

BANGLADESH

Food Aid: PL 480 Title I and Title III

Project Impact Evaluation No. _____

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B A N G L A D E S H

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FOREWARD

In October 1979, the Administrator of the Agency for International Development initiated an Agency-wide ex-post evaluation system focusing on the impact of AID-funded projects.

These impact evaluations are concentrated in particular substantive areas as determined by A.I.D.'s most senior executives. The evaluations are performed largely by Agency personnel, and by virtue of their comparability in scope, provide cumulative findings of use to the Agency and the larger development community.

This study of the PL 480 Title I and Title III program in Bangladesh, conducted January - February 1983, is a part of this Agency-wide impact evaluation system. The evaluation team would like to thank the Bangladesh Government officials interviewed for their time and patience in discussing with us the intricacies of this large and complex program, the largest Title III Food for Development program in the world.

In a very real sense this evaluation could not have been completed in the time allotted without the support and cooperation provided by USAID/Bangladesh. Mission Director, James Norris set this tone of cooperation at the outset of the evaluation, and his staff very ably carried out his instructions to be as helpful and supportive to the team as possible. Special recognition goes to Mr. Stephen French, Mr. Chuck Antholt and Mr. Rich Allen for their advice, counsel and data on the program.

Finally, we would like to extend our special thanks to Mrs. Nadine Johns, who so efficiently typed the team's draft report in Dhaka under difficult circumstances, and to Mrs. Nancy Greaves, the incomparable word processor operator, who performed the final typing of the manuscript in Washington.

EXECUTIVE SUMMARY

U.S. food aid to Bangladesh has evolved in three phases. The first phase (1972 to 1975) involved the provision of wheat, mainly for emergency relief purposes to avert famine. The second phase (1975 to 1980) while continuing to provide foodgrains to augment domestic supply, evolved to have a development emphasis, and in 1978 led to signing of the first Title III Food for Development agreement, the purposes of which were to promote domestic production, stabilize the consumer market and contribute to the creation of a national foodgrain security system. The present third phase, entirely under Title III, builds on the development foundation established in phase two, and is designed to further encourage increases in production through a price support mechanism and improved market stability, with greater private sector involvement.

The Bangladesh Title III program is unique, in that it is directed exclusively toward macro policy reforms, with no active involvement in project level activities, i.e., programming of local currency proceeds.

The Title I/III food aid program, in concert with World Bank and other donor efforts, has achieved notable success in a number of important areas:

- essential food supplies were provided during critical periods,
- agricultural production has increased significantly, enhancing national food security and the country's economic stability,
- government food policy planning and management have been strengthened,
- food distribution has been improved through an open market sales system,
- subsidies have been reduced on food distributed through government ration systems, and
- private sector development has been promoted in the marketing of foodgrains and in textile production.

Continuous effective coordination among the donors on food policies and operational problems have supported and enhanced the impact of the U.S. food aid program. Bangladesh Government (BDG) commitment, policy reforms and program management have been and continue to be critical to the success of the program.

Bangladesh now has a broad foodgrain pricing and distribution policy framework in place that has the support of the donor community. Differences exist with respect to the pace and level of government activities, but a consensus exists that the basic policy focus is sound.

Weaknesses in the U.S. Food for Development Program involve program execution more than policy differences. Difficulties of varying degrees have been encountered in the following areas:

- procurement prices to stimulate foodgrain production have not been fully effective due to delays in some cases in announcing them,
- small producers reportedly are not being effectively reached by the government procurement program,
- the open market sales system has not been fully effective due to operational restrictions imposed by local bureaucracies,
- performance with respect to agreed self-help measures has been spotty, and
- nutritional status of the rural poor, the overwhelming majority of the population, has deteriorated in absolute and relative terms despite foodgrain production gains, due to high population growth.

We believe improvements could be made in these areas with greater attention to more micro aspects of program implementation. This could include further refinement of policy initiatives, or greater involvement in the programming of local currency proceeds, or a combination of both. Broadening or deepening the policy dialogue would be consistent with the approach the mission has pursued so far.

Now that a dynamic policy framework for Title III has been developed and appears to be working, it is perhaps time to give serious consideration to getting increased development benefits from the proceeds. Even if production goals were achieved, the program could not be considered fully effective if the nutritional status of the majority of the people (and the most needy) is not improved.

An amendment to the 1982 agreement is in process which will require quarterly joint USG/BDG review and approval of projects funded from Title III proceeds, to assure that adequate progress is being made as a condition for maintaining funding eligibility. This could have a marked impact on project performance, if used to encourage sounder planning and selection of higher quality projects.*

Planning for the Bangladesh Title III program has been predicated on the country achieving foodgrain self-sufficiency in the near term, i.e., sometime in the 80's. This timeframe appears very optimistic for achieving self-sufficiency in any meaningful sense, i.e., improvement in the population consumption/nutrition level. The government and the mission are to be commended for setting and working toward this demanding goal, but Washington policymakers should understand

*This amendment has now been executed.

that the likelihood is that substantial food aid assistance to Bangladesh will continue to be required at least for another decade, to assure the success of the U.S. aid program.

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I. Introduction

The statements presented in the main part of this report are intended to be brief, nontechnical yet explicit comments on the results and conclusions that follow from the evaluation team's analysis of the Bangladesh PL 480 Title I/III program. The intent is to provide a summary that is readable and informative, in a length suitable for senior officials with limited time. All of the points made in the main body of the report are supported by the analysis and data in the appendices. Readers interested in greater detail are encouraged to read the supporting appendices.

II. Setting

Bangladesh, located on the Bay of Bengal, has a land area of 55,126 square miles, slightly smaller than Wisconsin. Bangladesh became an independent country in December 1971. The country has a tropical climate with monsoons and periodic cyclones, of which there were 15 in the 1970's. The monsoon season typically occurs from May through November, and is a prime determinant of agricultural production, the major economic activity of the country.

The population is estimated at 92 million in 1982, giving an average density of 1,670 persons per square mile, making Bangladesh one of the world's most densely populated

countries. For comparison, Bangladesh's population is 40 percent the size of the United States, crowded into a land area 1.5 percent that of the U.S. With a per capita income of \$120 in 1981, Bangladesh also is one of the world's poorest countries. Thirty percent of the people in the poorest thirty countries of the world live in Bangladesh. With a population growth rate estimated at 2.5-2.6 percent, the population will double in 25-28 years.

A large part of the population is undernourished, or malnourished. The rural poor are more numerous and consume substantially fewer calories than the urban poor. Of the total 92 million population, some 42 million are rural poor. Calorie consumption by the rural poor in 1981 was 20 percent below internationally accepted daily minimum standards. Available evidence indicates that the nutritional status of the poor has worsened over the past 18 years. The calorie gap of all poor is equivalent to over one million tons of rice annually. Twenty percent of the children do not live beyond age five, and life expectancy is 48 years. Most of the causes of infant mortality are preventable.

The country's major natural resources are its rich arable land, a climate that allows year-round agricultural production, abundant water resources, and natural gas that is a source of energy and raw material for fertilizer. Some 50 years ago agricultural production was more than sufficient to feed its population, and even export small quantities of rice. However,

a wartime Allied policy was taken in 1942 to remove carts, boats and rice from southern districts of Bengal to "deny" these necessities to the Japanese invaders, who, as it turned out, never came. Many observers believe that this disruption to old patterns of agricultural production and distribution set in motion the agricultural policies and problems from which the country still has not recovered.

The Bangladesh economy has improved considerably since the early years of independence. During 1971-75 the economy stagnated, especially in the agricultural sector. Production of most main crops fell, the result of natural disasters and the political turmoil of the period.

However, 1976-1981 was a period characterized by relative economic prosperity, and the agricultural sector was marked by increases in production, brought about by increases in yield and expansion of acreage under cultivation. GDP increased at an annual rate of 4.7 percent, foodgrain production by 3.1 percent and manufacturing output by 6.3 percent. This impressive growth largely was attributable to inflows of foreign aid, which totalled \$5.2 billion over the period.

The 1982 economy was characterized as plagued by budgetary and balance of payments difficulties, brought about by a number of factors including a worldwide recession, a worsening in the country's terms of trade and a leveling off in foreign aid availabilities. Observers by no means feel the country's

economic situation is hopeless, but considerable effort -- and aid -- will be required to put the economy back on the growth track of the late 1970's.

III. The Program

When Bangladesh achieved independence in December 1971, the country still had not recovered from a devastating cyclone that had struck in November 1970, and the struggle for independence intensified the socio-economic problems facing the country. Production fell in virtually all major agricultural crops. Rice production in the two crop years 1971-1973 averaged 10 percent less than in 1970/71 (see Table 1).

The United States was one of the many donors that provided relief and reconstruction assistance during this period. Emergency grants of food aid to prevent famine were provided under Title II of PL 480, and continue as Food for Work programs today.

By 1974 the economy had recovered somewhat, and this factor, in conjunction with U.S. budgetary pressures on Title II funding levels, caused the food program to be shifted to a conventional Title I loan program in 1974. The basic purpose of the U.S. food aid program, however, remained unchanged: to prevent famine.

The Title I loan program continued until 1978, when it evolved into the present Title III Food for Development mode.

One additional Title I agreement was entered into in 1980, for the provision of cotton, a commodity not provided for under the 1978 Title III agreement. However, the second multi-year food for development agreement signed March 8, 1982 incorporated the concept of a flexible commodity mix to include non-foodgrains if appropriate, and no further Title I proposals are presently contemplated.

The genesis for the change to a Title III food for development focus can be traced back to the Mission's FY 1975 program planning submission (called DAP at that time), in which the USAID proposed a restructuring of U.S. aid to Bangladesh to emphasize a broad based agricultural model relying heavily on high yielding technologies developed during the "Green Revolution." This conceptual framework was discussed and refined over the next two years, in the context of a growing realization that the conventional Title I loan program was piling up debt the country would be hard pressed to pay off in the future.

A major attraction of Title III food aid is that repayment can be "forgiven," if agreed development provisions are satisfied, thus converting the aid to a grant. Also, the so called "crossover" provision enables forgiveness of Title I debt repayments, which represents a significant foreign exchange savings to the Bangladesh Government (BDG).

There was an unusually receptive climate in Bangladesh for a Title III food for development program. The host government

Production of Major Agricultural Crops
(000 tons)

	<u>1970/71</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>
Rice	10,967	9,774	9,932	11,721	11,109	12,561	11,567	12,765	12,646	12,539	13,663	13,415
Wheat	110	113	90	109	115	215	255	343	486	810	1,075	952
Jute	1,191	749	1,163	1,071	621	703	858	957	1,150	1,065	883	..
Sugarcane	7,598	5,686	5,318	6,343	6,635	5,886	6,401	6,670	6,828	6,340	6,495	7,000
Tea	34,500	12,235	26,500	30,000	35,460	32,395	36,990	40,810	42,224	40,355	43,770	..
Pulses	296	281	222	209	223	220	230	238	226	214	208	..
Oilseeds	274	240	225	215	168	238	235	264	256	246	247	..
Condiments & Spices	337	342	322	302	307	309	286	303	182	298	236	..
Tobacco	39	34	39	41	40	44	63	49	43	39	47	..

.. = not available

SOURCE: Bangladesh Bureau of Statistics

was willing to change policies and goals to make them compatible with the philosophy of the new U.S. food aid legislation. There was agreement that agriculture would have to be the engine for economic growth in the country, and that increasing foodgrain production for the rapidly growing population was the only long term hope for improving the welfare of the people, and maintaining economic and political stability.

At the Mission's urging in 1977 the BDG adopted a foodgrain procurement program to support the price of rice as an incentive for farmers to invest in high yielding seed variety (HYV) technologies, and a successful procurement program was conducted in the 1977/78 crop year. The mission had been planning the Title III food for development program for some time, and this positive procurement experience gave further encouragement.

In early 1978 the mission proposed undertaking a broad Title III program involving basically a two-pronged macro-policy approach to stabilizing prices, as an incentive to increase production and to create a national foodgrain security system.

The concept involved supporting foodgrain prices at harvest time (through government procurement at "guaranteed" prices) and constraining increases in rice prices during lean seasons (through government stockpiling of foodgrains and releasing these stocks when needed through an open market sales

program). It also envisioned reducing government subsidies under the ration system by raising ration prices, and ultimately doing away with major parts of the system. Ration prices were serving as production disincentives, and the system benefited most certain privileged classes instead of the poor. Provisions were included in the agreement to promote the development of the private sector in agricultural marketing.

The major assumptions of the Title III food for development program were that price incentives would induce greater production and that government stockpiling and timely releases through the market system would stabilize consumer prices and enhance foodgrain security. As the program got underway and operational experience was gained, various amendments were made to the original agreement to take these experiences into account. They involved both policy and procedural adjustments.

The 1978 Bangladesh Title III program was the second undertaken under the new provision of the PL 480 legislation. It was and is unique, in that its focus has been exclusively directed toward macro-policy changes.

The program has been successful in establishing a procurement program to support prices and acquire commodities for BDG programs, including the accumulation of reserves, and an open market sales mechanism to release commodities from stockpiles to dampen seasonal price swings. These initiatives

have strengthened the nation's foodgrain security system. Decisive action by the BDG to take hard decisions when necessary has been one of the most important factors in this success.

The second multi-year Title III agreement, signed March 8, 1982 is still in force and contains the same basic conceptual and policy framework as the first agreement. While it is still too early, and too little data exists to make a final judgment, evidence to date suggests continued success with the Title III program under the second agreement. The next chapter will review the experience to date.

As shown in Table 2, United States food aid to Bangladesh since Independence totals \$1.055 billion, and an additional \$100 million remains committed under the second multi-year Title III agreement signed March 1982. Some 38 percent of the total was provided during the relief period (1972-75), 28.5 percent during the second phase (1976-78), and the balance of 33.5 percent under the third phase (1979-present). U.S. food aid currently accounts for about 44 percent of all donor food aid to Bangladesh.

Table 2

Food Aid to Bangladesh

(\$000, Disbursements, U.S. Fiscal Years)

	<u>1972-75</u>	<u>1976-78</u>	<u>1979-82</u>	<u>Total</u>
<u>U.S.</u>	<u>401,041</u>	<u>300,156</u>	<u>353,860</u>	<u>1,055,057</u>
Title I	258,591	246,025	12,440	517,056**
Title II	142,450	30,290*	109,518*	282,258
Title III	-	23,841	231,902	255,743***
<u>Other Donors</u>	<u>705,959</u>	<u>177,344</u>	<u>446,540</u>	<u>1,329,843</u>
TOTAL	<u>1,107,000</u>	<u>477,500</u>	<u>800,400</u>	<u>2,384,900</u>

*Food for Work

**Includes \$16.351 million of cotton, of which \$9.969 million was provided in FY 78 and \$6.382 million in FY 80.

***Includes \$9.180 million in cotton, provided in FY 82.

Source: U.S. Bilateral Economic Assistance to Bangladesh, USAID, October 1982; World Bank Report 3768-BD.

IV. Program Impact

A. Impact on Foodgrain Production

The most direct impact of the U.S. food aid program on foodgrain production has been at the policy level, while a secondary impact has been achieved through the earmarking of local currency generation for projects in the BDG development budget.

The cornerstone of the policy approach was the establishment in 1978 of a BDG national procurement program with prices calculated to serve as production incentives throughout the year, especially during the months when farmgate foodgrain prices are low. In other words, a producer price support mechanism. The primary objective of providing an incentive, or support, price was to encourage adoption of high yield seed varieties (HYV) and associated technology.

The basic mechanism calls for the government: (1) to calculate a price that will provide a fair return on investment to farmers who adopt the HYV technology for production, (2) announce this price in advance of the planting seasons (July 1 in the case of the wet season rice crop, and November 1 in the case of dry season rice and wheat), and (3) maintain this price throughout the season and procure all grain offered. The concept also includes use of private intermediaries to provide greater outreach to increase procurement of rice, paddy and wheat from small farmers who otherwise would not be served.

There have been difficulties in working the kinks out of the new system, but overall the effect has been quite positive. The government procurement program has functioned effectively, if not perfectly. Use of HYV technologies has increased, and production has risen. In the second half of the 70's average acreage planted to foodgrains increased only 5.2 percent while yields rose 12.9 percent. Total production was up 18.8 percent. (See Table 3.)

