are emerging for atta and flour, packed in polythene bags with suitable brand identification. Chakkis will find it difficult to face this type of competition in the urban areas, except to the extent the urban poor may consume lower grade atta sold from gunny bags.

5.21 **Profit Margin of the Chakki Owners :** Chakki owners earned a monthly profit of Tk. 7448 in the urban areas and Tk.2810 in the rural areas. Source of power used also affects margin. Electric chakkis earned a monthly margin of Tk.4888 while diesel chakkis earned only Tk.1545. Average crushing charge in the electric chakkis was Tk.19.61/md as against Tk.22.50/md charged by the diesel chakkis in the rural areas. There was no diesel operated chakkis in the urban areas. The custom milling charge of wheat in urban areas of electric chakkis was Tk. 21.70/md of wheat.

(b) Wheat Traders

5.22 The study on wheat traders covered 57 respondents consisting of Farias/Beparis and wholesalers (who were not importers) operating in rural as well as urban markets; the wholesalers were operating mostly in the urban markets. Main findings are as follows:

- (i) Almost 40% of the traders had over 10 years of experience in wheat business while 45% had 4 to 10 years experience, indicating that they were well experienced in their trade.
- (ii) Most of the respondents (84%) were owners of the business, 11% were partners and 5% were managers. More than half of the traders (56%) had trading licences from local authorities viz municipality, for operating their business. Parties operating in rural markets conducted business without any licence from any authority.
- (iii) The state of wheat business, according to the respondents, was unsatisfactory. About 72% opined that wheat business in 1993-94 deteriorated compared to previous years while 21% reported that conditions improved, 7% either remained silent or undecided.
- (iv) The number of wheat traders in the surveyed markets reportedly declined by 31% compared to 1986 reflecting lower availability of wheat in the markets.
- (v) Total purchase of wheat per trader declined from 282.02 MT in 1992-93 to 270.19 MT in 1993-94 i.e. by 4.2%.
- (vi) Seasonality of purchase of wheat by the traders, broken down into 4 quarters is shown in Table 5.4.

Table - 5.4 : Seasonality of Purchase of Wheat by Traders

Quarters	1992-93		1993-94	
	MT	% of total	MT	% of total
March - May	121.64	43.13	122.09	45.19
June - August	58.63	20.79	71.10	26.31
September-Nov.	57.66	20.45	41.47	15.35
December-Feb.	44.09	15.63	35.53	13.15
Total:	282.02	100.00	270.19	100.00

As is natural, maximum purchases were made in March-May i.e. immediately after harvest of the local production in both the years after which purchases slowed off. Average purchase during the years dropped from 44% in the first quarter, to 24% in the second quarter, 18% in the 3rd quarter and 14% in the last quarter.

- (vii) Supplies of wheat were received from 3 sources viz 1) domestic wheat from local markets, 2) Government and 3) imported wheat from importers or others. Table-5.5 shows sourcewise purchase of wheat by the traders during 1992-93 and 1993-94.

Table-5.5 : Sourcewise Purchase of Wheat by Traders

Source	1992-93		1993-94	
	MT	%	MT	%
Domestic wheat from local markets	132.71	47.06	123.37	45.66
Government	47.37	16.80	75.00	27.76
Imported wheat from importers/ others traders	101.94	36.15	71.82	26.58
Total	282.02	100.00	270.19	100.00

During the years domestic supply constituted 46%, Government source 22% and imported wheat 32%. Traders (wholesalers) operating in urban centres received most of the supplies from Government source and importers/other traders, and Farias/Beparis operating in rural areas/centres hardly shared such supplies.

- viii) Average investment of the traders in the wheat business stood at Tk.94,510. Most of the fund came from own source (94%), 3% was contributed each by banks and friends & relatives and nominal amount, less than 0.3%, came from Mohajan (money lenders). Table-5.6 shows the position.

Table-5.6 : Sources of Fund of Wheat Traders

Sources	Amount ('000 Taka)	In % of Total
Own	88.60	93.75
Bank	2.84	3.00
Friends and Relatives	2.81	2.97
Mohajan (Money Lender)	0.26	0.28
Total	94.51	100.00

- (ix) Sale pattern - Traders sold 58% of their wheat to millers, 32% to other traders while 10% was sold as atta after crushing in the chakkis.
- (x) Profit margin - Trader's profit margin stood at Tk.194 per MT in 1992-93 and Tk.270 in 1993-94 which worked out to 3.28% of cost in 1992-93 and 4.61% in 1993-94.
- (xi) Problems of traders - Multiple answers were possible. Highest number of respondents (75%) listed (a) price fluctuations of wheat as the major problem while 68% complained about (b) irregular supply of wheat; a substantial number (55%) noted (c) non-availability of quality wheat as a problem of traders. About half of the traders (48%) mentioned (d) shortage of fund while 20% referred to (e) inadequate/shortage of storage capacity.

(c) Wheat Millers (Not Importers)

5.23 The impact of private sector wheat import on several types of millers was sought to be assessed in this study. In all 53 wheat mills of different types in five divisions have been covered under the study (details shown in section 3 on Methodology).

5.24 The educational qualifications of the respondents : The majority or 45% were HSC, 21% were graduates, and 11% post-graduates; 21% had read upto SSC, and only 2% had no formal education.

5.25 Millers had significant experience in the business. Almost 40% have been working for 10 years or more and another 40% had 7 to 10 years experience. 15% had experience of 3 or less years.

5.26 Respondents in the survey comprised of 53% owners, 4% managing partners, 11% managing directors, 8% partners, and 24% managers.

5.27 State of Business : A great majority of the respondent millers (70%) reported that business deteriorated in 1993-94 compared to the previous year while 23% reported that business improved. About 7% said that business either remained unchanged or they did not know the answer to the query.

5.28 Seasonality of Milling : There appears a distinct pattern of seasonality of milling. The millers milled together about 33% of their wheat in the first (harvesting) quarter, March-May and in each of the other 3 quarters they milled around 21 to 23% only.

5.29 Average Investment of Different Types of Mills : The average investment of the mills ranged from about Tk. 10 lacs for a Roller Mill, Tk. 43 lacs for a compact mill and upto Tk. 2 crores for a major mill. The investment varied with capacity and the year of installation of the mills.

5.30 Average Number of Full-time and Part-time Employees : Different types of mills employed 2.76 to 14.24 full-time employees and 1.81 to 5.88 part-time employees.

5.31 The average quantity of wheat purchased by the mills stood at 1456 MT in 1992-93 and 1562 MT in 1993-94. Domestic wheat constituted 47% and imported wheat 53% in 1992-93 against 43% and 57% respectively in 1993-94. Details are shown in Table 5.7.

Table-5.7 : Quantity of Wheat Purchased by Wheat Mills from Different Sources

Source	1992-93		1993-94	
	MT	% total	MT	% total
Domestic	680	46.7	666	42.6
Imported	776	53.3	896	57.4
Total	1456	100.0	1562	100.0

5.32 Capacity Utilization of Mills : Capacity of the mills varied from 16.57 MT per shift in case of major mills to 8.49 MT in case of compact mills, 3.21 MT in case of Roller Mills and 5.50 MT in case of R³ and Major Mills. Capacity utilization varied from 76% in case of roller and major mills to 85%, in case of compact mills (on one shift basis).

5.33 Purchase Price of Wheat : There are significant differences between domestic and imported wheat prices around the harvesting season as may be seen from Table-5.8. Differences are also noticeable among the different types of mills in respect of purchase price.

Table 5.8 : Domestic and Imported Wheat Prices

Type of Mill	April 1993		April 1994	
	Tk/md		Tk/md	
	Domestic	Imported	Domestic	Imported
1. Major	231.55	255.00	236.58	258.93
2. Compact	214.81	249.00	222.53	251.91
3. Roller	219.44	246.21	223.53	253.16
4. R ³ & Major	212.00	265.00	216.50	N.R.
Average	222.12	250.07	227.71	254.36

The above table shows that price of domestic wheat was systematically lower than that of imported wheat which was often ascribed to quality differences. Local wheat is known to be soft with lower protein content. Imported wheat, mainly from U.S.A. viz, Hard Red Winter (H²W) and Hard Red Spring (HRS) contain higher protein and are purchased at a higher price. Domestic soft wheat is mixed with imported hard wheat to yield a better product acceptable to local consumers.

5.34 **Prices of Products** : Different types of millers reported different prices for their products as noted in Table 5.9.

Table 5.9 : Prices of Different Products of Mills

Type of Mills	(Tk/Md)				
	Flour	Atta	Suji	Bran	Others
1. Major Mill					
April/93	352	258	470	173	-
April/94	361	267	465	185	-
2. Compact Mill					
April/93	339	266	-	170	-
April/94	352	274	-	179	-
3. Roller Mill					
April/93	338	261	-	175	380
April/94	340	269	-	182	390
4. R ³ & Major Mill					
April/93	351	253	-	173	-
April/94	360	265	-	196	-
Average April/93	343	261	470	173	389
Average April/94	350	269	465	183	390

5.35 **Profit Earned by Different Types of Mills** : Average margin of different types of mills varied from Tk. 1,202 to Tk. 1,873 per MT during 1993-94 and the average of all types stood at Tk. 1464 as shown in Table 5.10. The margin in percent of cost is also shown in the table.