The overall economy was just beginning to pull out of an extended slowdown at the beginning of this period, and it is likely that some improvements would have been shown even in the absence of the policy stimulus from the U.S. food program. This should not, however, detract from the credit accorded to the Title III program; the evidence clearly indicates that the U.S. program played a substantial role in bringing about this improvement.

Under the first Title III agreement of August 2, 1978, local currency proceeds from U.S. food aid could be used for any of the projects in the government's development budget. The impact thus was diffused as far as encouraging production was concerned; the government was free to allocate these funds among any development projects it chose.

With the government's issuance in February 1981 of the comprehensive Medium-Term Foodgrain Production Plan (MTFPP), a framework was provided for better focusing of the uses of local currencies generated under the Title III program to more directly impact on foodgrain production.

The World Bank was the principal force behind the adoption of the MTFPP, and had USAID's full support in this effort. The objective of the MTFPP strategy was to provide a more stable production environment through projects designed to bring about three major types of improvements:

- improved water control mainly through minor irrigation, drainage and flood control,

Bangladesh
Foodgrain Acreage, Average Yields and Production

Year	Acreage ('000 acres)		Average Yields ^{a/} (maunds/acre)		Production ^{b/} ('000 tons)	
	Rice	Wheat	Rice	Wheat	Rice	Wheat
1970/71	24,494	311	12.19	9.63	10,967	110
1971/72	22,975	314	11.58	9.80	9,774	113
1972/73	23,796	297	11.36	8.25	9,932	90
1973/74	24,410	305	13.07	9.73	11,721	109
1974/75	24,197	311	12.50	10.07	11,109	115
<u>5-Year Average</u>	<u>23,974</u>	<u>308</u>	<u>12.15</u>	<u>9.46</u>	<u>10,701</u>	<u>107</u>
1975/76	25,525	171	13.40	15.77	12,561	215
1976/77	24,419	395	12.89	17.57	11,567	255
1977/78	24,778	467	14.02	19.99	12,765	343
1978/79	24,992	654	13.77	20.23	12,646	486
1979/80	25,106	1,071	13.59	20.59	12,539	810
<u>5-Year Average</u>	<u>24,964</u>	<u>592</u>	<u>13.54</u>	<u>19.43</u>	<u>12,416</u>	<u>422</u>
1980/81	25,474	1,461	14.60	20.03	13,663	1,075
1981/82 ^e	..	..	..	..	13,415	952

.. = not available.

e = estimated.

a/ 1 maund = 82.29 lbs; 1 long ton = 27.22 maunds.

b/ Gross production expressed in long tons of rice equivalent.

SOURCE: World Bank Report 3768-BD.

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- a steady supply of inputs matching demand, and
- incentive and stable farmgate prices.

Since the adoption of the MTFPP all local currency proceeds have been used for projects designed to achieve these improvements. While the focus has improved, a number of problems have arisen with respect to BDG fiscal and accounting procedures for MTFPP and other projects.

In their September 1982 evaluation Kunkel and Thormann reported two instances where substantially more Title III local currency funds had been attributed to two MTFPP projects than had actually been expended for the projects. In addition to implications concerning BDG accounting procedures for local currency generations, this also raises questions about the effectiveness of these generations in supporting the basic objectives of the Title III program. Further, some MTFPP projects have been suspended after Title III local currency funds were allocated to them, and other projects have been dropped from the MTFPP while others have been added.

Bangladesh has established a goal of achieving self-sufficiency in foodgrains by 1985. This goal has obvious implications for the level and duration of U.S. food aid. Production shortfalls last year have caused some rethinking of the time that will be required to reach this goal. Achievement is now a target of the late 1980's.

We believe it will take some time for the production based, market oriented agricultural development policy to become fully

and efficiently established. The dynamics of the market system need to be better understood, and trusted. The confidence of both producers and consumers is necessary for it to work, and it will take time to build up this confidence. While production gains over the past few years have been impressive, the annual gap between foodgrain production and consumption requirements is over a million tons.

The self-sufficiency goal is 20 million tons of foodgrains. Production in 1981/82 was 14.5 million tons, thus, a compound annual growth of 8.4 percent would be required to reach 20 million tons by 1988. However, because of financial pressures the BDG has had to reduce funding allocations for the MTFPP below those originally planned, which will stretch out implementation. The FY 1981 funding allocation was 28 percent below that originally projected, and in FY 1982 the shortfall was over 50 percent. The overall financial condition of the government does not suggest that these shortfalls are likely to be made up. In fact, given current budgetary stringencies, further budget adjustments could be necessary.

In recognition of the seriousness of the inadequate local currency resource problem, the Asian Development Bank is actively considering raising the percentage of local currency it will finance under its projects. The West Germans also are contemplating doing this as well.

Foodgrain self-sufficiency tends to be discussed in terms of the 20 million tons production goal, without much attention

being given to the nutritive aspects. This goal is based on an estimated population of 102 million by 1985. At that level of demand, 20 million tons of foodgrains (less the usual 10 percent for seed, feed and waste) would provide an average of 15.5 ounces per person per day, or some 1,600 calories per day, meaning per capita consumption would be some 24 percent below minimum daily requirements of 2100 calories, assuming the population would continue to rely on foodgrains for the bulk of calorie requirements. Under these conditions, some 75 percent of the population would be suffering from undernutrition.

Both USAID and BDG officials are aware of the potential for foodgrain imports to become a disincentive for domestic production. Certainly the fact that imported grain is about 10 percent of the total domestic consumption and is equivalent to 60 percent of the domestic crop which is marketed commercially cannot be dismissed out of hand. There is an ever present possibility that the BDG could become complacent and begin to rely more heavily on grant and concessionary foodgrain imports, if donors permitted this.

However, the government continues to give priority to the agricultural sector in its development budget. The World Bank reports that a significant degree of protection was given to MTFPP projects during the government's budget retrenchment in 1982. Given the seriousness of these budgetary difficulties, this protection obviously involved some very tough choices, and hard decisions on the part of the BDG. The government deserves a lot of credit for its resolute actions.

Further, within the agricultural sector, an increasing amount of resources have been allocated to increasing foodgrain production. This has focused primarily on making available modern inputs which are required for HYV production. Wheat and rice production have responded with growth of over 3 percent annually.

Although not all of the gains in foodgrain production can be directly attributed to Title III policy changes, there is every indication that the program has had a positive effect on production.

B. Impact on Foodgrain Producers

While it is difficult to precisely quantify the impact of the U.S. food for development program on foodgrain producers, indirect indicators and a priori reasoning indicate the program has been positive.

A national foodgrain procurement program, in effect a guaranteed floor price system, has been established and is working with some success. This program is designed to provide price stability for foodgrain producers at a level sufficient to cover their investments in HYV technologies and still realize a reasonable profit.

There has been some concern that the increases in the price of fertilizer and other inputs has exceeded increases in output prices, leading to a decreased use of fertilizer last year. However, when its fertilizer/rice price ratios are compared with those of other South Asian countries, it is evident that

Bangladesh's is one of the most favorable. For example, in FY 1981 the Bangladesh price ratio of paddy to urea was 1.05, while Pakistan's was 0.55 and India's was 0.52. This would indicate that the decline in fertilizer use is due to other factors, such as poor weather during which fertilizer use drops.

For the large number of small producers who must buy a portion of their foodgrain consumption requirements in the market during lean periods, the OMS program undoubtedly made a big difference, serving as it does to protect their real incomes by constraining price increases. Also, producers typically have to borrow money to meet their food needs during lean periods, and must pay very high interest rates -- 80 percent per annum is not uncommon -- which reduces their ability to invest for increased production the following season. Thus, not only are they helped directly by the OMS program, there also is a positive impact on the broad objective of increasing overall foodgrain production.

In the past some observers of agricultural development programs built around HYV technologies have argued that the new technologies had unintended negative effects due to their differential impact on producers. The argument is that initial benefits from these programs go to larger farmers, those who are market oriented and have the capital to finance and risk higher costing HYV seeds, irrigation equipment and other costs not associated with traditional agriculture. On the negative side, small farmers and the landless have to pay higher market

prices for their food without corresponding increases in their income.

There are two reasons for not being greatly concerned about this distributional problem with respect to Bangladesh. First, the mission reports that some recent studies indicate that all size farmers seem to adopt new technologies in roughly equal proportions and in a short time period. That is, the new technologies quickly take over. The Team was not able to confirm whether this is wholly true in Bangladesh, but available evidence is positive regarding HYV technology usage among different size farmers. Also, the landless benefit in that HYV technology is associated with increased demand for labor, and eventually, reduced foodgrain costs.

The second, more persuasive reason is that there is no other reasonable course available for Bangladesh to follow. The country needs to increase foodgrain production, and do it quickly. HYV technologies offer the only possible solution to the country's need for increased production to feed its growing population and maintain economic and political stability.

Further, the process of development by definition means change, and change never impacts evenly on all groups in a society, whether in traditional cultures or western societies. Those who are positioned and equipped to adapt quickly to new innovations and technological changes will benefit earlier, and (at least initially) to a greater degree than those who are not as adaptable. When the needed production increases are

achieved the system should be fully established, and adjustments at the margin should then be possible, and appropriate.

C. Impact on Consumers

The Title I/III program has impacted directly on consumers in four ways. First, U.S. food aid augmented domestic supplies available for consumption. Second, incentive pricing and procurement conducted under provisions of the Title III food for development program helped to stimulate production increases that also added to supplies available to consumers. Third, the open market sales program moderated price increases of foodgrains to consumers, by injecting government foodgrain stocks into the regular market during lean periods. Fourth, a portion of U.S. foods were channeled through the government ration system to serve the rural poor. Impacts under the first two of these were discussed in the preceding sections; the other two are discussed below.

The Open Market Sales System (OMS)

There are three basic elements to the OMS Price mechanism: initial prices, the adjustment mechanism and minimum prices. Initial prices are established at a fixed percentage above the government procurement price, so as to allow a reasonable return to private dealers buying and selling at the same prices, thus encouraging development of private marketing

mechanisms. These prices are adjusted on a subdivision basis (there are 68 subdivisions reporting prices across the nation) when market prices move up or down 10 percent or more. When this happens the OMS prices are adjusted by one-half the percentage change of the market price, thus acting as a brake against further movement. Minimum prices are fixed at a percentage above rice and wheat procurement prices to assure reasonable returns to private dealers operating in the market.

Sales under the OMS program are made to the public at large. All consumers benefit from stable food prices. When market stocks are plentiful prices generally are at a level that are affordable by the majority of population. It is during lean periods, when prices are high, that the population suffers privation most acutely.

The concept in the initial Title III agreement envisioned the government "holding" the market price at a predetermined level, by releasing into the market place whatever amount of stocks would be needed to accomplish this.

However, subsequently it was realized that government foodgrain reserves could be depleted by a sustained drawdown in a time of severe shortages, with disastrous results to national foodgrain security, and the concept was changed to one of "moderating" price increases through timely releases from government stocks, instead of entering the market at the outset of price increases and holding the line. Initially only wheat was marketed through the OMS program, but this later was changed to permit rice and paddy to be sold also.

The BDG had for some time been operating a program similar to OMS, but it was limited to a few areas, and thus had minimal impact on moderating seasonal price swings on a national basis.

As with other elements of the new Title III food for development program, management difficulties emerged as the program began to operate. During the first lean season period (September-October 1978) offtakes were very low; sales were made in some subdivisions where the trigger price had not been reached, while no OMS sales were made in a number of subdivisions where the trigger price had been reached; a disproportionately high share of all OMS sales went to Dhaka, the capital city; over half of all OMS sales went to flour millers whose products tended to go to the more well-to-do; and similar operational management problems.

These irregularities and operational problems were the subject of extended discussions and negotiations between the mission and BDG, and there was a gradual tightening up in the control of OMS operations. Procedures were revised, a limitation was placed on the amount that could be sold to flour millers, and basic policies were reviewed and reconfirmed. Adjustments continue to be made to fine-tune the program.

The evaluation conducted by the mission in December 1979 concluded that the OMS program had not been successful during its first year in constraining rice prices within a set of prescribed limits. Operational de-bugging, including finding the right price for wheat, the intervention commodity, low government stock levels and other similar factors were cited.

Good harvests over the next two years limited the need for OMS interventions. October 1981 was the first time in nearly two years that wheat and rice prices rose sufficiently to make the OMS prices attractive. Stock levels have been adequate since August 1979 to support OMS operations whenever price conditions warranted it. Since then (through November 1982) some 157,697 tons of foodgrains have been moved through the OMS system, of which 71,105 tons were rice and 86,592 tons were wheat.

The OMS system is considered to have functioned effectively during this latter period, and the OMS activity appears to have contributed to limiting market price increases in areas where it operated. No serious distributional problems were observed. But a number of operational difficulties were encountered, most of which involved special conditions imposed by local food controllers, e.g., restricting the number of dealers handling OMS grains, limiting quantities dealers could buy at any one time, limiting the geographic area in which dealers could resale their OMS offtakes and similar restrictions. Some of these differences may have been through a lack of full and clear understanding of central government policies and the procedures designed to carry them out.

In their September 1982 program evaluation Kunkel and Thormann recommended that training courses should be held at the subdivision level to explain the OMS program to local officials. However, in visits to thirty-nine subdivisions the

impact evaluation team was told that no training had been provided to local officials responsible for end-of-line operation of the program. In a number of cases the officials at sites visited were new and did not seem to be acquainted at all with the policy or procedural systems in place for the OMS program.

Another element, however, is that local officials have a degree of autonomy under the decentralized government system, and they frequently modify instructions from Dhaka or do not follow them fully, based on their judgment regarding local conditions.

The October 14, 1982 Title III amendment specified that all wheat provided under the agreement will be used for OMS, and permits the BDG to impose restrictions on handling of OMS grains. A rationale offered in support of this change is that successful OMS operations took place in the past when such restrictions, though not permitted under the Title III agreement, were in fact imposed. While there is some logic to this position, we believe that more operational experience will be needed to test its soundness.

Modified Rationing (MR)

Modified rationing is one of ten categories in the government's subsidized public food distribution system. Its stated purpose is to serve the rural poor, and by terms of the

original Title III agreement this grain was supposed to go only to category A ration card holders, those so poor they pay no income tax. These are households with very little or no agricultural land, who thus do not produce enough to meet their consumption requirements.

A 1978 study of 25 local jurisdictions during October to December revealed that in spite of this being the season for greatest need for ration rice an insignificant amount was allotted for purchase by the poor. Even when the poorest (category A) took the full allotment the amount available was only 0.6 - 0.7 seer per month (a seer = 0.933 kg). Given that the adult requirement is about 0.6 seer per day the allotted amount met only 3.6 percent of requirement. During that period the ration price was about 60 percent of the market price, hence contribution to income from savings by buying ration rice was a little more than 1 percent.

The study further identified the A category as almost totally dependent on the market during this period, having only 2-11 percent of cereal grains available from their own resources. The calorie consumption reported for the A category was only 70 percent of requirements, and some 55 percent of those in this category had no cash on hand to purchase food. Field observations report the same findings.

In negotiating the first Title III agreement AID pressed for the sole use of the OMS program, as a more effective and equitable means of foodgrain distribution, and pointed out

that, after all, the basic purpose of the OMS program was to protect the real incomes of the landless and small farmers who are foodgrain purchasers in the lean season. The BDG, on the other hand, strongly argued that the MR program already helped the rural poor, and should be continued.

The compromise reached was to permit use of U.S. foodgrains for MR as well as OMS, on the understanding that OMS would replace a portion of MR sales. The March 8, 1982 agreement authorized an additional 175,000 tons of wheat, which could be used either for OMS or MR Purposes; none has been used for the MR program. The following table summarizes the actual experience under the first agreement.

Table 4
Title III Agreement of August 2, 1978
(Metric Tons)

	<u>OMS</u>	<u>MR</u>	<u>Reserve</u>	<u>Total</u>
Provided	-	-	-	1,174,000
Authorized Uses	1,174,000	600,000	200,000	-
Actual Use	180,200	554,700	-	734,900
Balance	398,000	45,300	-	439,100

Administration of the MR program has been very loose. Mission and other studies have shown that B, C and even D cardholders have been receiving MR rations. Distribution also is erratic and falls below levels set in the guidelines. In

addition, everyone knowledgeable about the program, both in the BDG as well as the donor community, believe that substantial "leakage" occurs in the MR program as it does in other public food distribution categories. As shown in the table above, the BDG has emphasized MR above OMS uses.