Table 5.10 : Profit Margin of Wheat Millers by Mill Type

Mill Type	Cost Tk/MT	Sale Price Tk./MT	Margin (Feb'93-Mar '94) Tk/MT	* Margin as % of Cost
Major	6534	7736	1202	18.4
Compact	6510	8109	1599	24.6
Roller	6579	8165	1587	24.1
R3 & Major	6260	8133	1873	29.9
Average	6535	7999	1464	22.4

5.36 **Reasons for Change of State of Business of Millers** : A number of reasons were offered by the mills for the deterioration of their business, the often repeated reasons were :

- stiff competition among the millers (which have been accentuated by short supply of wheat)
- reduction in profit margin due to the abolition of fixed and low priced Government allotment, reduction of open market sale (OMS) by GOB, and distribution of wheat under non-monetized channels
- reduction in demand for wheat due to lower price of rice
- irregular supply of quality wheat and reduction of domestic wheat led to occasional closure of some mills.

5.37 On the other hand, some of the respondents (23%) claimed that business improved because wheat was now readily available from the wheat importers.

* Margin includes opportunity cost of own resources such as capital, land, structures etc. invested in the mill and services of the owners for supervision and management of the business as these costs are not estimated separately and charged to the firm. Besides, some of the mills which have integrated the functions of import, processing and trading would naturally show high nominal profit. These explain the apparent high margin of the sample millers.

(d) Private Importers

5.38 There are three categories of wheat importers operating in the private sector. Each category is discussed here to have an idea about the percentage of profit they earn. The importers do not maintain any published accounts. They were reluctant to disclose full information on their business operation and the consultants had to rely on the answers given by them in the questionnaire, cross-checked by information available from other sources.

Category 1 : Suppliers' Agent

5.39 W&W Grains Corporation is the local agent of Cargill, the biggest agro-based company of USA. This local agent has been operating on their behalf for the last 15 years. During past 13 years they supplied US wheat to the Ministry of Food both under normal commercial terms and under EEP. From 1992-93 they are also supplying wheat to the private sector under EEP both as an agent of the Cargill and occasionally as importers.

5.40 When the private import of wheat began in 1992-93 there was initially no import duty. In the latter half of 1992-93 import duty was first imposed at the rate of 7.5% of the C&F cost which was subsequently increased to 15% in the same year.

5.41 During 1992-93 W&W Grain Corporation supplied 36000 MT wheat (C&F price US\$ 142/MT). During 1993-94 they have supplied 50,000 MT in two lots at C&F price US\$ 127/MT and US\$ 125/MT. After addition of 15% import duty the C&F value per MT was US\$ 146.62 and US\$ 143.75 respectively. According to the calculation provided by USDA the millgate price of wheat including landing cost in the first supply was in the neighbourhood of US\$ 177-177.50/MT and in the other two cases it was about US\$ 177.00/MT. The sale price in all the cases was US\$ 178.50/MT. The suppliers' agent thus made an apparent profit varying from US\$ 1.25 to US\$ 1.75/MT, besides their commission from the principal.

Category 2 : Millers' Association

5.42 Bangladesh Major and Compact Flour Mills Association (BMCFMA) is the biggest importer of wheat. This association has now more than 200 flour mills enlisted with them. They import wheat on behalf of the mills interested in such import. They pool their resources together and contribute to the L/C margin according to the quantity of import of each participant. The Association just coordinates the import and distributes the imported wheat at C&F cost as evident from the details below in Table 5.11. The participating mills take delivery of the wheat from the ship and pay all expenses upto their mill.

Table 5.11: Import and Distribution price of wheat by the BMCFMA

	Import Price (C&F US\$ MT)	Sale Price (US\$ MT)
1992-93		
1. 1st lot	143.00	143.00
2. 2nd lot	142.00	142.00
1993-94		
3. 3rd lot	130.00	130.00
4. 4th lot	124.00	124.00
5. 5th lot	130.00	130.00
6. 6th lot	129.00	129.00

The import quota of the participants varied from as low as 50 MT to 3000 MT (Noorani Mills) per lot.

Category 3 : Commercial Importers

5.43 This category includes the commercial importers like M/S Padma Flour Mills and M/S Bhaiyan Group of Industries. They imported wheat purely for trading purpose. During 1992-93 and 1993-94 they imported the following quantities of wheat :

Quantity (MT)	Import Price (US\$/MT)
1992-93	
1. 25000 (HRW, USA)(Padma)	141.00
2. 15000 (Turkey) (Padma)	141.00
3. 53000 (in two lots)(Bhaiyan)	140.00 & 125.00
1993-94	
30,000 (Bhaiyan)	129.00

5.44 Both the importers incurred loss in 1992-93 on account of imposition of 7.5% import duty after opening of L/C. Their forward sale price to the customers varied from Tk. 250 to Tk. 265 per maund but the cost after imposition of import duty including landing cost was Tk. 265 per maund. So they had to incur loss. This forced M/S Padma Flour Mills not to import any wheat during 1993-94. M/S Bhaiyan Group of Industries also took considerable time to absorb the loss and so their import during 1993-94 dropped to 30,000 MT from 53,000 MT in the previous year. However, the other commercial importers made profit during 1992-93.

5.45 The commercial importers reported that their normal profit expectation was Tk.5.00 per maund which comes to Tk.135.00 per MT or U.S.\$ 3.35 per MT. This was cross-checked with different concerned agencies. It transpired that the commercial importers made a profit of U.S.\$ 5.0 to U.S.\$ 6.0 per MT which came to around 3.14% of the cost.

(c) Consumers

5.46 There has been a structural change in the distribution of wheat and wheat products in recent years. Previously, wheat was available in the urban markets either through the ration shops or leakage from the PFDS. The consumers used to buy wheat from the market and get whole wheat (atta) after custom milling in the local chakkis. Now wheat is not generally available in urban markets and the consumers purchase atta from the retailers in loose or packed condition supplied by the millers. In Dhaka market presently loose atta (ordinary quality) sells upto Tk 9.00 / kg and packed atta at Tk 12.50 / kg in polythene packs. With the changes in PFDS and with private import of wheat a sanguine qualitative change in the atta/flour market has taken place but with some baleful effect. The packed product may be considered superior to whole wheat (atta) as it is refined, well packed, has a better keeping quality and a convenient item for the consumers. However, these factors alone may not explain the increase of the cost by Tk 3.50 / kg.

5.47 The retail price of wheat in Dhaka market, if available, would be around Tk 8.00 / kg and the cost of atta custom-milled by the consumers in the chakkis would be Tk 9.00 / kg. But the consumers who would like to get atta from such channel cannot get it as wheat is not available in the retail markets and they are forced to pay Tk 3.50 / kg more for a product which is nutritionally inferior to whole wheat atta containing all the bran.

5.48 These facts possibly reflect an oligopolistic market structure in wheat import trade and industry. This is reinforced by the fact that while the import price of wheat was lower by around US \$ 20 / MT in 1993-94 the price of wheat products remained unchanged.

Constraints and Possibilities of Private Wheat Imports

General

6.1 Wheat import under private sector started from 1992-93. In the first year about 335,000 MT wheat were imported of which 59% was from the USA under EEP. In following year, 238,821 MT wheat had been imported of which 70% was from the USA again under EEP.

6.2 Presently the private sector is well organised for the wheat import and has attained a level of efficiency. Wheat is imported in bulk condition for freight advantage, one bottom of which should be between 25-30,000 MT to be viable. The C&F value of one such bottom (25,000 MT) is US\$ 3.1 millions for arrival at Chittagong port at the subsidized price of US\$ 124.00 per metric ton. 25,000 MT of imported wheat under EEP costs more than Tk. 124 millions. So to organize import of wheat in the private sector needs importers of considerable means to finance the purchase.

6.3 Interviews of a good number of various categories of importers, local agents, millers, retailers, wholesalers, international/foreign as well as national agencies/organizations, growers and scholars were undertaken to evaluate the performance of the private sector wheat import.

A. VIEWS OF THE PRIVATE SECTOR

Problems/Constraints/Possibilities

6.4 The importers are organized into three categories: Suppliers' agents, association of the flour millers and commercial importers. The Bangladesh Major and Compact Flour Mills Association (BMCFFMA) with more than 200 members is the only association importing wheat. All members are not active in the import trade. This association carefully plans their import programme participated by a number of Millers contributing fund to the L/C margin according to requirements varying from as low as 50 MT upto 3000 MT per shipment. Millers from Narayanganj, Dhaka and Chittagong mainly participate. The BMCFFMA coordinates the entire import process and so plans the arrival time of the ship. The participants in the import take delivery of their share from the mother ship directly at the outer anchorage through coaster/barges and then from jetty by rail and trucks on payment of their respective bank loan. The landed cost for each importer of the association varies as per their respective arrangements. The mother ship is unloaded very quickly and the importers generally earn despatch money. The BMCFFMA has unique record of earning despatch and there has so far been no instance of payment of demurrage on account of delay in discharge. They have no storage facility of their own but are thinking about setting up such facility in future. Import by BMCFFMA has been steadily increasing. Presently their annual requirement is above 100,000 MT. This organization appeared

to be aware of the alleged over capacity in the storage system of the Food Department of GOB and felt that they could rent or hire storage for their exclusive use.

6.5 This association imports through local agents of the foreign suppliers through open tenders. They distribute their imported wheat to the participants at the cost price and do not make any profit. They do not monitor the manner of utilization of the imported wheat by the participants.