Because of difficulties experienced with operation of the MR program, and because the OMS system now appears to be working well, in October 1982 the second Title III agreement was amended to limit the use of wheat to just the OMS program.

D. Impact on Institutional Mechanisms

In a sense donor food aid may be the sine qua non for all institutions of Bangladesh. The country's food situation is such that the removal of the some 1.2 million tons of foodgrains provided annually by aid donors would lead to chaos. No government could long survive under such circumstances. Thus, U.S. food aid, which currently is some 44 percent of total donor food aid, has to have a substantial impact.

The Policy Dialogue

The Title III program has been the underpinning for a broad policy dialogue with the government in the areas of:

- (1) establishing production incentive prices for farmers,
- (2) improving food security by holding and properly managing reserves,

- (3) promoting private sector development,
- (4) reducing inequitable and costly food subsidies by phasing down the government ration systems, and
- (5) moderating consumer price increases through the open market sales program.

Some of these impacts have been discussed in the preceding sections. The others are reviewed in the following paragraphs, along with one or two other matters concerning institutional aspects of the program.

Private Sector Development

Development of private sector activities relating to agriculture has been a key element of the Title III program from the outset. Since 1978, when the Bangladesh food for development program was initiated, the BDG has adopted various private sector initiatives, including distribution and marketing of fertilizers, pesticides and other agricultural inputs. Private sector promotion by the United States, the largest food donor, likely had some effect, but the mission reports there is more coincidence than causal relationship between the U.S. program and most of these private sector initiatives. The administration in power fortuitously had views on the utility of expanding the private sector that were very much in consonance with ideas the mission had been promoting.

A more direct causal relationship does exist, however, with respect to privatization of the cotton spinning industry. The March 1982 Title III agreement included a provision for the BDG to take measures to create an investment climate favorable to the development of the private sector cotton spinning industry. The initial step was to eliminate a 12,500 spindle limitation on new spinning mills that appeared to be a limitation to profitable manufacture, and thus private investment in the industry. This was to be followed by BDG identification of, and appropriate adjustments to, any other legal or administrative matters that were constraining private sector development in the industry.

On June 26, 1982 the BDG removed the size limitation on new spinning mills, allowing investors to construct any size plant they consider economical. Since then four license holders have announced their plans to construct new mills over the previous ceiling of 12,500 spindles.

In September 1982 the BDG took another important step to promote privatization of the cotton spinning industry, by announcing plans to divest itself of many nationalized spinning mills. Under this plan 40-60 percent of spinning capacity will be turned back to the private sector. Since November 1982, 18 textile mills have been denationalized and returned to their former Bangladeshi owners.

BDG Policy Formulation and Planning

The most visible evidence of institutional development under the food program is the creation by the BDG of a policy planning and monitoring unit in the Planning Commission, to develop and furnish data and analyses to BDG decision makers for use in formulating agricultural policies. This organization, called the "Food and Fertilizer Planning and Monitoring Secretariat (FFPMS)", was established in early 1980 at the urging of USAID and the World Bank. AID finances the FFPMS and supports it with the technical assistance and training, largely because of its relationship to the food for development program. AID is currently funding a long-term expatriate economist advisor to work with FFPMS.

The FFPMS is headed by a Project Director who is a member of the Planning Commission. Reporting to the Project Director are three Section Chiefs responsible respectively for Food, Fertilizer and Economics. The economics post is vacant. The full time professional staff of the FFPMS presently numbers nine.

The FFPMS has reached an effective operational capacity. The unit now publishes a monthly Food Input and Situation report, a Statistical Data report on Foodgrain and Inputs and a similar report on fertilizer, policy papers and long-term studies on crucial areas. In addition, it prepares position papers for the BDG Council Committee on Food, Agriculture and Rural Development and for the Council Committee on Food. On a

routine basis the FFPMS monitors foodgrain production and distribution in Bangladesh.

Food Management Costs

The government's involvement in food management is extensive, including procurement, storage and distribution of imported foodgrains; procurement, storage and distribution of domestically produced foodgrains, importation, sale or rental of production inputs; and numerous related activities. Many of these activities are subsidized, and the financial cost is a heavy burden on BDG resources.

According to a World Bank estimate, the subsidy on distribution of foodgrains averaged 37.7 percent of total government food costs over the period 1977-1981. This rate was estimated to decline to 28.4 percent by 1981/82 due to government policies to increase distribution through private markets and to raise ration prices to bring them more into line with free market prices. The subsidy of fertilizer was estimated to be 27.7 percent in 1981/82, reduced sharply from the 35.6 percent subsidy rate in 1977/78.

These substantial subsidies reduce the amount of funding available for other purposes. The government has taken measures to reduce the level of subsidies on food grains and the inputs side, but the goal remains to bring them into line with operating costs.

Phasing Down the Ration System

From the outset of the food for development program in 1978 a mission objective has been the phasing down of the ration system, and ultimately eliminating major portions of it. It was felt that the open market sales system would be more equitable and effective in delivering foodgrains, and would be less of a financial burden on the BDG. This would be accomplished by: (1) establishment of the OMS system, and (2) raising ration prices to gradually bring them closer to the free market rate.

The World Bank also was very much involved in working to have the BDG reduce ration subsidies. Cooperation between the World Bank and the mission was a very important aspect of this effort.

The government has taken various measures to rationalize its foodgrain distribution policy. Procurement prices have been increased; ration prices have been raised; and at the same time the ration quota has been reduced. By late FY 1981 and early FY 1982 the difference between prevailing market prices and ration prices was only 15 percent for rice, the narrowest margin in 10 years. Government sales and distribution of grains in FY 1981 fell to 1.5 million tons, with statutory rationing and modified rationing declining to their lowest levels since independence. In January 1983 the ration price was above the procurement price for the first time ever.

Development of a Market System

Perhaps the institutional development that will have the most long-term impact has been the development of a more open, free market system. Since the signing of the first Title III agreement in 1978 there have been major changes in Bangladesh's foodgrain marketing system. Many of these changes can be attributed directly to changes in foodgrain procurement and sales policy that have been the keystone of Title III activities in Bangladesh. The policy changes adopted by the BDG have been toward improving the marketing position of the small producer and increasing free market competition. The major elements of the market system are as follows:

-- Procurement Stations: The BDG has greatly increased the number of government procurement stations to reach more farmers. To reach the more remote farmers, mobile procurement units were introduced to go by truck to small villages to buy grains at the government procurement price.

-- Market Participation: Prior to the Title III program government procurement was primarily through Approved Grain Dealers. These were procurement agents approved by the Ministry of Food to purchase foodgrains from producers. Procurement centers were authorized to purchase from private farmers, but the geographic inaccessability and inconvenient procurement and payment procedures caused farmers to rely primarily on agents rather than selling it directly. Government regulations have been changed and simplified so that

now any and all farmers and traders are free to offer grains to government procurement points for the full procurement price, plus a transportation bonus.

-- Procurement Price: The Title III agreement required the BDG to announce the government procurement price early enough prior to the planting season so that farmers would have time to respond to it. This part of the agreement has not always been observed, but there have been improvements recently. At the subdivision level the Food Controller usually publicizes the government procurement price prior to the harvest, which at least alerts the farmer to the minimum of what can be expected in terms of farmgate price for the next harvest period.

The Title III agreement provides that the BDG will support foodgrain prices at levels sufficient to induce in HYV technologies. Whether or not the procurement price is an effective incentive for adoption of HYV technology, it does provide a price floor which minimizes market risk for those producers whose output is large enough to provide a marketable surplus. For smaller producers, the government price provides an incentive to enter the market system. In Bangladesh small producers have traditionally preferred to store any surplus, and sell only when necessary to meet cash obligations.

-- Open Market Sales: The public food distribution system dates back to the famine of 1943. Since that time, Bangladeshi governments have intervened in the food market in various ways. In recent years about 10 percent of the marketed volume

of grain has been controlled by the BDG -- either in terms of retail price or in terms of targeted recipients.

The Title III OMS program aims at reducing the extent of government intervention in the market system. Through efforts under the Title III program, anti-hoarding laws have been relaxed which encourages more competition among wholesalers and retailers. As OMS was conceived by the authors of the agreement, the objective was to inject supplies from government stocks directly into the regular market system. Although the original scheme has been modified by the BDG to include some restrictions on dealers, sales procedures and prices, it is a step in the direction of free market competition.

The policies that have evolved out of the Title III agreement have had a significant impact on the foodgrain marketing system from the producers to the consumers. Although the implementation of official policies have not been fully executed, there has been sufficient evidence at the operational level to indicate that there has been a significant impact on marketing. If present policies continue, this impact should increase in the future.

Institutional Weakness

There have been a number of charges of corruption in the handling of food by Bangladeshi authorities. These charges usually have involved food for work projects, which are outside the scope of this evaluation (food for work projects being

supported under PL 480 Title II), and food distributed under BDG ration systems, which no longer is permitted under the Title III agreement. (As indicated earlier, the October 14, 1982 amendment stipulated that all wheat provided under the agreement would be used for the OMS program.)

Everybody interviewed, including BDG officials, acknowledged there have been problems with the ration system. We believe the mission's actions to encourage the BDG to raise ration prices to bring them closer into line with free market prices, reduce the rice portion from the ration system and other measures had a salutary effect on the operation of the ration system. The most effective measure taken to restrict the scope for corruption has been the adoption of the Open Market Sales program to deliver foodgrains. Transactions are more open, and fewer intermediaries are involved.

An institutional weakness on the U.S. side involves the system of multiple agency administration of PL 480 Title III programming in Washington. This system was described to the team as cumbersome and a source of frustrations and delays in the design and implementation of the Bangladesh Title III program, especially in the early part of the program. The system seems to have improved somewhat over the last few years, but further improvements would seem to be possible.

V. Conclusions

1. The U.S. food aid program has been successful in

bringing about important policy changes to stimulate production and improve foodgrain security in Bangladesh.

2. The Bangladesh Title III food for development program is very compatible with current Agency policies. From the outset the program emphasized policy dialogue as a development tool, promoted private sector development, and stressed institutional development as key elements of the program.

3. Mission planning and management of the Title III food program have been exceptional. As operational experience was gained lessons were noted and applied to the conduct of the program to keep it on a sound course. Negotiating successful production incentive prices, ration price adjustments, open market sales procedures and establishment of a flexible commodity mix for the program are key indicators of this sound management approach.

4. Incentive prices adopted by the government pursuant to 1978 and 1982 Title III agreements provided farmers with a sufficient return to encourage them to invest in HYV technologies. Administration of this program by the government has been uneven, particularly in the early years when the system was just beginning, but overall performance has been good, although not strictly according to the conditions established in the Title III agreements.

5. As with the other elements in the Title III food for development program, the open market sales system has not worked perfectly, but the overall impact has been positive.

During the early part of the Title III program the government operated OMS to benefit the more privileged classes through distribution of U.S. provided food under government-run ration systems, and to flour millers. These problems largely have been corrected by tightening the policy underpinnings for the program.

Some mechanical and logistical difficulties still exist, but the only significant problem remaining in the OMS program has to do with getting local level officials at the village and thana level to properly implement central government policies. The mission is fully aware of this problem and is working to resolve it.

6. Regarding integration of PL 480 into overall development strategy, a reading of program documents indicates that the objectives of the food aid program are compatible with the development assistance activities of the U.S. aid program. At times leverage of food resources has been used to achieve policy objectives in non-food areas, e.g., removal of spindle limitations inhibiting growth in the textile industry. However, the food aid program has been only partially integrated in the mission's strategic planning for development assistance (DA) activities. The mission indicates in its FY 85 Country Development Strategy Statement that it expects to further the process of combining food and DA resources in the coming years.

7. Bangladesh has established a goal of achieving self-sufficiency in foodgrains by 1985. This goal has obvious implications for the level and duration of U.S. food aid; achieving it would not necessarily mean the end of a Title III program. Production shortfalls last year have caused some rethinking of this timeframe, and of what other measures will be required to reach this goal.

Since major changes in the structure of agricultural production and of inputs must occur, we doubt Bangladesh will reach foodgrain self-sufficiency by the end of the decade. While production gains over the past few years have been impressive, agricultural production has not closed the consumption gap.

The annual gap between foodgrain production and consumption requirements presently is over 1 million tons. We believe it will take some time for a producer driven, market oriented response to agricultural development policy to become sufficiently established to close this gap. The confidence of both producers and consumers is necessary for it to work, and it will take time to build up this confidence.

8. The mission position has been to concentrate on food pricing and food distribution policies, paying relatively little attention to the development projects jointly approved by AID and BDG for proceeds expenditure. However, there is evidence that the funds are not being used as effectively as they might be (e.g., Kunkel and Thormann pointed out in their

September 1982 evaluation that total disbursements for some of these projects had been quite low and that some of the projects had been dropped by BDG after receiving Title III local currency funding). The lack of more careful program management diminishes the impact of this important resource.

We believe greater impact could be achieved with local currency generations through greater USAID involvement in their programming, either at the policy or project level, or both.

It appears that the pricing and distribution policy initiatives have matured sufficiently for the mission to consider a new generation of policy initiatives pointed toward removing other constraints to increased grain production. The mission's FY 85 CDSS indicates that active consideration is being given to greater involvement in programming local currencies generated under Title III. The evaluation team believes it would pay off in improved program effectiveness.

VI. Recommendations

1. Continued substantial donor support will be needed to support the Bangladesh agricultural development program at least for another decade. Cessation or a sharp reduction in aid levels would jeopardize gains to date, and make problematical achievement of the final goal.

We recommend that U.S. food aid be continued at approximately the present annual level to support Bangladesh Government efforts over this period.

2. The list of projects approved for use of local currency generations is subject to continuous change as projects are completed, while others are dropped and new projects are proposed for inclusion. Until now, the procedures for changes in the approved list of projects has been ad hoc. The Title III program is now at a stage where consideration should be given to a more systematic approach to modifications in the list of approved projects.

USAID and the BDG now undertake an annual review of the projects approved for disbursement of Title III local currency funding. However, there is little active followup by the mission on project-level details. The BDG initially selects projects, and chooses when to drop them or add new ones. The mission makes little or no critical judgment on the individual projects involved. We think it would be beneficial for the mission to get involved at this level, i.e., review and concurrence in project selection, as a way to encourage sounder planning and perhaps selection of higher quality projects.

This would have minimal to modest staffing implications for the USAID, depending on the system adopted by the mission for this task; our estimate is in the range of 0-3 local positions.

The purpose of this approach would be to ensure that local currency generated under Title III is allocated in a way that takes into account the performance and priority of projects ranked against one another. Before the review occurs, BDG and donor evaluations, that include analysis as well as numerical

indicators of progress, should be made available to USAID to assist it to reach a determination on projects to be included in the approved list of projects. The provision in the pending amendment* of the second Title III agreement to have quarterly reviews of projects approved for local currency funding could serve this purpose if handled in the way described above.

3. Now that the Bangladesh food for development program is more mature, new initiatives could be directed toward the Mid-term Foodgrain Production Plan, its policies and implementation requirements to build on the tested, but still evolving food policy foundation that has been laid over the past four years.

The mission consider greater involvement in the development of sectoral policy objectives to support the MTFPP covering the major constraints of employment generation, water control, etc. Out of these deliberations may emerge a set of high priority needed activities that could be the most effective use of Title III proceeds. Consideration might also be given to the use of Title III proceeds outside the food sector to support high priority programs, e.g., accelerating the integration of MCH with family planning in order to do everything possible to reach fertility reduction to replacement targets.

4. The policies for open market sales of government buffer stocks activated in food deficit areas and in seasons of scarcity (June-July, September-November) have been slow to

*This amendment has now been executed.

evolve and complex to administer, since more detailed market performance information from many regions has been needed. Now this system is largely in place and has gone through one successful season. A few more seasons will be needed to test the system but almost everyone is optimistic, even the formerly reluctant BDG officials.

In order to store and use the data needed to effectively monitor performance under the program, the mission should have a small computer. The Team was amazed that the mission has managed to keep up as well as it has with manual data handling. The data processing requirements now, however, clearly exceed that possible under the "green eyeshade" approach. A program as large and important as the Bangladesh program warrants use of some modern technology.

VII. Lessons Learned

1. The effectiveness of the unique policy approach of the Bangladesh food for development program provides a useful model for other countries facing similar sets of circumstances.

2. Title III programs involve a different, and usually, more involved and active management approach than Title I programs. A learning period is required to work out policy and operational kinks. We suggest that such programs should start with relatively uncomplex and limited objectives until a firm foundation is developed. Such a beginning should enhance management and the long-term effectiveness of Title III

programs. The Bangladesh case illustrates that gaining experience on a few objectives paves the way for more in-depth development planning.

3. Active oversight of projects financed with local currency generations is required to assure the most effective use of this important resource.

4. Delays should be anticipated in obtaining Washington policy and program approvals for new Title III programs, until the interagency management system is more efficiently institutionalized, i.e., as it seems to be for PL 480 Title I and Title II programs.

5. Modern equipment readily available in Washington should be provided to missions to enable them to more effectively monitor complex programs having heavy data processing requirements. A small computer, for example, could facilitate timely analysis and monitoring for improved program management.

APPENDIX A

PL 480: Titles I and III
Summary of Main Provisions

Georgia Sambunaris

APPENDIX A

PL 480: Titles I and III

Summary of Main Provisions

The Public Law 480 (PL 480) program, enacted in 1954, is the means by which the United States provides food aid to developing countries. In addition to combating hunger and malnutrition, the program is designed to encourage economic development and support U.S. foreign policy goals, as well as expand the market for U.S. agricultural exports. Its resources are provided in bilateral and multilateral programs through Titles I, II, and III. For the purposes of this evaluation, Titles I and III require elaboration.

Title I

Title I provides for long-term, low interest loans to friendly developing countries to help meet chronic or unexpected food shortages, on condition that the countries themselves undertake self-help measures to improve the efficiency of agricultural production marketing, and distribution.

Current legislation requires that at least 75 percent of food aid provided under Title I be allocated initially to countries whose per capita income is at or below the eligibility level of the International Development Association (IDA) -- \$680 in 1979 prices.

Title III

Title III provides for commitments of funds and forgiveness of Title I loans to low-income developing countries, under certain conditions.

Specific legislative authority exists for authorization under Title III for multiyear supply agreements of up to five years with "IDA eligible" countries prepared to undertake specific actions to address the constraints to equitable development, particularly in the food and agriculture sector. PL 480 commodities or local currency sales proceeds used for agreed development purposes may be applied against the country's repayment obligation to the United States -- i.e., the United States may forgive the loan.

Table A-1

U.S. FOOD AID TO BANGLADESH
(FY/\$000; Shipments)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Total</u>
Title I	-	-	33,034	255,557	135,467	59,486	51,072	6,058	6,382	-	-	517,056
Title II	139,133	.....	3,317	-	15,645	14,645	38,543	12,804	25,035	33,136	282,258
Title III	-	-	-	-	-	-	23,841	56,334	64,738	46,830	64,000	255,743
Total	<u>172,167</u>	.....	<u>258,874</u>	<u>135,467</u>	<u>75,131</u>	<u>89,558</u>	<u>100,935</u>	<u>83,924</u>	<u>71,865</u>	<u>97,136</u>	<u>1,055,057</u>

SOURCE: U.S. Bilateral Economic Assistance to Bangladesh,
USAID, October 1982.

APPENDIX B

Macroeconomic Performance in Bangladesh

Georgia Sambunaris

APPENDIX B

MACROECONOMIC PERFORMANCE IN BANGLADESH

I. Introduction: Bangladesh During the 1970's

Bangladesh, or the land of Bengalis, is over 3,000 years old yet has been a nation only since December 1971. As East Bengal then East Pakistan, the history of Bangladesh is characterized by recurrent exploitation, centuries of neglect and a series of natural catastrophies that have left it largely dependent upon aid from foreign donors. Its natural wealth lies in its fertile soil, abundant labor supply, natural gas reserves and surface and groundwater resources.

During 1971-1975 Bangladesh experienced economic stagnation especially in its agricultural sector. Natural disasters such as the flood of late 1974 and political turmoil contributed to the difficulties faced by the poor new nation. 1971 to 1975 foreign assistance was relief-oriented with food aid alone accounting for 41 percent of all aid disbursements to Bangladesh. However, 1975 to 1980 was a period characterized by an improving economy, especially in the areas of food production and distribution, increased privatization of the economy and tax efforts. GDP increased at an annual rate of nearly 7 percent, foodgrain production by 3.1 percent and manufacturing output by 6.3 percent. This impressive growth rate was largely attributable to the vast inflows of foreign

aid, and coincided with the tenure of the late President Ziaur Rahman. Net aid disbursements over FY 1976 - 1981 totalled \$5.2 billion. By comparison, earnings from exports and wage earner remittances combined totalled \$4.2 billion. Although no real growth occurred in export earnings the large influx of foreign aid provided for a 10 percent increase in the rate of growth of real imports, even during the world-wide oil glut of 1979-1980.*

However, mounting difficulties have led to the characterization of the FY 1982 economy as one plagued by budgetary and balance of payments difficulties stemming to mid 1981. Real levels of investment are lower, agricultural output was down slightly, and less foreign aid in real terms. Highly unfavorable weather conditions, an undiversified economic structure and deteriorating terms of trade are contributing to Bangladesh's current economic problems. According to World Bank projections, overall growth in GDP in FY 82 and FY 83 is expected to be only about 2 percent.

II. The Balance of Payments

Bangladesh's balance of payments difficulties, characterized by a worsening in its terms of trade and a leveling off in foreign aid availabilities, is further affected by three factors: over 50 percent of its export earnings are dependent on the demand from developed market economies which

*See "Policy Reform Grant", May 21, 1982 388-0059

Table B-1
Balance of Payments
(\$ Millions)

	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82*</u>	<u>1982/83**</u>
Merchandise exports, GOB	355	374	352	381	411	490	610	727	711	626	650
Merchandise imports, C&F	-727	-925	-1,402	-1,266	-865	-1,349	-1,556	-2,372	-2,533	-2,587	-2,330
Trade balance	<u>-372</u>	<u>-551</u>	<u>-1,050</u>	<u>-885</u>	<u>-454</u>	<u>-859</u>	<u>-946</u>	<u>-1,645</u>	<u>-1,822</u>	<u>-1,961</u>	<u>-1,680</u>
Services, net	21	-21	12	-24	-29	-32	-27	3	11	-70	-110
Current account balance	<u>-318</u>	<u>-553</u>	<u>-1,004</u>	<u>-847</u>	<u>-402</u>	<u>-778</u>	<u>-830</u>	<u>-1,432</u>	<u>-1,425</u>	<u>-1,619</u>	<u>-1,190</u>
Aid disbursements	551	461	901	808	533	828	1,030	1,222	1,147	1,210	1,350

* Provisional

** Projected

Source: World Bank Report No. 3768 BD

are presently experiencing recession; its export earnings account for only 30 percent of the import bill, which in turn is growing faster than exports; and, export prices for jute and jute goods are decreasing while import prices are increasing.

During BDG fiscal years 1978-1983, the current account deficit is expected to steadily deteriorate from \$830 million to \$1,190 million (estimate, see Table 1). The inability of aid disbursements to cover the gap has led to heavy drawdowns on exchange reserves and commodity aid pipeline availabilities. Furthermore, this crisis was heightened through the suspension of the IMF's 3-year Extended Fund Facility (EFF) totalling SDR 1 billion or approximately \$800 million. The BDG's reaction has been to cut back on imports and to undertake large-scale commercial bank loans. The IMF and the BDG are presently negotiating a new IMF standby credit valued at \$75 million.

Exports

The total value of export earnings is expected to increase by nearly 7 percent from 1978-1982, while import costs are projected to increase 77 percent during the same period. Although demand for jute products, accounting for roughly two-thirds of Bangladesh's export earnings, shows continued strength, any hope for improving the trade deficit situation is thwarted by the continued decline in the prices of raw jute and jute goods. In FY 1982 the volume of jute manufactures exports

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was expected to increase to an estimated 550 thousand tons from 493.5 thousand tons in FY 1980. However, unit price of jute exports was projected to decrease to \$550 per ton from \$715 per ton during the same period. In addition, the remaining export commodity mix, of tea, leather and fish products, while increasing in volume and value terms, does not represent a significant enough portion of total exports to impact on the overall terms of trade.

Imports

The total cost of imports in Bangladesh increased from \$1,556 million in 1978 to \$2,587 million in 1982. However, total import costs are expected to slightly decrease to \$2,330 million in FY 1982. Petroleum imports alone accounted for 87 percent of merchandise export earnings in FY 1981 but are projected to decrease to 67 percent in 1982/83. (See Table 2.) On the other hand, due to inadequate rainfall conditions since the summer of 1981, commercial foodgrain import costs are expected to increase 33 percent from \$285 million in FY 1981 to \$380 million in 1982/83. Despite this slight improvement in import costs, Bangladesh's overall terms of trade over the past two to three years have deteriorated and are further affected by a leveling off in real terms of external aid to finance its balance of payments.

TABLE B-2

BANGLADESH - MERCHANDISE TRADE ESTIMATES & PROJECTIONS
(\$ Millions U.S.)

	<u>1980/81</u>	<u>Provi- sional 1981/82</u>	<u>Pro- jected 1982/83</u>	<u>Ten- tative 1983/84</u>
<u>Exports</u>				
Raw jute	119	102	107	118
Jute manufactures	366	291	306	360
Tea	41	38	51	53
Leather & hides	57	63	46	62
Fish, shrimps, froglegs	42	54	70	80
Naphtha, furnace oil, bitumen	49	42	29	30
Newsprint & paper	8	6	5	11
Rice	-	5	-	-
Urea	10	-	4	7
Others	<u>19</u>	<u>25</u>	<u>32</u>	<u>39</u>
Total	711	626	650	760
<u>Imports</u>				
Foodgrains	250	285	380	250
Edible oils	92	71	88	100
Oil seeds	11	5	4	5
Crude petroleum	344	334	290	290
Petroleum products	147	213	145	150
Coal & coke	16	23	30	30
Pig iron	32	25	31	35
Cement	33	30	32	38
Clinker	15	15	12	15
Fertilizers	104	104	66	80
Raw cotton	108	80	69	95
Staple fibre	3	7	6	15
Yarn	20	22	37	40
Textiles	36	24	25	35
Capital goods	665	670	650	750
Others	<u>657</u>	<u>679</u>	<u>465</u>	<u>652</u>
Total	2,533	2,587	2,330	2,580

Indices, 1972-73 100				
Export price index	176	147	157	175
Import price index	275	276	260	270
Terms-of-Trade index	64	53	60	65

SOURCE: World Bank

Trends in U.S. Food Aid

Table 3 indicates that the amount of food aid to Bangladesh has been significant in both absolute terms and in relation to total aid from all sources. Food aid from all sources has averaged about \$242 million per year, nearly one-fourth of total foreign assistance provided to Bangladesh from FY 1977-1982.

As regards U.S. food aid compared to total food aid from all sources, U.S. food assistance to Bangladesh over the past decade has averaged some 46 percent of total food aid. U.S. food aid as a percentage of total food aid reached nearly 68 percent in 1975, then slowly declined to 22.4 percent in 1980. Since then the U.S. percentage has steadily increased to an estimated 44.1 percent in FY 1982.

Clearly, U.S. food aid has been a critical resource to Bangladesh, and will continue to be an important resource for some years to come.

Table B-3

SUMMARY OF EXTERNAL ASSISTANCE
(Disbursements, FY/\$ Millions)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982 ^e
Total Foreign Aid	270.8	551.4	461.2	901.2	808.2	533.1	827.9	1,030.0	1,222.2	1,147.4	1,210.0
Food Aid	129.6	182.6	228.7	382.3	313.5	121.6	177.9	179.1	374.6	194.1	220.0
Commodity Aid	137.7	288.9	108.2	375.5	369.2	352.9	374.3	482.5	377.8	393.1	..
Project Aid	3.5	79.9	124.3	143.4	125.5	158.6	275.7	368.4	469.8	560.2	..
Total U.S. Food Aid	.....	172.2	.....	258.9	135.5	75.1	89.6	100.9	83.9	71.9	97.1
U.S. Food Aid as % Total Aid	.....	13.4	.....	28.7	16.8	14.1	10.8	9.8	6.9	6.3	8.0
U.S. Food Aid as % Total Food Aid	.....	31.8	.....	67.7	43.2	61.8	50.4	56.3	22.4	37.0	44.1

.. = not available.

e = estimated.

SOURCE: World Bank Report 3768-BD
U.S. Bilateral Economic Assistance to Bangladesh, USAID, October 1982

DONOR PARTICIPATION*

Since 1971, Bangladesh has received over \$11 billion in the form of loans and grants from 35 nations, 10 multilateral agencies and a number of private institutions largely on humanitarian grounds. From 1971 - 1980 annual disbursements averaged \$821 million most of which has been for commodity and food aid.

Among the 16 DAC nations, mainly the United States, Japan, the Federal Republic of Germany, Canada and the United Kingdom, Bangladesh has received 50 percent of its total assistance since 1971. Sixty-seven percent was offered as grants by DAC nations and the remaining 33 percent from multilateral agencies, mainly IDA and ADB, "soft loans" providing for up to 50 year repayment periods at no interest.

Donor coordination in Bangladesh ranks high as compared with many developing countries. Dialogue between the BDG and most donors occurs frequently on policy and operational matters. The Aid Consortium Group meets annually in Paris to review performance of the economy, discuss policy and outline future aid commitments at the highest levels. In addition, a Local Consultative Group (LCG) meets regularly to review and discuss day-to-day issues under consideration by the BDG or certain donors.

*For an excellent analysis on Bangladesh in this area see Boyd Wennergren's An Assessment of the Agricultural Sector in Bangladesh.

Agricultural Production

After record production in rice and wheat in 1980/81, adverse weather and government policy changes depressed agricultural productivity in 1982/83. Import and production costs, declining rural per capita incomes and rising foodgrain prices combined to present a bleak performance picture. Agriculture as a percentage of DGP is expected to remain stagnant, averaging 48.4 percent from FY 1981 to FY 1983. Real growth decreased by 1.4 percent in FY 1982 after a record increase of 5.5 percent in FY 81.

Because of the erratic 1982 monsoon the first aus rice crop produced 248 thousand tons less in FY 1982 over FY 1981. The subsequent aman harvest proved to be the smallest in five years. And, the combined effect caused foodgrain prices to increase sharply. However, the FY 1982 boro crop produced a record 3.1 million tons and helped to ease the situation. World Bank projections for FY 1983 foodgrains show an expected increase of 4 percent in overall foodgrain production.

Foodgrain Situation

Since independence, Bangladesh has had to supplement domestic foodgrain production with imports to meet the minimum food requirements of a rapidly growing population. In most years the import requirement has been met by the various aid donors. However, weather-related crop failures have created a need to purchase food imports on commercial terms.

In recent years, the attention of policymakers has been focused on achieving foodgrain self-sufficiency by 1985, the end of the Second Five Year Plan. This effort is largely outlined in the Bangladesh Government's Medium-Term Foodgrain Production Plan (MTFPP), which was prepared with the assistance of the World Bank and other donors. But with population increasing at an average rate of 2.5-2.6 percent per annum, and presently totalling 92 million, and Bangladesh's continued dependence on favorable weather conditions a more realistic target would not aim for self-sufficiency until after 1990.

In any event, successful implementation of the Plan also would improve the production environment for non-foodgrain crops. In addition, improvement in the quantity and quality of agricultural inputs and a marketing system for ensuring adequate incentive prices for farmers and foodgrain price stability are being pursued.

PUBLIC SECTOR

Fiscal Policy -- the Budget

The formulation and implementation of budgetary policy in Bangladesh is mainly affected by unpredictability in four areas. First, the food account is affected by domestic foodgrain production, prices for domestic procurement and sales under the ration system, all of which are unpredictable from year to year. Second, the heavy reliance on import-related

taxes and foreign financing subjects the development budget to pressures outside its control. Third, the BDG's large financial involvement with public enterprises plays a dominant role in industry, energy, transportation and finance. Revenue performance in FY 1980 and FY 1981 was weakened by a substantial shortfall in imports, which in turn occurred because of lower than anticipated export earnings and foreign aid inflows. Fourth, flows of foreign aid also directly or indirectly finance about two-thirds of the government's development budget, thereby subjecting its overall size and composition to the variability in flows of aid.