6.6 Importers like Bhaiyan Group of Industries and M/s. Padma Flour Mills of Chittagong imported wheat through local agent. They have storage facilities of their own as well as hired. M/s Padma Flour Mills used only 5% of their imported wheat in their mill. The other group sold their wheat to different customers. They have no flour mill of their own though the Nabisco Biscuit and Bread Factory owned by them purchase flour from the market. Narayangonj Flour Mills, a noted member of BMCFMA, participate in the wheat import through BMCFMA and use it in their mill.

6.7 All imports have hitherto been made at Chittagong port alone because of major importers having business concerns at Chittagong and of better port facilities which are lacking in Mongla, the second port of the country.

6.8 There are a number of experienced local agents of well known foreign suppliers operating in the country. The agents look after the interest of the suppliers in this country and are well conversant with the rules and regulations of wheat import and export.

6.9 The importers reported that they suffer ship shortage varying from 0.25% to 1.00% but transit loss within the country was negligible because of transportation through escorts provided by themselves. Ship shortage and transit losses in the private sector are significantly lower than the same in the public sector.

6.10 Efficient and economic wheat import warrant use of one bottom ship with a minimum load of 25,000 MT to avail the benefits of low freight rates by bulk import. This requires very heavy investment. It is not possible to import wheat in small lots by any party. As a result, only resourceful parties can manage to participate in wheat import. Already an oligopolistic structure participated by a few resourceful parties of Chittagong and Dhaka has emerged in private sector import of wheat.

Regulatory Issues

6.11 The importers had no complaints about any Government regulations hindering their business or affecting their efficient operation. Government has practically dismantled all regulations affecting their business.

Taxes and Duties

6.12 At present import of wheat is subject to an import duty of 15%, license fee of 2.5% and advance income tax at the rate of 2.5%. The importers strongly suggested that the import duty should be reduced to 5% as the present high rate of import duty was affecting the price of wheat products. (The entire issue of import duty is discussed

in Appendix-6.1; page 6-7 to 6-9). They also suggested for the withdrawal of the advance income tax. They had no complaint about import license fee.

Infrastructure Need - Availability and Needs of Transport, Storage - Marketing Facilities

6.13 The importers generally have some storage facilities of their own and hired. A good portion of wheat is delivered from mother ship. The balance is taken to jetty by private lighterage vessel and by the ship herself on attainment of suitable draft and thereafter transported to customers place of business (store house) through truck and railways. No difficulty has been reported by any importer/customer in the matter of unloading, loading, transportation of their wheat from port area as well as customs clearance. Mostly they use hired transports for which they reported no difficulty. Some of the importers reported that they would need to set up their own storage facilities to handle the import more efficiently. They pointed out that Food Department had storage facilities in Chaittagong, Dhaka and Khulna which would be rendered surplus or useless with the reduction of PFDS; they accordingly suggested that such surplus storage facilities should be rented/leased/sold out to the private importers.

6.14 The importers required a time period ranging from 15 days to 1 month occasionally extended upto 2 months, to sell their wheat on the basis of indents from the customers.

Credit Needs and Availabilities

6.15 The importers needed to deposit L/C margin varying from 5 to 20%. Adequate collateral security and L/C charge are also required. Formalities to establish L/C take about two weeks. About 1.5-2 months time period is required for the ship to arrive at Chittagong port after opening of L/C. Bank interest rate has now been reduced from 18% to 12% by nationalized banks.

6.16 They recommended that L/C margin should not exceed 10%. There were no general complaints about behaviour of the banks in opening of L/C except that formalities were too many and time consuming. It is true that the L/C margin would be primarily determined by the inter se relationship between the bank and the client (importer). Discussion with the importers revealed that the L/C margin was also affected by the descretion/personal attitude/whims of the bank officials. Considering the fact that the value of a wheat shipment of 25,000 MT would come to about Tk. 13 crores, the L/C margin of even 10% exceed Tk. 1.0 crore which is a heavy amount. There is, thus, a strong case for fixing the maximum L/C margin at 10% in the interest of reduction of the cost of import.

Market Information and Intelligence

6.17 According to field survey there are seasonalities in wheat trade. During peak supply season of fruits (May-June) and harvesting season of aman (Dec-Jan), wheat and Boro (March-June) the demand for wheat decreases. The traders are well aware of this seasonality and plans their import avoiding these periods. About international price/import price of wheat they compare the domestic market price with import price obtained through local agents of the suppliers and then negotiate. The Millers Association (BMCFMA) float international tenders to import wheat. The Association

maintained that during the last 2 years they received no response from EEC countries.

Current Incentive Provided by USA, EEC, etc.

6.18 In order to increase the sale of US wheat USDA started the EEP from mid 80s for sale of wheat to the underdeveloped countries at highly subsidized price. EEC also used to sell wheat at subsidized price. The traders here do not like EEC/French wheat due to its quality. This wheat is softer than HRW/HRS of US variety. There is no instance of import of EEC/French wheat in the country by the private sector. Enquiries to a big French supplier of wheat drew no response from them during the study period.

6.19 The importers and traders have categorically stated that if wheat at subsidized price was not available then its import would not be profitable. Importers revealed that EEP price costs US\$ 125/MT while the US farmer received around US \$175, involving a subsidy of US \$ 50/MT. According to these importers, with the abolition of EEP, wheat import would be difficult.

6.20 The study reveals that wheat has multiple uses. So even if it is not available at subsidized price, import of harder varieties such as HRW/HRS would be required for mixing with domestic softer variety for crushing into quality flour, atta and suji which sell at higher price than coarse and sometimes medium quality rice. In the absence of subsidized (EEP) wheat, the price of quality flour will tend to rise. Wheat is also being increasingly used by the growing labour force both in urban and rural areas, particularly for breakfast and lunch.

GATT Agreement, Future Incentives and Consequences on Private Import of Wheat

6.21 Recent GATT decisions will take a few years to implement. So the EEP facilities are expected to continue upto that time though the extent of concession may be reduced. Appendix 4.2 shows the background paper on GATT. Considering the economic situation of the LDCs, donors' assistance in terms of concessional price is expected to continue in addition to outright grants for special programmes such as FFW, VGD etc.

Food Aid Possibilities and Impact on Private Import

6.22 During 1983-84 to 1993-94 the total quantity of food grains received from various donor countries was 12.326 MMT. The annual average works out to be 1.23 MMT. Out of this quantity the share of wheat was 1.13 MMT i.e. about 92% of total food aid. But during the first four years of the current decade (1991-1994) the total food aid received was 4.053 MMT - the annual average being 1.01 MMT out of which share of wheat was 0.99 MMT i.e. about 98% of total food aid. During the first two years of the current decade the annual food aid was about 1.3 MMT but during the latter two years it was about 0.7 MMT i.e. annual food aid sharply fell by 50%. According to the projection by WFP of probable food aid by different donor countries, about 1 MMT is expected to arrive in the country during 1994-95 but there is every likelihood of lesser quantity of around 0.7 MMT arriving. According to WFP, Dhaka donors contributing to WFP have pledged lesser quantity for the programme to the countries where it is in

operation. Allocations under US PL 480 - II & III, EEC and Canada, the other major donors have already been substantially reduced. All these allocations are in wheat.

6.23 Wheat aids to be received in the coming years are mostly meant for distribution under non-monetized channels like FFW, VGD and relief work. Wheat aid under US PL 480 - II is placed at the disposal of CARE for FFW. US Aid has been finalizing plans to auction the PL 480 - III wheat at Chittagong, Mongla and Dhaka and deposit the sale proceeds to government exchequer for financing agreed rural development projects of ADP. Monetized channels of ADP are now confined to Essential Priority (EP) and Open Market sales (OMS). The importers are not against OMS under which wheat is sold at a price between Procurement Price and Open Market Price. They have stated that distribution of wheat under EP, Free Sale (FS), FFW and VGD affect their trade because of substantial leakage from these channels into the market.

6.24 With the substantial contraction in food aid in the coming years and preponderance of non monetized channels, the private import is not going to be affected much. If we take domestic production of wheat remaining static at 1.1 MMT and annual food aid at 0.8 MMT the private sector requirement of wheat import will be to the tune of 0.3-0.5 MMT, in the coming few years.

B. VIEWS OF PUBLIC SECTOR

Problems/Constraints/Possibilities

6.25 According to the food policy and management currently pursued by the government, Public Food Distribution System (PFDS) barring EP and OMS/MO channels is virtually not in operation. PFDS figures which used to be annually 2.17 MMT on the average during 1980-81 to 1991-92 fell to 1.07 MMT in 1992-93 and to 1.3 MMT in 1993-94, proportion of wheat mostly being 2 to 3 times larger than rice.

6.26 With reduced volume of PFDS and reduced coverage of population the wheat gap is now open to be filled up through private import. Government is also attaching lesser importance to domestic procurement and advocating open market mechanism to combat any unhealthy situation in the foodgrain sector.

Infrastructure Needs - Availability and Needs of Transport, Storage - Marketing Facilities

6.27 Government has been managing food in the public sector for the last half a century since 1943. In the process GOB had established an elaborate Public Food Distribution System (PFDS) with a storage capacity of around 1.8 MMT extending often upto the Thana Head Quarters. Except for a brief period government did not have any own transport fleet for transportation purpose of wheat. Carrying contractors for road, rail and waterways transportation were appointed by DGF on commission/fee/rate basis. Appreciable loss such as storage loss, handling loss and transit loss used to be incurred besides ship shortage running into thousands of tons valued at millions of taka.