During the late 1970s and early 1980s, central government finances in Bangladesh have benefitted from increasing inflows of foreign resources provided to assist in financing the development program and to relieve persistent food shortages. During the 1977-1981 period foreign resources financed, on the average, nearly 45 percent of total government expenditures and 85 percent of the deficit. Despite the large inflow of foreign aid, the burden of servicing foreign debt has remained low because a large portion of aid has taken the form of grants, while loans have usually been provided under favorable terms.

In 1982 government fiscal performance was not expected to meet its initial budget targets. As in previous years, the budget was based on assumptions that did not materialize particularly in regard to the inflow of foreign aid, domestic inflation, agricultural production and the volume of foreign

trade. Substantial departures occurred in foreign financing, which was expected to increase 33 percent but instead increased only approximately 16 percent; and foreign revenues, projected to increase 26 percent, instead increased only about 10 percent. In addition, total expenditures were budgeted to rise by nearly 20 percent and current expenditures by 10 percent in 1982 over 1981. However, performance again is expected to be disappointing in light of the prospective 20 percent increase in the consumer price index and higher interest payments.

On the whole, the overall deficit was projected to decline to Tk 20 billion or 8.1 percent of GDP in 1981/82; evidence shows the present deficit at Tk ___ billion for 1982/83, or ___ percent of GDP.

APPENDIX C

Nutrition and Food in Bangladesh

Harold Rice

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APPENDIX C

Nutrition and Food in Bangladesh

Introduction

Bangladesh has experienced but short periods of equanimity in the countryside since the war of independence in 1971. Major disruptions in food availability have occurred from natural disasters, drought, flood, cyclone and from the social disruption caused by the large out migration to India of mid-level skilled artisans and craftsmen important to agricultural production (1).

Historically food policies in Bangladesh have not enabled production to increase as rapidly as the growth in population, creating a food deficit economy. The government has attempted to stabilize itself in this situation by maintaining a food ration system that assures food supply for the army, civil servants, and other priority groups (2, 3, 4, 5). Meanwhile population has grown and the fractionation of landholdings has increased as land is divided among heirs. Every year an ever larger number of families have insufficient land to meet their food and/or income needs (6, 7).

What follows is a discussion of nutrition and related matters in Bangladesh.

Nutritional Status Surveys

Three large nutritional status surveys have been carried out in what is now Bangladesh. The first in 1962-64, the

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second in 1975-76 and the last in 1981-82 which is still not completely analyzed. The 1962-64 survey was sponsored by the Government of Pakistan with financial and technical assistance of the United States Department of Health Education and Welfare. It also received logistic and technical support from UNICEF and FAO. The Department of Biochemistry, University of Dhaka served as the center for all the survey activities. The later surveys have been carried out by the Institute of Nutrition and Food Science of the University of Dhaka. All the surveys have been on populations selected by a multistage random sampling plan. All surveys include dietary, clinical and anthropometric data. The 1975-76 survey (8) - (Nutrition Survey of Rural Bangladesh 1975-76, Institute of Nutrition and Food Science, University of Dhaka, Dhaka, Bangladesh, December 1977) includes also seasonal food availability information and socio-economic data as well as intrafamily food distribution data.

A comparison between 1962-64 and 1975-76 can be seen in Table I (5.1) 75-76 survey. Intake has fallen during the period, particularly the intake of animal products. Rice consumption remained the same, while wheat increased from 3 percent to 6 percent of calories. Animal foods, however, declined by 22 percent. Only 41 percent of households meet daily calorie requirements and only 11 percent meet vitamin A requirements (Table II). Preliminary analysis of the 1981-82 survey results on food consumption indicates a decline of approximately 7 percent in caloric intake as compared with 1976 levels.

A dismaying finding of the 1975-76 survey is that every family owning less than three acres (83 percent of the population) was deficient in the intake of calories, calcium, vitamin A, vitamin B2 and vitamin C. There was a shocking decline in vitamin A consumption to perhaps the lowest level ever recorded in a country (36 percent of requirements).

(Table III) Further information on this will be forthcoming from an ongoing Vitamin A Blindness Prevalance survey sponsored by Helen Keller International and funded by WHO, UNICEF, USAID and HKI. Surprisingly, vitamin A consumption is negatively correlated with income, because vegetable consumption declines with higher incomes.

Intra-Family Distribution

Data on intake shows young children to be the lowest age group, 1-3 years, for calories, protein and vitamins. (Table III) Clinical examinations for vitamin deficiencies did not show increases between 1962 and 1975 that correspond to the reduced dietary intake, but the number of observations were quite small. (Tables IV, V)

Interestingly, possibly because of cultural bias, older females (60+ years) receive surplus of calories (133 percent). Protein levels are adequate except for children up to 4 years, and pregnant and lactating mothers who are about 30 percent deficient. The latter group is particularly vulnerable since both mothers and infants and possibly pre-natal infants may be adversely affected.

For vitamins A, B2 and C the lower the age the greater the deprivation. The intake of fat (5-6 percent) is one of the lowest on record.

Anthropometry

Measurements of nutritional status involving weight, height, skin fold thickness, arm, head and chest circumference have become the most reliable measurements by which to judge recent and historical nutrition performance of individuals, particularly young children. Using these parameters individuals can be classified into chronically undernourished and acutely undernourished. In the 1975-76 survey approximately 74 percent of the children were chronically undernourished (Table VIII). Twelve percent of the children below 12 years are acutely as well as chronically undernourished.

The 24-35 month age group show the greatest number of acute undernourished and chronically undernourished, (24.5 percent). Figures 1 and 2 compare the growth rates for children in Bangladesh, Nepal, Thailand and the United States. It can be seen that the Asian countries show poor growth at all ages. The reason why Bangladesh rates are only slightly lower than Thailand where undernutrition rates are less than half those reported here may be explained by realizing that anthropometric data are collected on the living children. Those undernourished who died do not show in the anthropometry and it

is well known that infant mortality rates in Thailand are about half those in Bangladesh and in Nepal. A relation between severe economic hardship, nutrition and mortality has been found in several studies (9, 10, 11).

Iodine deficiency is widespread (Table IV) particularly in hilly areas and was reported in the 1975-76 survey to affect 80 percent of the population in certain regions. Iodization of salt will eliminate the deficiency and may reverse the development of goiter at early stages but the manufacture of salt needs to be centralized to permit thorough coverage. Targeting iodine treatment through the health system should be a highly cost effective intervention.

Socio-Economic Survey Findings

The 1975-76 survey included an investigation of socio-economic factors of those families examined clinically, anthropometrically and dietarily. Family composition, education, occupation, family size, land-holding, income expenditures, housing conditions and overall socio-economic score were determined. Land-holdings below 3 acres have strongly been associated with undernourishment; all of those families have inadequate consumption. Basically, then, income serves as the primary determinant of undernutrition except for vitamin A deficiency which is negatively correlated with income.

Food Patterns and Trends

Cereals dominate the food intake in Bangladesh accounting for two-thirds of the diet and more than 75 percent of the

calories. Animal sources (milk, meat, eggs, fish) account for only about 5 percent of intake. Fish is the only significant source of nutrients from animal food consumption. Egg consumption, for example, amounts to one egg per family every sixth day and meat consumption is 6 calories per capita per day. Other than cereals (rice - 94 percent and wheat 6 percent), vegetables make up about 30 percent of all food consumed with pumpkin and gourd, the least nutritious of them, dominating the consumption.

The intake of pulses and nuts declined between 1962 and 1975 by 15 percent because of less acreage planted. This trend is ominous because pulses should be an increasingly important source of protein in diets already with insignificant and more rapidly declining (-22 percent) animal protein levels. Unless policies to encourage pulse production are adopted the trend can be expected to continue as high yield rice varieties are adopted. Similar trends have been observed in other countries.

Intake of fats and oils declined by 40 percent between 1962 and 1975 to 29 calories per capita per day. Also insignificant is the nutritional contribution from fruits except for vitamin C and carotene.

These food patterns and trends will have little affect on adult nutrition if sufficient amounts of the principal foods, cereals and vegetables, can be obtained. The affect on pregnant and nursing women and young children will be negative because human growth calls for more concentrated nutrient sources, especially for proteins, fats, and vitamins.

Seasonality

From consumption surveys carried out throughout the year it was noted that undernutrition is most likely to intensify in June-July and again from late September to mid-November (Table VI, VII). Calorie levels in the Dhaka region for example dipped from a maximum of 2,060 in the February - April period to only 1,766 in October, November and to a surprising 1,584 in May - July.

Food as a Proportion of Household Expenditures

Statistical surveys of 1973-74 show a very high proportion of household expenditures for food. If most of the fuel and light expenditures (say two-thirds) were used to cook the food then food consumption absorbs 85 percent of all income (Table VIII).

Health

Health services remain centralized with a concentration of socialized curative services in urban areas. Traditional healers remain the principal sources of care in the rural areas. As late as 1978 there were only 63 Maternal and Child Welfare Centers in the entire country.

Since the government has now placed priority on primary health care and four years ago reorganized the MCH program integrating it with the more extensive Family Planning outreach program, at least a mechanism exists for MCH delivery, although

many problems discussed later under population are yet to be overcome.

Overall mortality rate is 17.2/1000 and life expectancy is about 48 years (12, 13, 14). Principal causes of death for infants can be seen in Table IX and are discussed below.

Principal causes of death for all ages are diarrheal disease (cholera and various dysenteries and GI infections), respiratory (tuberculosis, and pneumonia), and chronic ailments (circulatory, and rheumatic) of which diarrhea is more than 25 percent of the total, double any other class.

The infant mortality rate in Bangladesh is about 160/1000. About 20 percent of the children do not live beyond age five. Furthermore, 30 percent of all deaths occur before 11 months and another 25 percent between 1-4 years. Most of these deaths are preventable. In addition to the high wastage in human life there is a real economic wastage in the food loss to a family from the mortality.

We know how to bring mortality down to the level where fertility generally begins to fall (45-55/1000) through a widespread primary health care system emphasizing immunization, birth attendants, mother education, oral rehydration and nutritional monitoring. Such a system is still at an early stage here. Problems lie in every facet -- physical facilities, training, organization, equipment, medicine, access to rural areas, a referral system and developing in the public

the concept of the mother as the front line health worker. The recent integration of MCH into Family Planning, while theoretically more efficient, has created operational difficulties that may setback the pace of family planning, at least temporarily. Family welfare visitors established at Unions is still less than 50 percent complete (15).

Causes of Death Among the Young

Tetanus accounts for one-third of the neonatal deaths and one-sixth of the infant deaths in Bangladesh (Table IX). Neonatal tetanus is mainly associated with the use of unsterile instruments for cutting the umbilical cord by the traditional birth attendants, unsanitary surroundings and the prevalent practice of dressing the umbilical cord with substances like cow dung, ash or burnt earth. Usually, the principal foci of infection are the rural areas associated with manure-fertilized soil, and the damp, warm climate. The other causes of neonatal deaths were prematurity, congenital illnesses and birth injuries. The chance of an early infant death is greatly enhanced by these factors: too young or too old a mother, short duration of pregnancy or large family size.

Pneumonia, malnutrition, diarrheal illnesses, fever and measles were causes of post-neonatal deaths. These illnesses are generally caused by infection, poor housing, poverty, lack of safe water supply and basic sanitation.

From the analysis of the principal causes and the risk factors associated with neonatal and post-neonatal deaths it is evident that a large proportion of infant mortality in rural Bangladesh might be influenced by appropriate interventions. Neonatal mortality could be reduced by immunization of the mothers with tetanus toxoid or improved delivery practices. Congenital illness and injuries sustained due to obstructed labour could be avoided by appropriate screening before the delivery. The incidence of premature births, perhaps, could be reduced by improving maternal nutrition during the pregnancy. Malnutrition, pneumonia and diarrheal illnesses could be reduced by better and more accessible child care as well as improvements in the environmental hygiene and socio-economic conditions.

Population

The population density in Bangladesh of 1,670 persons/square mile makes it the most densely populated agricultural country in the world. At its current rate of growth (2.6 percent) the population will double in 27 years. The Bangladesh Population Control Program, strongly supported by the Government and by many donors, aims at achieving replacement rates by 1990. AID is heavily involved in assisting the government to achieve its objectives. Evidence from the recent mid-term evaluation of USAID Family Planning

Services Project (15) indicates that slippage in the replacement goal could push it to 2000. The consequences will be 9 million more people, 2.3 million more in the work force and 6 million more school age children. At least 11 percent more foodgrain will be needed even if no gains are made in reducing undernutrition. Furthermore, the growth in landlessness, now 2 to 3 times the rate of population, will continue at exponential rates with similar indications for the growth in unemployment, poverty and consequently undernutrition.

Progress and Problems

Recent progress on the population control problem is encouraging. The mid-term evaluation noted that public interest in family planning has accelerated and acceptor rates have risen from 12 percent to 18 percent in two years (Table X). The BDG goal is to reach 32 percent by 1985. Recently the BDG reorganized the health delivery system to incorporate MCH into the Family Planning delivery system. Integration at local levels with expanded and improved training programs have been slow to be implemented. However, if a major expansion in primary health care could be achieved through this integration, health should improve and job opportunities for girls in this sector should develop. Education levels of women have shown a strong correlation with acceptance of family planning.

The attached Table XI shows the magnitude of donor assistance to the BDG Family Planning/MCH Program.

Conclusions: Health, Nutrition and Population

The downward drift in real income affects the majority of the population, especially in rural Bangladesh. Consumption therefore declines and protein, both animal and vegetable declines faster than cereal grains. Fragmentation of land continues to exacerbate the income decline by reducing the amount of food that producers can produce for their own consumption. This trend together with the absence of any improvement in primary health services (tetanus immunization, oral rehydration, and hygiene, sanitation and nutrition education of women in child care) threaten to push mortality upwards from an already very high level.

Grain price stabilizations during normally scarce seasons, adoption of high yield varieties by the small farmer, and creating a grain surplus economy, all being assisted by Title III programs, stabilize and even may ameliorate some of the problems since less food borrowing will be necessary and also less interest will need to be paid on food borrowing in the hungry seasons.

Getting ahead of the problem, however, will require much more. Incomes will need to follow inflation more closely, wastages from poor health must decline, and more employment opportunities are necessary in order to create an effective demand that will show steady positive nutritional impact.

Table ~~C~~ - 1

Per Capita Food Intake By Their Sources in 1962-64 and 1975-76
(January to July)

Sources	1975-76		1972-64		Change in 1975-76 Compared to 1962-64
	Intakes				
	gm/person/day	% of total intake	gm/person/day	% of total intake	
Cereal	523.0	65	545.8	62	-4.3%
Animal	44.0	5	56.5	6	-22.1%
Other plant & vegetables	240.3	30	283.7	32	-15.3%
Total	807.3	100	885.9	100	- 8.9%

Animal food includes meat, fish, egg and milk and milk products. Compared to the 1962-64 intake (January to July), consumption of these highly nutritive foods has unmistakably and greatly declined (-22.1 per cent).

Table II - Percent Distribution of Households Meeting Minimum Daily Nutrition Requirements. Bangladesh, 1975-76

Percent of Requirement	Percent of Households Meeting Minimum Daily Requirement for:							
	Calories	Protein	Calcium	Thiamine	Riboflavin	Niacin	Vit. C	Vit. A
Less than 50	9	4	47	4	30	3	82	82
50-59	6	2	8	1	17	2	4	2
60-69	8	3	9	2	13	3	1	1
70-79	12	7	8	2	11	4	2	1
80-89	11	6	4	2	10	3	1	2
90-99	13	7	5	3	8	6	3	1
100 & above	41	71	19	86	11	79	7	11

Source: Nutrition Survey of Rural Bangladesh, Compiled from source Tables 5.13, 5.20, 5.21, 5.22, 5.24, 5.25, and 5.26.

from B. Winbergren, manuscripts.