Credit needs and Availability

6.28 MOF gets budgetary allocations for commercial import of foodgrains with which it plans import. In case of shortfall in fund additional allocations are often promptly received from the Ministry of Finance for any extra-import. Sometimes

suppliers' credit is also organized. In short to meet emergency requirement MOF gets the full support of the entire government machinery.

Market Information and Intelligence

6.29 MOF used to monitor international wheat price through its missions located in the countries of major suppliers such as USA, Canada, Australia and also from USDA and other sources. Moreover, the commercial purchases are made at competitive price through open tenders participated by suppliers from all over the world. Quite often it is not possible to make bargain purchase because of emergency needs.

6.30 Very recently a "Food Situation Room" has been set up in the FPMU for market monitoring and dissemination of information on food situation in the domestic as well as world market. The role of the government will now be changed from regulation to assisting the private sector in improving their performance and monitoring the condition of the market structure of the private sector. The Room/Centre should be provided with all equipment and manpower for effective performance of the new role. Through the centre, information on the supply, stock and price situation of wheat in the world market may be collected and supplied to the private importers. Continuous study of the relationship between the import price of wheat, and the domestic price of wheat and the wheat products would be essential to decide on the tariff on wheat import and the measures needed to maintain a competitive market structure in the wheat trade and industry.

EEP, GATT Agreement, Future Incentive and Consequences

6.31 Recent GATT Agreement will take several years to implement. Abolition of EEP or for that matter absence of subsidized sale of wheat will severely affect government or private commercial purchase requiring more fund. Under certain scenarios described in **Section 4**, there may be no private import and food aid could as well be reduced. The own price elasticity being high, rising prices affect consumption of wheat quite substantially (See Section 4).

Food Aid Possibilities and its Impact

6.32 As already explained wheat aid of around 1.0 MMT received annually on the average in the last ten years will no longer be there in the remaining years of the current decade on account of donors attaching lesser importance to Bangladesh in view of increasing domestic rice production and their emerging interests in other countries. Wheat is a relatively new crop in Bangladesh and is not expected to grow much without major technological breakthrough. On the other hand use of wheat for half a century has created a certain taste and preference for wheat among the people and its consumption by labour force will continue to grow. Lesser wheat aid means wider wheat gap under certain conditions mentioned above in **Section 4**, which can be filled up by the private importers since government current policy is of gradual withdrawal from food management.

Tariffs on Wheat

Presently, Bangladesh Government has imposed a tariff of 15% on private imported wheat. Before examining the relevance of this policy, it could be worth while to measure the Nominal Protection Co-efficient (NPC) and Effective Rate of Protection (ERP) of wheat.

(i) Nominal Protection Coefficient (NPC) :

$$\text{NPC} = P_d/P_w$$

Where, P_d = domestic price of wheat

P_w = world price (converted through an appropriate exchange rate, transport and handling and storage charges and adjustment of quality differences).

NPC indicates the difference between domestic and world price as adjusted above. NPC larger than 1 indicates that domestic price is greater than world price, giving a presumption that production regime including Government policy is favouring domestic production.

Chowdhury, Morris and Meisner have calculated that NPC for wheat is less than 1 for all the years since 1981-82 as shown below :

Nominal Protection Co-efficients for Wheat

Year	Wheat
1981-82	0.73
1982-83	0.76
1983-84	0.78
1984-85	0.75
1985-86	0.79
1986-87	0.81
1987-88	0.83
1988-89	0.80
1989-90	0.84
1990-91	0.87
1991-92	0.88

Source : Chowdhury N, Morris M, and Meisner, C - Comparative Advantage of Wheat in Bangladesh : Technological, Economic and Policy Issues , 1994.

(ii) Effective Rate of Protection (ERP)

ERP is defined as :

$$\frac{\text{Assisted Value Added}}{\text{Unassisted Value Added}} - 1$$

$$\text{or, } \frac{\text{Assisted Value of Output}-\text{Assisted Value of Inputs}}{\text{Unassisted Value of Output}-\text{Unassisted Value of Input}} - 1$$

Assistance means taxes, subsidies, divergence between official and equilibrium exchange rate for price, input and output.

In this analysis, the No 1 soft white winter wheat has been taken to be comparable with Bangladeshi wheat. Its import parity price was estimated taking into consideration the FOB price of US\$ 125/ MT. Adjustment has been made for exchange rate overvaluation of 1.7%, and freight, transport, storage & handling costs upto the farmgate in Bangladesh. The domestic farmgate price was estimated to be Tk 6.50 /kg based on trend price. The unassisted input value was estimated by adjusting the conversion factors for individual inputs. Based on the above assumptions, unassisted value added and assisted value added were arrived at. The ERP for wheat has been estimated at - 0.28 for 1992-93 and -0.29 for 1993-94.

The assisted and unassisted value added for 1992-93 and 1993-94 are given in Appendix of the Table 1 and 2.

Under such circumstances, one would expect that production of wheat should expand in the country. But it has already been observed that wheat production remained static over the last one decade and yet wheat imports took place not only under grant but also under private commercial import. The producer price of wheat in Bangladesh has remained considerably below import parity price, possibly because of large scale distribution of wheat by Government to the poorer section of the people, under non-monetized channels viz. FFW, VGD, relief operations to meet the social demand.

Appendix Table 1 : Estimation of Assisted and Unassisted Value Added for 1992-93

Items	Quantity (Kg / Acre)	Assisted Unit price (Tk/Kg)	Assisted Value (Tk /Acre)	Conversion Factor	Unassisted Value (Tk /Acre)
Yield	1027.16	6.50	6676.00	1.24	8299.00
Seed			598.04	0.85	508.33
Urea	72.54	6.03	437.74	1.00	437.24
TSP	48.81	7.60	371.05	1.11	411.86
MP	28.07	7.28	204.42	1.25	255.53
Other	13.10	3.35	43.89	1.11	48.72
Organic	1285.00	0.15	190.19	1.00	190.19
Pesticides			66.23	0.89	58.94
Irrigation			423.75	0.89	377.14
Other cost			83.57	1.00	83.57
Total of current input			2418.38		2371.52
Value added			4258.00		5927.00

Appendix Table 2 : Estimation of Assisted and Unassisted Value Added for 1993-94

Items	Quantity (Kg / Acre)	Assisted Unit price (Tk/Kg)	Assisted Value (Tk /Acre)	Conversion Factor	Unassisted Value (Tk /Acre)
Yield	961.84	6.50	6252.00	1.24	7772.00
Seed	74.58	6.03	598.15	0.85	508.43
Urea	47.34	7.93	449.37	1.00	449.37
TSP	27.33	7.93	375.56	1.11	416.87
MP	11.59	3.43	216.77	1.25	270.96
Other	947.52	0.17	39.77	1.11	44.15
Organic			157.18	1.00	157.18
Pesticides			75.34	0.89	67.05
Irrigation			443.83	0.89	395.01
Other cost			125.92	1.00	125.92
Total of current input			2481.89		2434.94
Value added			3769.00		5333.00

Conclusions and Recommendations

CONCLUSIONS

7.1 With relative ease in national and international food situation and the expensive nature of public sector involvement in food management, alternative efficient and cost-effective way of marketing wheat in Bangladesh is the involvement of the private sector. In the last two years, the private sector has participated in the marketing of wheat. This study has seen their commendable performance.

7.2 In spite of the large financial involvement in importing one bottom of wheat of 25-30 thousand tons, resourceful Bangladeshi businessmen have succeeded in importing annually around 0.28 MMT in the last 2 years.

7.3 Private sector importers, however, face certain constraints and bottlenecks. They have particularly highlighted 15% tariff, high L/C margin and lack of storage facilities.

7.4 While they have appreciated the need for income generation projects like FFW, VGD etc., they strongly felt that these programmes should be well coordinated to promote local production of wheat as well as maintain the profitability of private sector import of wheat.

7.5 Since early 1980s, production of wheat in Bangladesh has remained more or less static around 1.1 MMT. Analysis of production function and the constraints of wheat production indicate that wheat production in the country may have reached a stage wherefrom production cannot be enhanced without major technological breakthrough.

7.6 Bangladesh will have to maintain a certain quantity of Food Security Reserve (currently estimated at 500,000 MT). Sale by Government for stock turnover in case of slow off-take from PFDS has to be coordinated with the private sector import. The modus operandi has to be worked out so that private sector import is not discouraged.

7.7 Under erstwhile elaborate PFDS and high level of distribution, wheat used to flow upto the thana level and below on regular basis. At that time atta chakkis used to operate throughout the year having both local and Government wheat. The study shows that while public sector wheat is not available on a regular basis now distribution of imported wheat mostly remains confined to milling centres and flour mills. Wheat imported under private sector rarely reaches the chakki owners and as a result they are facing scarcity of supply.

7.8 There has been structural change in the distribution of wheat and wheat products in recent years. Previously, in urban areas wheat was available in the urban markets either through the ration shops or leakage from the PFDS. The consumers used to buy wheat from the market and get whole wheat (atta) after custom milling in the local chakkis. Now wheat is not generally available in urban market and the consumers purchase atta from the retailers in loose or packed condition supplied by the wheat millers. In Dhaka market, presently loose atta sells upto Tk. 9.0 per kg and packed atta at Tk. 12.50 per kg in polythene packs. With the changes in PFDS and with private import of wheat, a sanguine qualitative change in the atta/flour market has taken place. Before, the margin between wheat and whole wheat used to be Tk. 1.0/kg only. Now, the price of packed refined atta (bran off upto one third) is Tk. 12.50/kg while wheat price if available at retail channel is Tk. 8.00 only. This is the outcome of oligopolistic production of refined atta and distribution of imported wheat by the few importers. This is further reinforced by the fact that import of wheat at a price reduced by around US\$ 20/MT during 1993-94 did not reach the consumers in the form of lower price of the wheat products.