Table III

Nutrient Intake (Per Capita Per Day) Expressed as the
Per Cent of Requirement for Different Age and Sex Groups

Age in years	Energy (Kcal)		Protein (gm)		Calcium (mg)		Iron (mg)		Vitamin A (I.U.)		Thiamine (mg)		Riboflavin (mg)		Niacin (mg)		Vitamin C (mg)	
Children (both sex)																		
1 - 3	46		68		32		101		30		93		38		71		13	
4 - 6	64		93		46		180		50		127		46		102		31	
7 - 9	68		102		57		230		44		139		50		111		34	
Adolescents																		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10 - 12	77	76	114	109	50	42	293	264	44	22	150	155	54	54	121	123	53	30
13 - 15	81	86	140	134	60	55	281	188	52	25	158	170	58	62	126	133	38	33
16 - 18	100	102	153	129	97	53	634	159	43	15	192	176	70	61	154	155	53	25
Adult																		
20 - 39	95	123	140	156	97	86	441	177	34	35	167	238	64	82	155	200	40	31
40 - 49	101	121	136	153	96	89	644	194	38	27	200	253	71	90	161	195	43	27
50 - 59	106	124	133	142	112	80	600	106	31	20	215	231	73	82	173	132	42	36
60 - 69	113	133	124	135	75	83	379	117	27	69	239	276	82	100	199	221	31	34
70 +	132	106	124	96	111	55	401	89	41	47	249	226	89	86	201	178	54	31
Pregnant (P)	103		127		24		51		35		236		79		105		30	
Lactating (L)	97		96		33		89		23		244		84		158		40	
FL	68		65		18		118		12		190		67		112		13	
Average (all age and sex)	90		125		66		292		35		179		64		115		35	

TABLE IV
Per Cent Prevalence of Enlarged Thyroid Gland by Different Age and Sex Groups in 1962-64 and 1975-76

Year	Age and Sex				
	Males		Females		
	5-14 yrs	15 yrs+	5-14 yrs	NPNL	15 yrs+ P.L or both
1975-76	8.4	2.2	13.4	24.8	31.3
1962-64	23.4	13.8	25.0	33.6	40.5

As in 1962-64, a high prevalence of goitre was observed in the P.L and PL women. In 1962-64 four of every ten in this group showed goitre. In the current survey three out of every 10 pregnant or lactating women showed this deficiency. Goitre is more prevalent among females than among males.

It is known that in certain geographical areas, namely Jamalpur, Rangpur and Dinajpur, goitre of various grades occur in as much as 80 per cent of the population. These areas are either hilly or frequently flooded and it is thought that the iodides there are completely leached out of the soils. Water from ponds in these areas was analysed for iodine at the laboratory of the Wisconsin Alumni Research Foundation and extremely low values were found¹⁵. A program for iodization of salt to eradicate goitre is urgently needed.

TABLE V
Per Cent Distribution of the Population Showing Signs of Riboflavin Deficiency in 1962-64 and 1975-76

Signs and symptoms	Year of study	Children (both sex) 0-4 yrs.	Males		Females			Total
			5-14 yrs	15 yrs+	15 yrs+			
					5-14 yrs	NPNL	P.L or PL	
Angular sears	1975-76	0	1.0	0	1.0	0.1	0.7	0.4
	1962-64	N.A	5.2	4.3	1.6	1.6	3.4	N.A
Angular stomatitis	1975-76	3.3	8.7	2.6	8.7	5.4	9.4	5.9
	1962-64	N.A	9.9	3.5	4.3	3.1	7.5	N.A
Cheilosis	1975-76	0	0	0.1	0	0	0	0.1
	1962-64	N.A	0	0	0	0	0	0
Nasolabial dysplasia	1975-76	0	0	1.5	0.4	1.5	0.7	0.8

N.A. - Data not available

Figure C-1
HEIGHT AND WEIGHT FOR AGE FOR RURAL BOYS (0-5 YEARS)
OF BANGLADESH COMPARED WITH THOSE OF NEPAL THAILAND
AND U.S.A (IOWA).

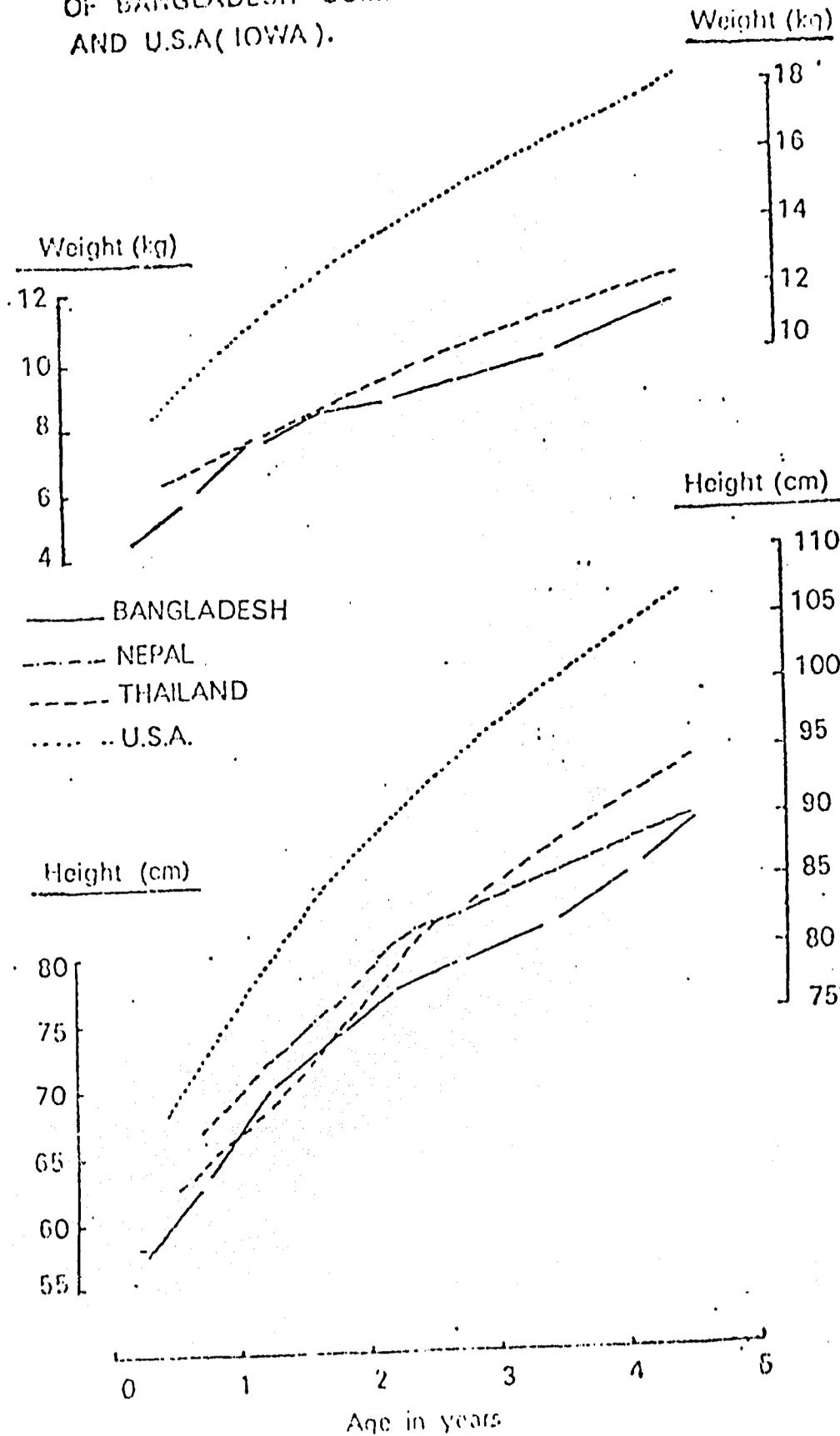
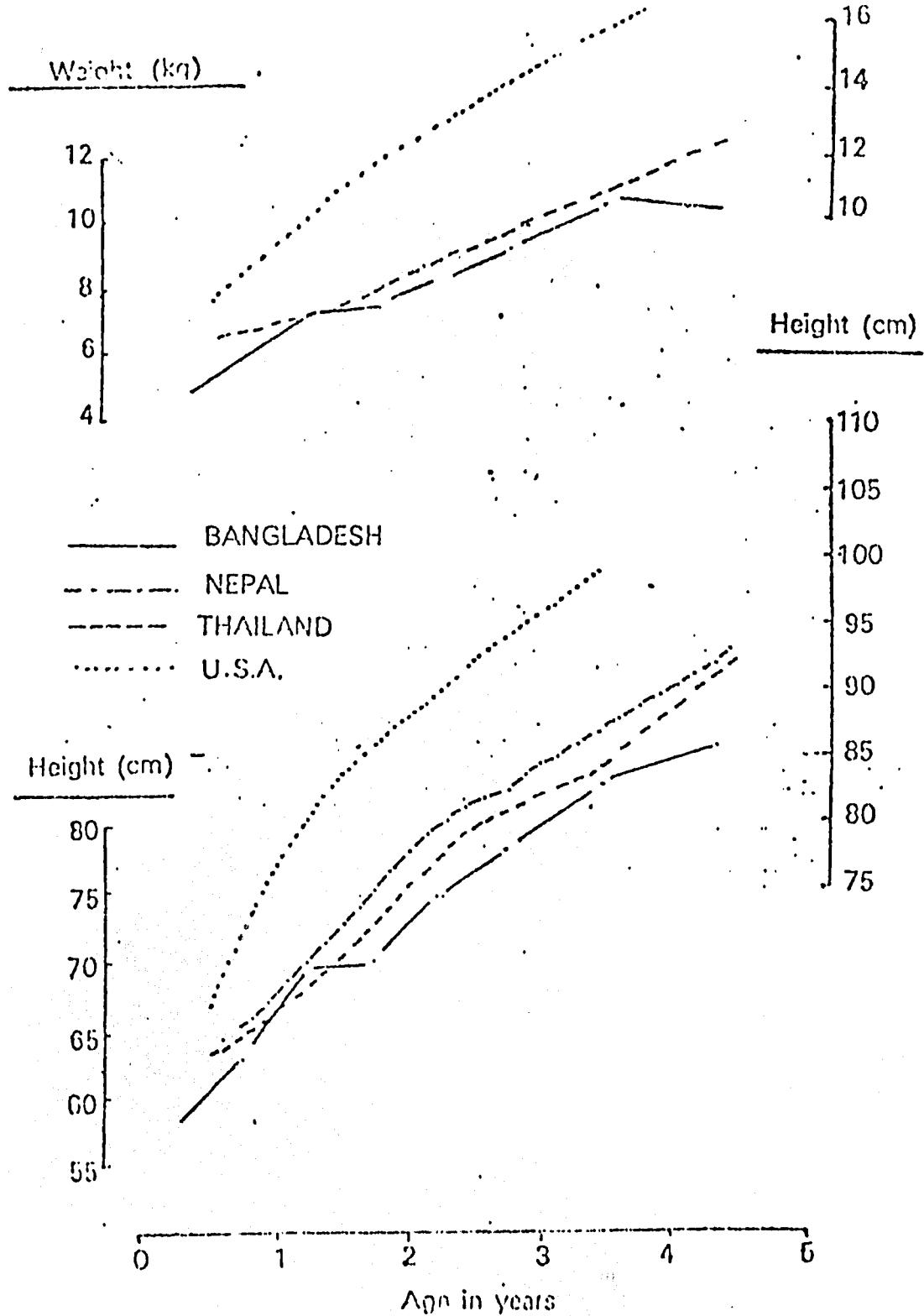


Figure 2

HEIGHT AND WEIGHT FOR AGE FOR RURAL GIRLS (0-5 YEARS) OF BANGLADESH AS COMPARED WITH THOSE OF NEPAL, THAILAND AND U.S.A.



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Table ~~V~~
 Food Intake by Nutrients
 (Per person per day, seasonal locations)

Month of Visit	1st round			2nd round		
	May-July, 1975			August-Sept., 1975		
Season	Before boro/aus			During sus		
Location	Chittagong	Rangpur	Dacca	Chittagong	Rangpur	Dacca
No. H/H	35	48	52	38	49	52
No. members	261	292	274	249	235	260
Nutrients						
Calorie	2766	1757	1584	2664	2014	2012
Protein (gm)	68.0	50.5	45.4	67.4	57.6	53.3
(Animal)	(8.1)	(2.7)	(2.9)	(10.1)	(5.6)	(4.0)
Fat (gm)	20.1	11.9	8.8	20.1	12.5	9.5
Carbohydrate (gm)	589	365	334	568	414	426
Calcium (mg)	455	370	301	550	230	229
Iron (mg)	29.3	25.4	18.3	29.5	26.2	20.6
Vitamin A (I.U.)	643	3354	370	512	305	253
Thiamine (mg)	0.84	1.55	1.35	0.79	1.72	1.58
Riboflavin (mg)	0.70	0.99	0.82	0.67	0.90	0.81
Niacin (mg)	17.09	18.21	16.85	16.62	23.17	22.34
Vitamin C (mg)	12.66	32.18	5.14	5.67	3.97	9.04

(Contd)

TABLE ~~III~~ ^{VII}

Food Intake by Nutrients
(Per person per day, seasonal locations)

Month of Visit	3rd round October-November, 1975			4th round February-April, 1976		
	Before Aman			After Aman		
Season	Chittagong	Rangpur	Dacca	Chittagong	Rangpur	Dacca
Location						
No. H/H	38	50	52	38	50	51
No. members	249	304	274	236	301	274
Nutrients						
Calorie	2586	1731	1766	2754	2129	2060
Protein (gm)	64.3	49.5	48.9	67.2	55.8	55.9
(Animal)	(11.0)	(7.0)	(5.6)	(6.5)	(2.9)	(5.1)
Fat (gm)	19.5	11.2	9.2	16.9	12.3	12.4
Carbohydrate (gm)	551	363	377	591	452	437
Calcium (mg)	437	228	193	492	235	312
Iron (mg)	27.6	23.5	19.3	29.5	22.3	19.5
Vitamin A (I.U.)	571	346	275	1234	325	282
Thiamine (mg)	0.73	1.37	1.35	0.96	1.78	1.59
Riboflavin (mg)	0.61	0.69	0.72	0.94	0.85	0.81
Niacin (mg)	16.42	19.67	19.19	17.33	23.39	21.34
Vitamin C (mg)	3.17	3.47	3.18	15.43	12.27	13.39

Table ~~VIII~~ ^{VIII} Rural Expenditures for Food and Non-Food Products,
Bangladesh, 1973-74

<u>Item</u>	<u>Average monthly Expenditure per family (Tk.)</u>	<u>Percent of Total</u>
Food & Drinks	366.54	74.72
Clothing & Footwear.	25.80	5.26
Personal Effects	0.98	0.20
Housing	65.88	13.43
Rent	(23.77)	
Fuel & Light	(39.64)	
Furniture	(2.45)	
Other	31.33	6.39
<u>Total</u>	<u>490.55</u>	<u>100.00</u>
=====		

Source: Bangladesh Bureau of Statistics, 1973-74: Household Expenditure Survey of Bangladesh, Dacca, August 1978, p. 26.

TABLE IX
~~III~~

NEONATAL AND POST-NEONATAL DEATHS BY CAUSE

Cause of Death	Neonatal Deaths			Post-Neonatal Deaths			Infant Deaths		
	No.	Percent	Rate ^a	No.	Percent	Rate ^a	No.	Percent	Rate ^a
All causes	120	100.0	83.6	96	100.0	71.2	216	100.0	152.9
Tetanus	37	30.8	27.4	9	9.4	6.7	46	21.3	34.1
Prematurity	26	21.7	19.3	-	-	-	26	12.0	19.3
Congenital illness	14	11.7	10.4	-	-	-	14	6.5	10.4
Birth injury	8	6.7	5.9	-	-	-	8	3.7	5.9
Pneumonia	8	6.7	5.9	32	33.3	23.7	40	18.5	29.6
Malnutrition	-	-	-	17	17.7	12.6	17	7.9	12.6
Diarrhoeal illnesses	4	3.3	3.0	10	10.4	7.4	14	6.5	10.4
Fever	3	2.5	2.2	9	9.4	6.7	12	5.6	8.9
Measles	-	-	-	6	6.3	4.4	6	2.8	4.4
Other and undiagnosed	20	16.6	14.8	13	13.5	9.6	33	15.2	24.4

^a Per 1,000 live births

TABLE X

PERCENTAGE OF CURRENTLY MARRIED WOMEN UNDER
50 YEARS OF AGE USING CONTRACEPTION
BY METHOD, BANGLADESH
1975, 1979 and 1981

METHOD	BFS ¹	CPS YEAR	
	1975	1979 ²	1981
ORAL PILL	2.7	3.6	3.5
CONDOM	0.7	1.5	1.6
IUD	0.5	0.2	0.4
TUBECTOMY	0.3	2.4	4.0
VASECTOMY	0.5	0.9	0.8
INJECTION	-	0.2	0.4
VAGINAL METHOD	- ^a	0.1	0.3
ABSTINENCE	1.1	0.8	1.2
SAFE PERIOD	1.0	2.2	3.9
WITHDRAWAL	0.6	0.2	1.8
OTHER	0.3	0.6	0.7
TOTAL USE RATE	7.7	12.7	18.6

¹Source: BFS - Bangladesh Fertility Survey, 1975.
(Data derived from Table 2.4.5. and Table 4.4.1)

²Source: CPS - Contraceptive Prevalence Survey, 1979.