7.9 The loss of business sustained by the chakki owners, a class of consumers who prefer wholewheat (atta) but now are forced to consume refined atta and the consumers of refined packed atta who are obliged to buy at a higher price by the introduction of monopolistic brand names, are real phenomena borne out by the study.

7.10 With the implementation of GATT provision of reduction of export subsidy, price of wheat in Bangladesh may rise. This rise in price, under the influence of own price and cross-price elasticities, may drastically reduce the consumption of wheat, resulting in the evaporation of private import which is also apprehended by well-informed private importers. Consumption and private import of wheat are very much sensitive to price changes and leakage from non-monetized channels of PFDS. With increase of wheat price by 15% and decrease of rice price by 10% between 1991-2001 and increase of wheat price by 35% and rice price by 5% between 1991-2006, there are positive private imports of wheat between 160,000 MT and 215,000 MT in 2001 and 780,000 MT and 890,000 MT in 2006 with 25% leakage. When the wheat price increases by 20% and rice price decreases by 15%, between 1991-2001, private wheat import almost ceases to exist in 2001. When wheat price increases by 45% as per GATT provisions and rice price increases by 5% between 1991-2006 private wheat import disappears in 2006 with 25% leakage; however, with 50% leakage private wheat import in 2006 becomes negative meaning reduction of public sector import. However, it is expected that LDCs like Bangladesh will be exempted from GATT provisions for a reasonable period and hence price of wheat will increase marginally allowing profitable private import of wheat for the coming decade.

RECOMMENDATIONS

7.11 Private Sector

- i) Private import of wheat should continue and measures could be taken to sustain it by not importing commercial wheat under Government auspices. In case it is necessary for the Government to commercially procure wheat externally because of shortfall in production and low level of public stock, such procurement may be made through the private sector.
- ii) There scarcely is any justification for the imposition of a tariff of 15% on wheat import as domestic wheat price is less than imported wheat price, adjusted for quality. However, the nominal protection coefficients (NPC) or Effective Rate of Protection (ERP) are based on ex-post costs and prices. It appears from several studies that in Bangladesh wheat production has reached a technological bottleneck specially in terms of R&D, particularly for lack of quality seed, inadequate extension service, cash constraints and lack of credit facilities. To promote wheat production, tariff for sumptuary motive could be imposed, the budget specifically pinpointing that the money could be used for wheat development in the country. In such a situation, a tariff of 10% could be supported for 1994-95. Domestic and world price (C&F) should be regularly monitored and studied and recommendations formulated for variation of the import duty for future years. The rate of tariff should be decided in the budget session and incorporated in the Finance Act; there should not be any change of rate after passing of the budget through Statutory Regulatory Order (SRO).
- iii) The L/C margin needs to be rationalized as the bulk import of wheat requires quite a substantial resource. Though the L/C margin should be decided by the inter se relation between the client (importer) and the banker, knowing the banking practices in the country as they exist now, a case for maximum 10% L/C margin could be supported.
- iv) Some of the importers have expressed their necessity and intention to set up storage facilities of their own to handle the import, particularly in Dhaka and Chittagong. With the reduction of the size of the PFDS, sizeable portion of storage capacity of the Food Department could be rendered surplus even in Dhaka and Chittagong. Some of these may be leased/sold out to the private importers/wholesalers.
- v) As an LDC country, GOB must put in all efforts to get access to all concessional terms such as EEP for private sector import of wheat. GOB must also try to obtain all the exemptions and preferences under GATT in respect of wheat.

7.12 Public Sector

Role of Government /Ministry of Food should remain mainly confined to

- i) maintaining Food Security Reserve and operating price stabilization measure mainly through open market sale (OMS) of paddy/rice & wheat at a price which does not unduly depress the domestic price;
- ii) distribution of foodgrains (mainly wheat) under non-monetized programmes like FFW, FFE, VGD etc. to meet social want;
- iii) importing wheat, under food-aid of around 800,000 tons annually;
- iv) procurement of local wheat for PFDS strictly meeting quality standards;
- v) providing all facilities and assistance to the private sector for their efficient performance; the Food Situation Room set up in the FPMU may collect information on the supply, stock and prices in the world market and supply the same to the private importers; the centre should be provided with necessary equipment and manpower to efficiently perform its function; and
- vi) constant monitoring of the performance of the private sector and taking appropriate steps to ensure a competitive market structure in the wheat trade and industry. The interests of the chakkis and small flour mills, particularly in respect of their availability of wheat, should be monitored by Ministry of Food.

Annexure

STUDY ON PRIVATE SECTOR WHEAT IMPORTS

TERMS OF REFERENCE

1. (a) Name of the study : Study on Private Sector Wheat Imports
 - (b) Objective of the study :
 - i. Evaluate incentives for private sector import :

The study will review existing incentives and dis-incentives to private sector import of wheat. Among other considerations, it will include an examination of policies, infrastructure, tariffs, world and domestic prices, and Government pricing policy.
 - ii. Review recent private sector import :

This study will review and evaluate recent private sector wheat imports. The goal of the review is to see if any changes in regulations, procedures, information availability or financing will be necessary to stimulate further private sector participation in the future.

This study will review existing Government regulations on foodgrain import, access to foreign exchange, and any others effecting private foodgrain imports.

It will then examine, in-depth, the recent private import efforts, the regulatory approval procedures, tariff negotiations, financing availability and any other factors effecting them. It will likewise review the private associations tendering, mechanisms, information availability and evaluate the competitiveness of the prices received.

In gathering necessary data, the study will include interviews with private importers, grain dealers, bankers, Government and other observers knowledgeable about grain import. The work will require substantial knowledge about current government foodgrain import practices and policies as well as about the private import trade in Bangladesh.
2. Sponsoring Authority : Food Planning and Monitoring Unit (FPMU), Ministry of Food.
 3. Consultancy, Fees : The fees of the consulting firm could be finalized only after the acceptance and processing of the technical offer of the selected firm (s).

4. **Source of Finance** : USAID Technical Assistance Grants to FPMU. The amount will be paid in local currency. The amount of the consultancy fee will be made strictly as per condition of agreement reached between the employer and consultant and as per approval of the Functional Committee headed by the Secretary, Ministry of Food.

6. **Background :**

Until recently, the Government of Bangladesh has held a monopoly on foodgrain imports. That controls may have disadvantages. First, Government import has proven more costly than necessary (World Bank, 1992; Choudhury, 1990).

Second, Government may not always be able to ensure an adequate and timely supply of foodgrain imports. The crisis in wheat supply 1991-92 represents the latest example of the difficulties government faced in mobilizing necessary resources and machinery to effect timely foodgrain import.

All project suggest that, in the future, demand for wheat will far outface domestic supply, Hence, Bangladesh will become more and more dependent on wheat imports. Government increasingly felt that private sector support is needed in mobilizing resources, anticipating demand and securing timely foodgrain imports.

Government has begun, to sanction private wheat imports. In the year 1992-93, the private sector imported as much as 3,30,000 m.tons. This year government has also authorized. Private traders to import for purely commercial distribution. In the medium and long run, many observers expect that the private sector share of foodgrain imports will need to grow in order both to reduces costs to government and to ensure adequate and timely supplies.

7. **Terms of Reference (TOR) :**

- i. Evaluate possibility for private sector wheat import under existing condition: Private sector wheat import may be done by the traders for commercial distribution by the flour millers or their flour mills. It implies that traders or millers can go for import only if there is sufficient profit margin under the existing price structure. Among other issues the study will examine the following:
 - a) To examine local wheat production, government import either through aid or through commercial purchase correspondingly, the wheat consumption demand in Bangladesh over long and short term.
 - b) To analyze and compare the historical world price against the local market prices of wheat and wheat products and to estimate profit

- margin for the millers and traders at different stages of marketing and processing.
- c) To assess the yearly gross and core requirement of wheat import at short and long term given the local production and extent of substitutability to rice.
 - d) To analyze the infrastructure facilities like port handling, storage, movement and marketing facilities available for the private importers in the country.
- ii. In order to make the private import competitive with that of Government, it is required to analyze the existing government regulations including tariff and pricing policies in relation to private grain trade and to suggest legislative/regulatory changes to liberalize the import. Hence, the study will examine.
- a) Examine the policy implications needed to rationalize the private and public wheat import.
 - b) Identify the disincentives and bottlenecks on the way of private sector import and suggest alternative measures to remove such disincentives.
- iii. To review and evaluate the private sector wheat imports in 1992-93 and 1993-94 as taste cases and identify the underlying problems and suggest for improvement of the process.
- iv. To examine international principles of wheat trade and find out the import incentives given by the exporting countries (like EEP).

8. Execution and Responsibilities of the Study :

The study will be carried out by the consultant under the direct supervision and control of the Functional Committee constituted by the Ministry for the study. Overall responsibility for direction will rest with the Functional Committee. Besides providing counterpart support to the entire study programme, the Functional Committee will guide and supervise the study at all stages while the FPMU, Ministry of Food will coordinate and evaluate the progress of the study.

9. Work Plan :

- i. Start work by the local consultant immediately after the agreement.
- ii. Submission of inception report within one month from the date of agreement.
- iii. Submission of monthly/bi-monthly report on the progress of work made by the consultant and reviewing the same by the Functional Committee.
- iv. Collection of information, statistics and conducting field survey on regular basis, or at a time as mentioned in the agreement/proposal.

- v. Submission of draft report for review by the Functional Committee in appropriate time.
 - vi. Review the draft report by Functional Committee at a time decided by the committee as per agreement.
 - vii. Revision/modification as per observation/recommendation of the Functional Committee time to time.
 - viii. Submission of final report in due time as decided by the committee.
10. **The offer should contain the following information :**
- A. Details of the consultancy firm/consultant :
 - i. Name and official address.
 - ii. Name and official address of the Director/nominated coordinator.
 - iii. Bio-Data of the personnel/professional to be engaged for full time or part time mentioning remuneration alongwith their written consents.
 - iv. Date of establishment of the firm.
 - v. List of equipments.
 - vi. Details of similar work done/undertaken.
 - B. Consultants approach to work should be briefly spelled out in the proposal showing detailed outline, methodology, sample of questionnaire etc. to be followed.
 - C. The consultant shall perform the services setforth in a manner at all times consistent with sound professionals and economic practices. The consulting firm must engaged required number of economist, agricultural economist, sociologist, marketing specialist, statistician, and Trade specialist etc. for efficiently carrying out the study.
 - D. The consultant shall submit the draft report as fixed by the Functional Committee. The final report o the study (as accepted by the committee) shall have to be submitted in 100 (one hundred) copies in English in neatly bound form.
11. The technical proposal for consultancy services in 5 (five) copies must reach FPMU office within 20 (twenty) days after advertisement.
12. Offers will be graded according to the competence of the bidding consulting firms/groups/institution. The grading procedure will be determined by the Functional Committee. Financial terms will also be decided by the Functional Committee on receipt of the offers and in accordance with the usual rule. The selected consultant will have to enter into a legal agreement with the employer in respect of under taking the study.
13. The authority reserves the right to accept or reject any/all offers without assigning any reason whatsoever.

List of Interviewees of National and International Organizations/Agencies/Individuals

SL No.	Name	Discussion held on
Importer of Wheat		
1.	Mr. M.A. Hannan Sr. Vice President, Bangladesh Major and Compact Millers Association (BMCMA)	Import, price, profit margin, difficulties etc. of Wheat Import
2.	Mr. Habibur Rahman Talukder Executive, BMCMA	- do -
3.	Mr. Syed M. Altaf Hossain Chief Executive Officer W&W Grains Corporation, Local Agent of Cargil USA, Dhaka	- do -
4.	Mr. Rasheduddin Chowdhury, Owner M/s Padma Flour Mills, Chittagong	- do -
5.	Mr. Jahiruddin Ahmed, General Manager, Bhuiyan Group of Industries, Chittagong	- do -
Bakery		
1.	Mr. Zeaul Huq, General Manager (Production) Nabisco Biscuit and Bread Factory, Tejgaon, Dhaka	Prospect, price difficulties etc. of procurement of Wheat product for bakery, confectionary and allied industry
2.	Mr. Faruk Azam General Manager M/s Huq Biscuit, Eskaton, Dhaka	- do -
Banks		
1.	Mr. Kamal Ahmed First Vice President, Eastern Bank Ltd. HQ, Dhaka	L/C matters of wheat import
2.	Mr. Sohail Zaman Account Officer ANZ Grindlays Bank, H.O. Dhaka	- do -
USAID/USDA		
1.	Dr. David Atwood USAID Consultant, Dhaka	Impact of wheat import on US wheat aid and domestic production
2.	Mr. Robert Pierce USAID, Dhaka	- do -
3.	Mr. Mohammad Akhteruzzaman Country Director, USDA, Dhaka	Export Enhancement Programme and import of wheat under EEP
Customs & Excise		
1.	Mohammad Alam Joint Collector, VAT Collectorate, Chittagong	Private sector import of wheat
2.	Mr. Badiur Rahman Khan Assistant Collector of Customs, Chittagong	Private sector import of wheat
NBR		
1.	Mr. Jahurul Huq First Secretary, NBR, Dhaka	Import Duty

Sl. No.	Name	Discussion held on
	Tariff Commission	
1.	Dr. Mohiuddin Khan Alamgir Chairman	Trarif value of imported wheat
	CIMMYT	
1.	Dr. Sufi Mohiuddin Ahmed Scienties Emeritus, Dhaka	- do -
2.	Dr. Craig A. Meisner Agronomist and Project Advisor Bangladesh-Australia Wheat Improvement Project	- do -
	IFPRI	
1.	Dr. Naimuddin Chowdhury Consultant Economist	Domestic production, demand and supply of wheat and the economics of wheat import under private sector.
	MOA	
1.	Mr. Ahsan Ali Sarker Additional Secretary	Production & Private Sector Wheat Import
2.	Mrs. Nilufar Jahan Asstt. Chief	- do -
	DAE	
1.	Mr. Kushal Dewan Director, Food Crops Division Khamarbari, Dhaka	Prospect of Domestic Wheat Production
2.	Mr. Muzibar Rahman Choudhury Deputy Director (Wheat) Khamarbari, Dhaka	- do -
	WFP	
1.	Mr. Saeed A. Malik Senior Advisor	Prospect of WFP Wheat Aid to Bangladesh
2.	Mr. Kumud Bandhu Bowmik Chief, Statistics Unit	- do -
	WB	
1.	Mr. Syed Nizamuddin Programme Officer	Private Sector Import of Wheat

Annex - III

Instruments - I to V

**Food Planning and Monitoring Unit, Ministry of Food
Kranti Associates Ltd.**

**Study on Private Sector Wheat Imports
Instrument-I
Questionnaire for Interviewing Wheat Grower**

Grower Sl.

Division District..... Thana.....

A. General

- 1) Name of the farmer :
- 2) Father's name :
- 3) Vill: Thana..... Dist.....
- 4) No. of family members :
 Adult (more than 15 years) :
 Minor (15 & less than 15 years) :

B. Land Information in Decimal

- 1) Total own land :
- 2) Cultivable land : (i) Feasible for wheat (ii) Others (total)
- 3) Land cultivated :

Crop	1992-93 (November-April)				1993-94 (November-April)			
	Own	Rent in	Share-cropping	Total	Own	Rent in	Share-cropping	Total
Boro Paddy								
Wheat								
Pulses								
Mustard seeds								
Sugarcane								
Other Rabi crops								
Total								

4) Wheat cultivation by variety :

(Figures in Decimal)

Variety	<u>1992-93</u> (Period)	<u>1993-94</u> (Period)
Sonalika		
Kanchan		
Akbar		
Balaka		
Others		
Total		

5) Wheat cultivation on the basis of irrigation :

(Figures in Decimal)

Type	1992-93	1993-94
Without irrigation		
With irrigation		

C. Costs for Wheat Cultivation

1) Seed cost

Item	1992-93	1993-94
(i) Qty (kg)		
(ii) Value (Tk.)		

2) Fertilizer cost (Qty in Kg and value in Tk.)

Type	1992-93		1993-94	
	Qty (kg)	Value (Tk.)	Qty (kg)	Value (Tk.)
(i) Organic				
(ii) Urea				
(iii) TSP				
(iv) MP				
(v) Others				
Total :				

3. Labour Cost

Item	1992-93			1993-94		
	Own (man-days)	Hired (man-days)	Wage Rate	Own (man-days)	Hired (man-days)	Wage Rate
1. Land Preparation						
2. Irrigation cost (if any)						
3. Harvesting Cost						
4. Threshing Cost						
5. Winnowing & drying cost						
Total						

D. Irrigation Cost (Tk./100 decimal) : i) 1992-93 ii) 1993-94

E. Pesticide Cost (Tk./100 decimal) : i) 1992-93 ii) 1993-94

F. Other Cost (Tk./100 decimal) : i) 1992-93 ii) 1993-94

G. Returns (Qty in maund, price and value in Tk.) :

1) Total Production

Year	Sonalika	Balaka	Kanchan	Akbar	Others	Total
1992-93						
1993-94						

1992-93

1993-94

2) Qty sold :

3) Sale price/maund :

4) Qty used for consumption :

5) Qty used for seed :

6) Price value of straw :

7) Marketing Pattern :

(in MT)

	1992-93	1993-94
A. Wheat Sold to :		
i) Wholesaler/Aratdar		
ii) Faria/Bepari		
B. Quantity sold at :		
i) Farmgate		
ii) Village market		
C. Qty of Atta Sold (by crushing wheat) :		

H. Problem faced in wheat cultivation [Please put Tick (√)]

- i) Want of irrigation facilities
- ii) Want of HYV seed
- iii) Attack by insect & non-availability of insecticide
- iv) Less profitable than other crop such as paddy, pulses, sugarcane, etc.
- v) Others (please specify)

L. Reasons for not cultivating wheat in your feasible growing area?

Food Planning and Monitoring Unit, Ministry of Food
Kranti Associates Ltd.

Study on Private Sector Wheat Imports
Instrument-II

Questionnaire for Interviewing Wheat Traders (not importers)

Division District..... Thana.....