^aThis method is included in 'OTHER'.

TABLE X I Donor's Assistance to MCH/FP Programme

(In million US\$)

Donor	Allocation	Percentage(%)	Duration
WORLD BANK	126.6 ^{a/}	(61.2%)	1975 - 1983
USAID	44.0	(26.0%)	1981 - 1983
UNFPA	18.5	(10.9%)	1979 - mid 1985
UNICEF	1.39	(0.8%)	1980 - 1982
WHO	1.02	(0.6%)	1982 - 1985
UNDP	0.79	(0.5%)	1977 - 1982
TOTAL:	169.4	(100.0%)	

a/ For MCH/FP only:

1st Project : US\$ 33.6 million

2nd Project : US\$ 93.0 million

TOTAL : US\$ 126.6 million for MCH/FP

APPENDIX D

The Public Food Distribution System

John Warren Smith

Daniel H. Erickson

APPENDIX D

THE PUBLIC FOOD DISTRIBUTION SYSTEM (PFDS)*

The PFDS is the mechanism for distribution of foodgrains (together with salt, sugar and edible oil) to consumer beneficiaries of ten programs.

Table D-1
BDG Public Food Distribution by Category
(as percentages of total offtakes)

<u>Category</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>
1. Statutory Rationing	24.4	23.2	20.5	22.5	15.1
2. Modified Rationing	19.1	17.3	16.0	11.8	23.7
3. Essential Priorities	6.6	5.3	3.5	5.8	4.9
4. Other Priorities	17.7	21.9	22.4	23.5	18.5
5. Large Employers	4.8	4.2	4.4	2.0	2.7
6. Flour Mills	11.7	10.2	7.4	8.2	6.1
7. Marketing Operations	0.3	0.5	0.4	0.0	5.3
8. Open Market Sales	0.0	2.9	4.6	0.0	2.3
9. Food for Work	13.8	12.0	18.4	22.9	18.0
10. Relief	1.6	2.5	2.4	3.3	3.4

Source: Directorate of Food.

*The descriptive portion is based on World Bank Report #2761-BD December 19, 1979, updated. The Mechanics of Operations section is based on information furnished by concerned public officials and field research.

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Statutory Rationing (SR)

In principle, Statutory Rationing is extended to all the people living in six cities -- Dhaka, Narayanganj, Chittagong, Khulna, Rajshahi and Rangamati. The ration consists of specified quantities of rice, wheat, sugar, edible oil and salt, to be provided weekly through licensed dealers at prices fixed by the Government. The ration issue price for coarse rice, fluctuated between two-thirds and three-fourths of the free market price during 1976-79 and recently was raised to 90 percent of market price. The SR system accounted for about 23 percent of the foodgrains distributed through the public distribution system in FY 78/79 but declined to 15 percent in 1981/82. Though the issue of new ration cards in SR areas was officially stopped in 1974 (except for civil servants being posted to these six cities), the number of such cards increased by about 18 percent. This was due to the inclusion of Rajshahi in April 1975 and Rangamati in October 1976 and to some changes in the delineation of the statutory rationing areas.

The coverage of the SR system in the defined areas, therefore, declined from about 77 percent of their total population in 1976 to 63 percent in 1979. Many of the persons living in the six cities where SR is distributed are ineligible to receive these rations as they are new immigrants from the rural areas. However, these new immigrants are most likely to be among the most needy of the urban population.

Modified Rationing (MR)

The Modified Rationing System, which functions outside the statutory rationing areas, is meant to benefit primarily the rural poor. The population in these areas is classified into four income (or tax-paying) categories. In principle, only the lowest income groups are entitled to benefit from the Modified Rationing System. However, distribution is subject to the availability of grains after the requirements of priority categories have been satisfied. Thus, there has been a considerable fluctuation in the amount of foodgrains distributed under this category. In 1981/82 MR accounted for 23 percent of the total PFDS offtake. This was the highest MR percentage for the past 5 years.

Only about 10 percent of the allocations under Modified Rationing goes to small towns. Ration cards for the MR system are issued by the Union Parishads, and food is distributed on the basis of special master rolls prepared by the chairmen of the Union Parishads. The distribution of MR seems to be more or less at the discretion of local leaders (chairmen and members of the Union Parishads). Considerable quantities of MR grain reportedly are diverted for sale in the open market and do not therefore reach the intended recipients.

Essential Priorities

Essential Priority groups include members of the armed forces and of the Bangladesh Rifles, police, jail and hospital inmates, residents of orphanages, and rural and reserve police who do not live in the defined statutory areas. Government rations to this group are about 5 percent of the total.

Other Priorities

This category pertains to employees of Government, semi-Government and autonomous bodies, educational institutions, railways, nationalized banks. BWDB, BADC, rural development workers and employees of large institutions. The Other Priorities category accounts for about 20 percent of the total.

Large Employers

Employees of large establishments (i.e., those employing 50 or more persons) who live outside statutory rationing areas are usually entitled to buy 35 seers of wheat per month regardless of family size, though occasionally this becomes 15 seers of rice and 20 seers of wheat.

Flour Mills

Distribution to this category has steadily declined over the past five years, draining from 11.7 percent in 1977 to 6.1 percent in 1981.

Market Operations

Market operations entail sales of limited quantities of grains through ration shops at somewhat higher than ration prices but lower than regular retail prices. Ration eligibility is not required to purchase such grains. This distribution mechanism is seldom used to any significant extent. In 1981/82 the BDG needed it to reduce old stocks of foodgrains to make way for unexpectedly large supplies of donor stocks and domestic procurement.

Open Market Sales (OMS) is a market supply mechanism developed under the Title III Agreement to help stabilize foodgrain prices. It is designed to operate only when foodgrain prices exceed a predetermined level by injecting government foodgrain stocks into the regular market with a minimum of resale restrictions. Sales are made to the public at large, there are no special eligibility requirements. The percentage of the PFDS offtake allocated to OMS depends primarily on the price movement of foodgrains and the levels of government stock. In 1981/82 23 percent of PFDS offtake was through OMS.

Food for Work

The Food for Work program has been expanding and in FY 81 accounted for 18 percent of all grains distributed through the public system. Daily wages are fixed at a level considered sufficient to provide the energy requirements of an average family of five. These wages are equivalent to about two-thirds of average agricultural wages. The program makes an important contribution towards moderating rural underemployment during the dry season and provides food to the most needy.

Relief

A small minority continues to receive food free of charge under the Relief category. These allocations constitute only 3.4 percent of the total public distribution. Distribution is

made by the Ministry of Relief and Rehabilitation under master rolls prepared by Union Parishad officials.

Mechanics of Operation

The PFDS is centrally administered by the Food Directorate (FD), a unit within the Food Division of the Ministry of Food. Various facets of the operation come under the aegis of the Director of Supply, Distribution and Rationing (DSDR), the Director of Movements and Storage and the Director of Silos.^{1/}

The Director of Movements and Storage (DMS), upon demand by the DSDR, has responsibility to get the ships importing foodgrain from abroad unloaded at the ports and to get the foodgrains transported to their destinations within the system.

The FD administers the PFDS through subordinate officials whose responsibilities encompass successively lower echelon administrative units within the country. Reporting to or through the chain of command to the DSDR are four Divisional Controllers of Food with responsibility for internal procurement and movement of the commodities to godowns at Central Storage Depots (CDSs) and Local Supply Depots (LSDs), twenty-two District Controllers of Food and seventy-two Subdivisional Controllers of Food. The Subdivision Controllers supervise thana inspectors.^{2/} There are 12 CDSs and 486 LSDs. In addition, the Ministry of Food operates 325 Temporary

^{1/} Currently one official encumbers both the Director of Movements and Storage and Director of Silos posts.

^{2/} There is in planning a concept of an upgraded thana with an elected Chairman and administrative structure which would have a role in PFDS administration.

Purchasing Centers (TPCs) in public buildings and rented facilities.

Each CSD, which meets the storage and distribution needs of several districts and each LSD, which meets the storage and distribution needs of several union parishads or one or more thanas depending on considerations of population, area and/or production and each TPC is managed by an Officer-in-Charge (OC).

The CSD OCs Report for some purposes to the DMS and for other purposes to the Regional Controller of Food, the LSD OCs report to the DSDR through the District Controllers of Food (DCF) and the TPC OCs report to the Director of Procurement through the DCFs. The Director of Silos has responsibility for storage of foodgrains in four Bangladesh Government (BDG) silos located in the port of Chittagong and at Narayanganj, Achnganj and Santatra. The DMS allocates incoming foodgrain shipments between Chittagong and Chalna considering (a) port facilities, (b) area needs, and (c) terms and conditions of supply. However, no ship except one of the smallest, i.e., in the range of 6,000 to 10,000 DWT, may, due to draft restrictions, proceed to Chalna without first unloading part of its cargo at the Chittagong outer anchorage.

The DMS further has responsibility for management of a fleet of 298 trucks owned by the BDG and used in the PFDS.^{3/}

3/ It was stated that not all of the 298 trucks are fully operational because some of these trucks were received in 1973 from the United Nations Relief and Rehabilitation Administration (UNRRA) and so are superannuated and some received in a barter deal with Poland in 1981 are not in good operating condition due to lack of spare parts. The status is: 151 in running condition, 41 not running but repairable, 93 not repairable but not yet condemned and 13 condemned.

These trucks are used throughout the country but mainly in Dhaka, Chittagong and Khulna.

Whereas imported foodgrains arrive by ship at the ports of entry, that which is locally procured may be delivered by the farmer/producer or his agent, using available means of transport such as lorry, or cart or rickshaw, to an LSD.

After the foodgrains enter the PFDS, they may be transported within the country by railway, river boat or barge or road transport. A Transport Coordinating Committee (TCC) meets every other Wednesday to discuss BDG transportation requirements including food, jute and other commodities. Priorities are set and equipment is allocated. Contractors are selected in response to competitive tender for furnishing truck, self propelled barge, dumb barge and country boat transport. The DMS furnishes transportation only when the movement is from one district to another. When it is necessary to move foodgrain from one LSD to another within one district, the District Controller of Food makes the arrangements.

Except for conditions imposed by the terms and conditions of sale, foodgrains, either imported or locally procured, are distributed throughout the country on the basis of local needs without regard to the source. If there is a foodgrain stock shortage at any LSD, the District Controller of Food will attempt to meet it by movement within his district. If this is not feasible, the DMS will move foodgrain to the deficit LSD from outside the district.

When foodgrains arrived at the port, they are usually unloaded into port silos. Sometimes this requires triple handling -- ship to silo, silo to CSD, then CSD to LSD. However, whenever appropriate the DMS sends foodgrain directly from ships to the LSDs in order to cut down transportations cost and handling losses.

To draw foodgrains from an LSD an individual dealer makes payment to a Subdivisional Controller of Food and in return receives a Delivery Order (DO) specifying the kind and amount of grain to which he is entitled. The dealer presents the DO to the LSD officer in charge who in turn causes delivery to be made to the dealer's transport vehicle. The dealer may use a trucker or bullock cart or rickshaw operator, depending upon the amount to be transported. Delivery from the LSD is first in, first out.

After the foodgrain leaves the LSD, it enters the private sector. The ration shop is a BDG licensed private establishment, typically family operated. Customers present their ration cards at the shop and are authorized to purchase prescribed quantities at a subsidized price. At the Union Parishad level ration cards are not issued, but the names of persons whose income is so low that they do not pay taxes are placed on a priority list for purchase at ration shops. In practice, however, those on the priority list do not always receive ration shop grain. Open market sales are mainly through BDG licensed private foodgrain dealers.

Some statistical information will give an idea of the magnitude of the PFDS and its operations. The Food Directorate has a Director General and staff together totalling 3,084 persons. 2,035,804 long tons of foodgrains passed through the PFDS during FY 1981-82. Normally, 60-70 percent of the grain is imported, the balance is procured in country. This harvest year (1982/83), it is expected that less than 30 percent will be locally procured. During 1980/81, a bumper crop year, about 50 percent of the PFDS foodgrain stock was procured in Bangladesh.

A study of the LSD organization and operations at Comilla gives some insight into the working of the PFDS at the local level.^{1/} The Comilla LSD has an OC/Inspector, plus an executive staff consisting of two sub-inspectors and four assistant subinspectors and eight guards. It contracts for a workforce of 45 laborers for loading and unloading. Laborers are paid Tk 10-15/day.

The Comilla LSD godown has a capacity of 8,450 MT and as of January 15, 1983 it had 89,300 maunds of rice and wheat in stock. The 1982/83 procurement target for the Aman season was 8,000 maunds, but actual procurement was 2,000 maunds. The procurement price was Tk 210/maund for rice and Tk 135/maund for wheat.

^{1/} The LSD at Comilla is larger than the typical LSD since because of its direct link to Chittagong Port. It services the LSDs of other thanas, thus performing a CSD function.

Tracking some of the paperwork gives insight into the administrative practices of the PFDS. The LSD OC sends daily activity reports to Subdivisional Controller. The Subdivisional Controller then sends a compiled report to the District Controller with a copy to the Ministry of Food. At the national level The Directorate of Movement and Storage issues a monthly movement plan to consignors and consignees and all others concerned with the movement of foodgrains, so that the necessary transport equipment may be assigned.

APPENDIX E

Medium-Term Foodgrain Production Plan

John Warren Smith

Blaine Richardson

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APPENDIX E

Medium-Term Foodgrain Production Plan (MTFPP)

The MTFPP was issued in February 1981 as a part of the Second Five Year Plan (SFYP) to help achieve self-sufficiency in foodgrains by FY 1985. The objective of the MTFPP strategy was to provide a more stable production environment through projects designed to bring about three major types of improvements.

- (a) improved water control, mainly through minor irrigation as well as drainage and minor flood control -- especially for aus and aman -- to minimize the use of imported recurrent inputs and capital goods, and the farmer's cash cost and credit need;
- (b) a steady supply of inputs matching the demand; and
- (c) incentive and stable farmgate prices through more efficient procurement and marketing.

Improved water control is the spearhead in gaining ground towards a more stable production environment that is important to small farmers in driving toward self-sufficiency.

An understanding on the water sector strategy being pursued was reached between BDG and the World Bank in their joint review of BWDB in 1979 and then confirmed by the government in the MTFPP. The water sector strategy emerged both from the

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over-riding need to achieve self-sufficiency in foodgrain production as soon as possible, and from the country's land and water resources pattern that requires linking and sequencing of individual projects into an evolving system of water control.

The MTFPP's overall strategy emphasizes technically simple, divisible, quick-to-plan and quick-to-implement projects. The danger of scarce financial resources being allocated to major indivisible and irrevocable commitments is thus minimized and emphasis can be changed as experience or changing needs and situations may dictate.

The FY 82 percentage share of agriculture was 32 percent of the economy's ADP as projected in the MTFPP and is expected to increase to 36 percent during the FY 83. This is an improvement as against the ratio of 28 percent and less before the launching of MTFPP.

Nevertheless, there has been a shortfall in the actual ADP allocations for MTFPP from those projected for its first two years. The actual MTFPP allocation in FY 1982 was less than one-half the projected one. The same relationship is likely to remain in FY 1983 and probably also in 1984. The scaling down of funding has caused the BDG to reorder the priorities of some of its MTFPP programs.

The following is a table of the originally approved projects that are expected to be retained.