A. Introduction

- 1. Name of the respondent :
- 2. Address of the Business Enterprise :
.....
- 3. When did you start this business? :
- 4. What is your role in this business ? [pl. use √]
(i) Owner, (ii) Managing Partner, (iii) Managing Director, (iv) Partner, (v) Manager,
(vi) Working Partner
- 5. Whether possesses license for business : 1. Yes, 2. No

B. General Information

- 1.
 - i) What is the state of business now (1993 & 1994), compared to previous years?
[please use √]
(a) Improved (b) Unchanged
(c) Deteriorated (d) Do not know/Silent
 - ii) Reasons for change (if any)
.....
.....
- 2. (i) Number of traders of your type in this market area in 1986?
.....
- (ii) What is the current number ? :
- (iii) What do you think are the reasons for the changes :

C. Operating Cost, Fund Requirements

1. Annual transaction

Source of Purchase	Qty Purchased (MT)		Average Price/MT		Av. transportation & handling Cost/MT	
	1992-93	1993-94	1992-93	1993-94	1992-93	1993-94
Domestic wheat from local market rather than Govt. source						
From Govt. source						
Imported wheat from importer or other traders						
Total						

2. Rolling fund required for the business : -----

3. (a) Source of fund : (i) Own Tk. (ii) Loan : Tk.

4) (a) Source of loan : (Use Code : 1. Friend/relative, 2. Bank, 3. Mohajon)

(b) In case of loan indicate interest rate :%

5) What is the amount of monthly establishment cost (godown rent, electricity charges, staff salary etc.) : -----

6) What is the amount of other costs required for business : -----
(If any)D. Whether have storage facility : Yes No

E. What is the storage cost : Tk./Year

F. What is the handling cost : Tk./MT

G. What is your expected profit margin : Tk./MT

H. Purchase and Sale

Period	1992-93			1993-94		
	Qty. Purchased (MT)	Average Purchase Price Tk./MT	Average Sale Price Tk./MT	Qty. Purchase (MT)	Average Purchase Price Tk./MT	Average Sale Price Tk./MT
March-May						
June-August						
Sept-Nov						
Dec.-Feb						
Total						

I. Sale Pattern

- a) To other trader :% (approximately)
- b) To miller :% (approximately)
- c) Sale of atta by crushing wheat (if any) :% (approximately)

J. Problem Faced in the Business

- i) Irregular supply of wheat
- ii) Price fluctuation
- iii) Shortage of fund
- iv) Inadequate storage capacity
- v) Non-availability of quality grain
- vi) Other (please specify)

K. What is your experience regarding supply of government wheat and private importer's wheat ?

Comments :

Food Planning and Monitoring Unit, Ministry of Food
Kranti Associates Ltd.

Study on Private Sector Wheat Imports

Instrument-III

Questionnaire for Interviewing Wheat Millers (not importer)

Division District..... Thana.....

A. Introduction

- 1) Name of the respondent :
- 2) Address of the business enterprise :
.....
- 5) Educational qualification of the respondent :

B. General Information About Business

- 1) When did you start this business?:
- 2) What is your role in the business? :
(i) Owner, (ii) Managing Partner, (iii) Managing Director, (iv) Partner, (v) Manager,
(vi) Working Partner
- 3) What is the type of your mill?
(i) Major Mil, (ii) Compact mill, (iii) Roller Mill (R³), (iv) R³ and Major,
(v) R³ and compact
- 4) a) What is the state of business now (1993 & 1994), compared to previous years?
(i) Improved (.....%), (ii) Unchanged
(i) Deteriorated (.....%), (ii) Do not know
b) Reasons for changes, if any :
- 5) Milling capacity/Shift :
- 6) Annual working day :

- 7) a) What is the average annual quantity of wheat milled in your mill? MT
- b) (i) March-May :%
- (ii) July-Aug :%
- (iii) Sept-Nov :%
- (iv) Dec-Feb :%

C. Information Regarding Investment and Employment

- 1) Fixed capital cost
- (i) Land & building : -----
- (ii) Machinery installment : -----
- 2) Working capital : -----
- 3) What is the current number of employees in this enterprise?

	No.	Total Salary/month
Full time :		
Part time* :		

* It would be wage/day

D. Information Regarding Procurement and Milling of Wheat

- 1) What are the quantities purchased from the different sources?

Source	1992-93				1993-94			
	Domestic		Imported		Domestic		Imported	
	Qty (MT)	Price (Tk./MT)						
From Govt.								
From Importer								
Traders								
From Other								
Total :								

- 2) i) Between March 1993 to February 1994, what total Qty of wheat were milled/ crushed in your mill/mills?

Domestic _____

Imported _____

Total _____

ii) What were the prices of purchased wheat ?

	(Tk/MT)	Total Cost
Domestic	_____	_____
Imported	_____	_____

E. Information Regarding Costs

1) What is the milling cost per MT of wheat ?

Items	Expenditure (Tk.)
Establishment	
Maintenance	
Depreciation	
Others (specify)	
Total	

2) What is the average weighing, loading on/off commission costs and other charges per bag for procurement (Tk.) :

(Please note the conversion, 1 bag kg)

F. What are the Milling Products at Your Mill ?

Type of Wheat	[Qty as %]				
	Flour	Atta	Suji	Bran	Others (pl. specify)
Domestic					
Imported					
Mixture of Domestic and Imported Wheat*					

* Please specify the ratio of mixture : Domestic%, Imported%

G. Features of Sales

1) How did you dispose of your output?

	% of Total Output	Profit Margin (%)
Wholesaler/Paikar/ Aratdar		
Bepari/Faria		
Bakers/Biscuit Factories		
Others (specify)		

2) Sale prices of products

[Tk./Maund]

Month	Flour	Atta	Suji	Bran	Others (pl. specify)
March, 1993					
April, 1993					
March, 1994					
April, 1994					

3) Market prices of wheat

[Tk./Maund]

Month	Domestic	Imported
March, 1993		
April, 1993		
March, 1994		
April, 1994		

H. Density of Market Contracts

Please provide the following information about the number of trading partners

(Nos.)

Type of Business Transactions	Deals exclusively with you	Deals frequently with you	Deals infrequently with you
Paikers/Beparics/ Faria			
Aratdars/			
Roller Miller/ Compact Miller/ Major Miller			
Atta Chakki			
Chairmen & Members			
OC/LSD			
Importers			
Bakers/Biscuit Factories/Restaurants/Sweet-meat Shop			

I. What is the present (April '94) market prices (Tk./Maund) :

(i) Domestic Wheat :, (ii) Imported Wheat :

(iii) Flour :, (iv) Atta :, (v) Bran :

J. 1) How much wheat, owned by others, did you crush in you mill last year?

- | | | | |
|------------------------------|-------|-----------------|-------|
| i) Owned by local Traders | _____ | Crushing charge | _____ |
| ii) Owned by local Farmers | _____ | Crushing charge | _____ |
| iii) Owned by other Millers | _____ | Crushing charge | _____ |
| iv) Owned by local Consumers | _____ | Crushing charge | _____ |
| v) Govt. owned wheat | _____ | Crushing charge | _____ |

- 2) What are the sources of your capital
 - i) Own (as%)
 - ii) Credit from Bank (as%)
 - iii) Credit from Relatives (as%)
- 3) During the last one year (March '93 - February '94) how much of your capital remained arear on various accounts ? _____
- 4) What are your price expectations for imported and domestic wheat, flour during October 1994 and March 1995?

Expected price on the basis of information available at	October 1994			March 1995		
	Imported wheat	Local wheat	Flour/ Atta	Imported wheat	Local wheat	Flour/ Atta
April, 1994						

K. What are the Problems Faced in Business operation? (use √)

- | | |
|-------------------------------|-----------------------------------|
| 1) Non-availability of credit | 2) Shortage of quality grains |
| 3) Price fluctuation | 4) Shortage of Storage facilities |
| 5) Govt. taxes | 6) Output selling |
| 7) Others (specify) | |

L. Comments on the private sector wheat imports.

Whether it facilitates the wheat trading or not ?

Food Planning and Monitoring Unit, Ministry of Food
Kranti Associates Ltd.

Study on Private Sector Wheat Imports
Instrument-IV
Questionnaire for Interviewing Atta Chakkis

Division District..... Thana.....

A. Introduction

- 1) Name of the respondent :
- 2) Address of the business enterprise :
.....
- 3) Year of Establishment :
- 4) Milling Capacity : Maund/day

B. General Information About Business

- 1) a) What is the state of business now (1993-94), compared to previous years?
(i) Improved (.....%), (ii) Unchanged, (iii) Deteriorated (.....%),
(iv) Don't know
- b) Reasons for changes, if any :
.....
.....
- 2) What is monthly average quantity of crushing/milling : Maund
- 3) Crushing charge/maund : (Tk)
- 4) a) What is the recovery rate (.....%)?
(i) Atta (.....%), (ii) Bran (.....%)

C. Supply Pattern

- 1) What is the monthly average quantity of wheat crushed in your mill?
.....Maunds
- 2) Quantity crushed :
 - i) Purchased : Domestic : Maunds, Imported : Maunds
 - ii) Owned by local farmers (domestic wheat) : Maunds

- iii) Own by other traders : Domestic : Maunds, Imported : Maunds
 iv) Own by FFW or VGD card holders (imported wheat) : : Maunds
 v) Others : Domestic : Maunds, Imported : Maunds

D. What is the crushing volume?

[Maund]		
<i>Month</i>	<i>Domestic</i>	<i>Imported</i>
March-May		
June-August		
September- November		
December-February		
Total		

E. Information about the expenditure

- i) What type of power do you use in the chakki : [1. Electricity, 2. Diesel]
 ii) What is the cost of electricity/diesel in crushing wheat :Tk./Month
 iii) Monthly staff/labour cost (if any) : Tk.
 iv) Rent of the shop : Tk./Month
 v) Other cost : Tk./Month

- F. 1. Do you crush any other commodity : [1. Yes, 2. No]
 2. If yes, what are the commodities? (pl. use ✓)
 i) Rice, ii) Turmeric, iii) Chillies, iv) Others
 3. What amount do you earn by crushing the above commodities ?
Tk./Month

G. Problems faced in running the business :

**Food Planning and Monitoring Unit, Ministry of Food
Kranti Associates Ltd.**

**Study on Private Sector Wheat Imports
Instrument-V**

Questionnaire for Interviewing :

- a) Importer, b) Importer-cum-miller, c) Importer-cum-wholesaler,
d) Importer-cum-miller-cum-wholesaler**

Division District..... Thana.....

1. Firm/agency name :

2. Name of owner :

3. Business address :

4. Ownership Pattern (use code) :

Code : 1. Individual Proprietor, 2. Joint Proprietor, 3. Private Limited Company, 4. Public Limited Company, 5. Autonomous Body, 6. Others (specify)

5. Name and designation of the respondent :

6. Educational qualificaion of respondent :

7. What is your role in the business :

Code : 1. Owner, 2. Managing Partner, 3. Managing Director, 4. Partner, 5. Working Partner, 6. Manager

8. Nature of Business :

Codes : 1. Purely Importer, 2. Importer-cum-wholesaler, 3. Importer-cum-miller, 4. Importer-cum-miller-cum-wholesaler

9. Years of business experience in

1. Import Trade

2. Wheat Trade/Processing

3. Wheat Import

10. License obtained for operating the business :

Authority

Annual License Fee

1. Import license from CCIE

.....

2. Trade License from Municipal Authority

.....

3. Others (specify)

.....

11. Information on the import of wheat during 1992-93 and 1993-94 :

Month	Quantity Imported (MT)	Source* (Code)	Kind/ Type** (Code)	CIF Price (per MT)	Port of Import *** (Code)	Average Sale Price (per MT)
1992-93						
July						
August						
September						
October						
November						
December						
January						
February						
March						
April						
May						
June						
Total						
1993-94						
July						
August						
September						
October						
November						
December						
January						
February						
March						
April						
Expected in May-June						
Total						

* Source : 1. USA, 2. EEC, 3. Australia, 4. Saudi, 5. Others

** Kind/Type : USA HRW, 2. USA SRW, 3. HRS, 4. Others

*** Port : 1. Chittagong, 2. Mongla

12. Relevant Information about Procurement

- (1) Easy availability of import license and foreign exchange to procure wheat from cheapest source : 1. Yes , 2. No
- (2) Regulations if any, to be complied with by the importers for wheat import in the private sector : 1. Yes , 2. No
- (3) Availability of market information on supplies, stock and price of wheat in the world market with the importers : 1. Yes , 2. No
- (4) a) Opening L.C. : Time taken (in week)
 b) Margin required by the bank (% of L.C. value)
- (5) (a) Availability of shipping space for import in Chittagong and Mongla port :
 Code : 1. Sufficient, 2. In-sufficient
- (b) Regulation required use of national flag ship- BSC : 1. Yes , 2. No
- (c) Freight rate per MT from export port to
 (i) Chittagong (Tk.) (ii) Mongla (Tk.)
- (d) Delay in shipment of wheat or enhancement of cost if any on account of regulation for using BSC ships/national carriers : 1. Yes , 2. No
- (e) Time taken in between LC opening and arrival (in days) :
- (6) Delay if any in getting clearance from customs authority : 1. Yes , 2. No
- (7) Port facilities at Chittagong/Mongla
- (a) Time taken (in days) in getting berth/clearance from the ship :
- (b) Payment of demurrage (in Tk.) for delay in clearance from the ship \x()
- (c) Shortage due to rough handling pilferage etc. : MT
- (8) Suggest measures, if any, for
- (a) Easy and quick availability of import license/foreign exchange

- (b) Rationalization/abolition of all regulations for import (specify the regulations to be abolished)
- (c) Availability of market information with importers
- (d) Abolition of regulation, if any, regarding use of BSC/national ships/carriers
- (e) Rationalization/reduction of L.C. margin for import of wheat by private parties
- (f) Removal of delay in custom clearance
- (g) Quick clearance at the port
- (h) Reduction of shortage at the port due to rough handling, pilferage etc..

12. Storage facilities

- (1) Do you need storage facility : 1. Yes , 2. No
- (2) If answer to 12 (1) is yes, What is your storage requirement : MT
- (3) State the type, capacity and rent of your storage facilities

	Type	Capacity (MT)			Rent (if hired) in Tk.
		Own	Hired	Total	
1.	Pucca				
2.	Semi-pucca				
3.	Kutchha				

- (4) How long do you store the imported wheat pending sale

- Upto 1 week
- Upto a fortnight
- Upto a month
- More than a month

- (5) Do you find any difficulty in hiring storage facilities : 1. Yes , 2. No
- (6) Do you need bank loan for construction of your own storage facilities :
 1. Yes , 2. No

13. Transportation/movement facilities

- (1) State the mode of transport used in moving your wheat from the ship to selling point:

Mode	in % of total quantity
1. Lighter vessel	
2. Coaster vessel	
3. Cargo	
4. Truck	
5. Others (specify)	

- (2) Do you experience any difficulty/problem in procuring required transportation facilities : 1. Yes , 2. No
- (3) Suggest measures for improvement of situation and reduction of transportation cost :

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14. Financing/credit facilities

- (1) Total capital involved in wheat import trade :

Year	(Tk.)
1992-93	
1993-94	

- (2)

Source	in % of total	
	1992-93	1993-94
1. Own		
2. Borrowed		
(a) Bank		
(b) Friend/relatives		
(c) Advance from buyers		
(d) Other source (specify)		

(3) Conditions of loans/borrowed capital

Source	Annual Rate of Interest	Other conditions
1. Bank		
2. Friends/relatives		
3. Other source (specify)		

(4) Do you face difficulties in obtaining required credit from banks ?

1. Yes , 2. No

(5) If answer to 14(4) is yes, pl. specify what are the problems?

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(6) Suggest measures if any for provision of adequate credit by banks specially to meet future need of the private sector to handle bulk of wheat import :

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15. Sale Policy

(1) Disposal pattern (in % of total quantity)

A. Used in own mill (if any) :

B. Quantity sold

i) Sold to local wholesalers :

ii) Sold to outside wholesalers :

iii) Sold to other millers :

iv) Sold to others (specify) :

Sub-total :

(2) Place of sale (in % of total sale)

i) From the ship :

ii) From local storage depot :

iii) In outside wholesale market /milling centre :

(3) Terms of sale (in % of total quantity sold)

- A. Sale in advance :
- B. For cash :
- C. On credit :
- D. Period of credit allowed
- i) Upto 1 week :
- ii) Upto a fortnight :
- iii) Upto a month :
- iv) More than a month :

16. Disincentives for private sector wheat import

Identify the factors that act as disincentive for private sector import of wheat :

(1) High rate of import duties and taxes on private sector import of wheat :

Show the rates of import duties of taxes on wheat :

Factors	1992-93	1993-94
i) Rate of import duty		
ii) Rate of import licence fee		
iii) Rate of advance income tax		
iv) Rate of VAT		
v) Any other (specify)		
a) Tariff value of wheat		
b)		
c)		

(2) Distribution of wheat under Food for Works/Food for Education/other relief/nonpriced assistance programmes of under Food Aid and at subsidized rate to selected govt. employees (EP/OP or the both)

(3) Any other (specify)

- a) Distribution of Govt. Wheat under OMS or other lifting channels

(4) Suggest measures for removal of the disincentives

- i) reduction/abolition of duties and taxes
- ii) abolition of tariff value
- iii) fixation of fair (competitive) distribution price of wheat (under OMS) in line with the landed cost of imported wheat

- iv) abolition of distribution of wheat to Govt. employees at subsidized price
- v) coordination of distribution of non-priced wheat with private sector import policies or sale of aided wheat at the port and payment of cash in place of distribution of non-priced wheat say under Food for Works/Food for Education/VGD etc.

A. Landed cost of wheat in respect of last two consignments - one of 1992-93 & one of 1993-94 imported by you firm :

(Tk. per MT)

Items	1992-93*	1993-94*	Remarks
1. C&F Price			
(i) F.O.B. price			
(ii) Port of Shipment			
(iii) Freight			
(iv) Marine insurance			
Sub-total (i) to (iv)			
2. Customs, duties & taxes			
(i) Import duty (rate)			
(ii) Import license fee (LCA) (rate)			
(iii) Advance Income Tax (AIT) (rate)			
(iv) Any other (specify)			
(v) VAT			
Sub-total (i) to (v)			
3. Other expenses			
(i) Port dues, river dues, handling charge, commission to C&F agent			
(ii) Banking charge, interest etc.			
(iii) Shortage & other unforeseen exps. (if any)			
(iv) Bagging and handling expenses			
Sub-total (i) to (iv)			
Total (1+2+3 of A)			
Landed cost (per MT)			
B. Other expenses of importers			
1. Transportation cost from ship/jetty to the selling point/storage depot of the importer			
2. Establishment Cost (salarie, storage, establishment charges, office rent, telephone, stationaries, entertainment etc.)			
Sub-total (1+2 of B)			
Grand Total (A+B)			