Table E-1

MTFPP CORE PROJECTS

<u>Name of Projects</u>	<u>Estimated FY 82 BDG^{1/} Local Currency Expenditure (Taka 000)</u>
1. Manu River Project	149,275
2. Karnafuli Irrigation and Flood Control	78,018
3. Barisal Irrigation II	26,831
4. Muhuri Irrigation	4,055
5. Shallow Tubewell (IDA)	59,277
6. Intensive Agricultural Program for North-West	317,092
7. Supply of Low Lift Pump under Canal Digging Program	83,376
8. Ashuganj Sabuj Prokolpa	1,759
9. Low Lift Pump Irrigation	926,099
10. Low Lift Pump (IDA)	22,652
11. Deep Tubewell Irrigation	576,714
12. Shallow Tubewell Irrigation all over Bangladesh	398,062
13. Command Area Development	3,890
14. Establishment of Workshops in Private Sector	962
15. Support to Locally Developed Small Pumps and other Agricultural Implements	193

1/ Source: WDB/BADC.

Most of the remaining projects face budget cuts which will reduce their effectiveness. Funds for field visits by support services have been reduced, which undermines their efficiency and effectiveness.

Provisional data on physical performance for FY 82 was made available from BADC for the projects to which local currency generated by Title III was disbursed. As might be expected with any project portfolio, performance varied widely. For example, on the Low Lift Irrigation Pump project, the objectives were to put into operation 44,000 low lift pumps, and to irrigate 1.956 million acres of land. The percentage achievement of targets was 86 percent and 84 percent respectively. By contrast, the project for the Establishment of Workshop Complex in Private Sector performed poorly. The target was to establish 70 workshops in the private sector, to train 9,000 persons and to procure 40 machines. The physical performance record was no workshops set up, no persons trained, and 37 machines purchased.

Corrective action was taken by the Government for several projects (on the list of approved projects for Title III funding) that did not perform well during FY 82. The Establishment of Workshop Complex in Private Sector has been dropped from the BADC program and was shifted to other implementing agencies. The Ashuganj Sabuj Prokolpa project has proven to be more complex and more difficult to complete than anticipated by BADC. The project has been abandoned. The

Command Area Development Project will be funded at a minimal level during FY 83 and is expected to be dropped from the BADC's FY 84 budget. The support to the project for Locally Developed Small Pumps and other Agricultural Implements will be terminated in FY 83 because it duplicated another project and did not receive support from the intended beneficiaries.

Total disbursements from local currency generated under Title III to the projects mentioned in the preceding paragraph were quite small relative to total disbursements, i.e., \$104,000 out of a total \$32,000,000 for all projects.

The implementation of the traditional type capital intensive projects have suffered from a variety of problems. Chief among these have been delays in construction and technical problems, as well as cost increases.

The approved list of projects is subject to continuous change as projects are completed, while others are dropped and new projects are proposed for inclusion. Until now, the procedures for changes in the approved list of projects appears to have been ad hoc. The Title III program is now at a stage where consideration should be given to a systematic approach to modifications in the list of approved projects.

The MTFPP concentrates on foodgrains, almost exclusively rice and wheat, which account for about 85 percent of total calorie intake of the population. Consumption targets were set at 15.5 ounces per capita per day, for a projected population of 102 million by 1985. To achieve this goal, a sustained

annual production growth rate of 7.2 percent would be required, to reach a gross production of 20 million tons of foodgrains by 1985. The average FY 78-FY 80 benchmark production level was about 13 million tons.

Basically, the plan calls for use of modern technologies to increase agricultural productivity, i.e., increasing acreage under high yield variety (HYV) seeds, expanded and more efficient use of fertilizer and improved irrigation and water control.

Policy measures include higher priority for the agricultural sector, improved planning and implementation of agricultural programs and projects, and institutional development to improve input supply and marketing. Expansion of private sector activities was envisioned. Funding for the agricultural sector under the Annual Development Budget is to be increased, and measures are to be taken to protect this investment against funding cuts, even if cuts should have to be made in the overall development budget.

Principal actions planned to reach the production target of 20 million tons of food grains include the following:

- irrigation, doubling acreage under irrigation from roughly 3.6 million to 7.2 million acres, and improving 2 million acres by drainage and flood control measures.

- HYV and fertilizer technology, expanding use of HYV seeds from 6,000 tons to 58,000 tons, and doubling fertilizer usage from 840,000 tons in FY 79 to 1.9 million tons by 1985.

- institutional development, strengthening the physical infrastructure required for expanded agricultural production, e.g., procurement, transportation, storage, processing, marketing, etc.

The physical targets of the MTFPP are summarized in the following table:

Table E-2
Main Features of MTFPP

-85a-

Output/Input	Pre-MTFPP			MTFPP					Total MTFPP Increment
	FY 78	FY 79	FY 80	1981	1982	1983	1984	1985	
Foodgrain Production (Gross) (M Tons)	13.1	13.0	13.3	15.4	16.2	17.3	18.6	20.0	6.7
Fertilizer (000 Tons)	715	730	840	1,000	1,200	1,430	1,665	1,900	1,060
Irrigated Area (000 acres) Of which	3,160	3,430	3,630	3,913	4,518	5,447	6,315	7,220	3,590
Minor Irrig. (00 ac) ..	1,813	2,050	2,230	2,620	3,142	3,898	4,560	5,250	3,020
Major Irrig. (000 ac) ..	150	180	200	293	376	549	755	970	770
Traditional Irrig. (000 ac)	1,200	1,200	1,200	1,000	1,000	1,000	1,000	1,000	(-200)
Units in Operation :									
Lowlift pumps (000 units)	36.7	36.7	38.6	42.0	44.0	47.0	49.0	51.0	12.4
Deep Tubewells (000 units)	7.5	9.3	10.5	11.0	13.0	17.0	21.0	25.0	14.5
Shallow Tubewells (000 units)	12.0	16.9	23.4	38.0	58.0	81.5	105.0	130.0	106.6
Hand Tubewells (000 units)	40.0	90.0	110.0	195.0	275.0	350.0	425.0	500.0	390.0

Source: Bangladesh Medium-Term Foodgrain Production Plan, February 1981.

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Financial requirements for the 57 projects included in the MTFPP were estimated in 1981 at \$5.4 billion, of which \$2.9 billion is the foreign exchange requirement and \$2.5 billion is local currency. The total estimated foreign aid requirement was \$3.2 billion (the average foreign aid level for agriculture over the period 1978-80 was \$_____). Fertilizer, pesticides and seeds represented 40.6 percent of total MTFPP financing requirements; irrigation projects 34.7 percent; rural institutions and infrastructure 11.2 percent; marketing, storage and transport 10.3 percent; and research, extension and training 3.2 percent. The financing for each of these sub-sectors is shown in the following table:

Table E-3

Financial Requirements of MTFPP
(\$ billions, constant FY80 prices)

-86a-

	Public Sector Net (a)	Private Sector (b)	MTFPP Combined Total (c)	Foreign Exchange Requirements
Minor Irrigation	0.56	0.67 (d)	1.23	0.76
Major Irrigation, Drainage & Flood Control (BWDB)	0.63	..	0.63	0.22
Fertilizer, Pesticides and Seeds	0.71	1.47 (d)	2.18	1.46
Marketing, Storage & Transport	0.55	..	0.55	0.18
Sub-Total	2.45	2.14	4.59	2.62
Research, Extension & Training	0.17	..	0.17	0.06
Rural Institutions & Infrastructure	0.60	..	0.60	0.22
Total	3.22	2.14	5.36	2.90

- (a) Gross public sector outlays net of recoveries from the private sector such as sale of minor irrigation equipment, fertilizer, etc.
- (b) Private sector purchases referred to under (a). Excludes private sector investments in kind.
- (c) Excludes public sector investments to be realized through mass mobilization of voluntary labour.
- (d) The private sector share of financing would be 54% and 67% respectively in minor irrigation and in the supply of recurrent inputs (fertilizer, pesticides, seed).

Source: Bangladesh Medium-Term Foodgrain Production Plan, February 1981.

APPENDIX F

Foodgrain Production

John Warren Smith

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APPENDIX F

FOODGRAIN PRODUCTION*

Until the 1960s tradition-bound technology in the less developed countries held the production of foodgrains in check. However, population growth was accelerating as death rates were being reduced without an accompanying reduction in births. It was in this food crisis situation that the high yield varieties of rice and wheat were developed.

Beginning with the introduction of rice HYV in the 1960's, foodgrain production in Bangladesh began to accelerate. During this decade production increased at an average rate of 2.4 percent. The War of Liberation disrupted production, but the rate of increase resumed and even increased slightly in the 70's. Unfortunately, production tended to vary widely from year to year. Production was up 18 percent from FY 1971 to FY 1972. It fell 5 percent the next year and rose 18 percent the year after. The year to year swings were primarily the result of too little or too much water at the wrong time. In the second half of the 70's, the 5 year average production was 18.8 percent above the 5 year average of the first half. As Bangladesh moves into the 80's, the growth rate of foodgrains appears to be increasing.

For the past two decades production gains in Bangladesh have been based primarily on the use of modern inputs - HYV seed, modern irrigation, chemical fertilizers and pesticides.

*Discussion and analysis based on data in Table F-1 at end of appendix.

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Acreage planted to grain has increased only about 16 percent in the past 20 years. Most of this increase has been in aus and boro rice crop land which accounts for only 42 percent of total rice production. There has been virtually no change in the area planted to aman rice, the largest crop. The greatest growth in production has occurred in boro rice in which yields have increased by two-thirds. This dry season planting has benefitted from the introduction of tubewells for irrigation which made it possible to transform an essentially fallow period into a producing season.

Wheat has always been considered inferior to rice by the Bangladeshis. However, tastes have begun to change with the importing of wheat and the increase in domestic wheat production. Wheat production quadrupled in the second half of the 1970's compared to the first half. Today almost all domestic wheat is HYV.

Although foodgrain production is increasing at more than 3 percent annually, the erratic year to year production of rice, particularly the wet season, aman rice crop, makes a trend line analysis of growth less meaningful in terms of the nutritional welfare of the population. Since the 1950's food imports have had to make up chronic shortfalls in production. Domestic production shortfalls are greater in some years than in others, but foodgrain imports are a continuing necessity to meet even minimal calorie requirements.

In spite of the introduction of HYV seed and modern inputs in the mid 1960's, growth has been slower than hoped for. Major irrigation projects have been delayed by financial and administrative problems. Groundwater development remains largely untapped. Minor irrigation, which presents the best opportunity for near term production increases, is facing problems of organizing farmer irrigation associations. Shallow tubewells are being fielded, but some are not operational and many of those installed and operating are underutilized.

With the physical input components available, or potentially available, the slow growth must be attributed mainly to weakness in agricultural support services. To attain its production potential, HYV technology depends upon adequate and timely supplies of inputs, an effective extension service to provide technical advice, an efficient marketing system and suitable post harvest facilities. Support services have suffered from administrative procedures as well as a lack of well trained staff. The extension service is poorly trained and motivated and has generally been ineffective. The purchase of modern inputs requires relatively large cash outlays for small producers. In practice, institutional credit is still unavailable to the small landholder and tenant farmer. They must rely on credit at exploitive rates from the traditional moneylenders. Climatic conditions in Bangladesh require relatively precise timing in planting and there have been repeated breakdowns in the supply of seed and fertilizer.

By all accounts, there is the potential for significant growth in the production of foodgrains. Indeed, there is optimism that Bangladesh can be self-sufficient in foodgrain production before the end of the century. This is based on some basic assumptions about increasing foodgrain production and decreasing the growth rate of the population. The BDG has targeted foodgrain self-sufficiency by the end of the Second Five Year Plan (SFYP) which will conclude at the end of 1985. However, it is generally accepted that this is unrealistic. However, in the following paragraphs a simple model is presented which sets out some basic assumptions which would enable Bangladesh to reach self-sufficiency in 10 years.

Within the Bangladesh context we would define foodgrain self-sufficiency as the availability of foodgrains for an average daily consumption of 17 ounces per day. Current estimates are that consumption is between 14 and 15 ounces per day. Unfortunately, this results in about three-quarters of the population suffering from undernutrition. This is below acceptable levels. In the Philippines, undernutrition is about 20-25 percent. In Thailand, it is 10-15 percent. An increase consumption of foodgrains in Bangladesh to 17 ounces would reduce undernutrition below 30 percent. Although this is still high, it is more acceptable. Thus, for purposes of this discussion foodgrain self-sufficiency will be defined as domestic production which will provide an average daily per capita consumption of 17 ounces of foodgrains.

The assumptions for the present population and foodgrain production are the following. Population in 1982 was approximately 92 million. Production of foodgrains in 1980/81 (a bumper year) was 14.7 million long tons. An estimated 10 percent of the harvest is unavailable for human consumption because it is used for seed and animal feed, and there is some spoilage and wastage. About 1.2 million tons of foodgrain were imported in 1980/81. Making no deductions for seed, wastage, etc. on the imported grains, the total available for human consumption was 14.43 million tons. We make a further assumption that this represents the total amount consumed, i.e., none held out for emergency reserves. This results in per capita consumption of 15.4 ounces per day. To bring this to 17 ounces production must increase 10.4 percent. To reduce undernutrition to the 50 percent level, the consumption availability of foodgrains would have to be 15.93 million tons. If there is a 10 percent deduction from production to meet this figure, actual production would have to be about 17.71 million tons/year. This is an increase of 20.5 percent over the current production of 14.7 million tons.

It is not a question of whether or not Bangladesh has the potential physical resources to achieve self-sufficiency. Land, labor, climate, and technology are abundantly available to effect dramatic production increases. The question of self-sufficiency hangs on the growth rate of food grain, the reduction of population increase, and the timeframe.

We can gain some perspective of the magnitude of the problem by assuming a static population of 92 million and apply the current estimated annual foodgrain growth rate estimate of 3.1 percent. Given these conditions self-sufficiency in foodgrains would require about 6 years.

Population growth in Bangladesh is usually estimated to be between 2.5 percent and 2.8 percent. The population control program aims at Zero Population Growth (ZPG) by 1990. This is generally accepted as highly improbable. More likely, but still optimistic, is ZPG by year 2000. The decrease in the population growth rate depends primarily on the acceptance of birth control technology. Acceptance is rising and is expected to accelerate. If ZPG is reached by 2000, the World Bank estimates a population of 122 million. This is an average growth rate of 1.016 percent over the next 18 years. If we assume that over the next 10 years that the rate of population increase will average 2.2; there will be 115 million persons by 1992. This is an increase of 23 million persons, a 25 percent increase from 1982. To feed the population at the desired foodgrain level, production would have to be 22.05 million tons. Applying an average annual growth rate of 4 percent to foodgrain production, self-sufficiency could be reached in 10 years.

There are many difficulties in assessing when foodgrain self-sufficiency actually will be attained. Little is known about the rise in consumption as production increases. Will an

increasing portion of production be used for animal feed? Will real income per capita rise or fall, and what effect will this have on the effective demand for foodgrains? It is estimated that 75 percent of calories consumed are from foodgrains. Will this remain the same, or will higher calorie foods such as edible oils be substituted with reduced reliance on foodgrains. The future of production increases also depends, in large part, on socio-political development. The traditional agrarian structure of Bangladesh is still pervasive in the countryside. This reduces the effectiveness of inputs, distribution and the efficiency of marketing. Another thorny question is that of the level of employment which is the basis of effective demand. Will families have the income to purchase the increased production?

There has been progress in population control and in agricultural production since the War of Liberation, and there is every hope and expectation that these will continue at an accelerating rate. However, for policy and planning purposes there is not yet sufficient evidence to conclude that domestic foodgrain production will be at an acceptable level to meet the nutritional needs of the Bangladeshis within the next 10 years. Unless there is a dramatic breakthrough in the very near future in population control and in foodgrain production, Bangladesh will require continued foodgrain imports in substantial amounts.

FOODGRAIN ACREAGE, AVERAGE YIELDS AND PRODUCTION

Year	Acreage ('000 acres)						Average Yields (maunds per acre/a)						Production/b ('000 long tons)					
	Aus	Aman	Boro	All Rice	Wheat	All Grains	Aus	Aman	Boro	All Rice	Wheat	All Grains	Aus	Aman	Boro	All Rice	Wheat	All Grains
1960/61	6,300	14,578	1,007	21,885	140	22,025	10.79	12.27	12.11	11.84	6.22	11.80	2,497	6,574	448	9,519	32	9,551
1961/62	5,874	14,082	1,007	20,963	145	21,108	10.79	12.86	13.14	12.29	7.32	12.26	2,328	6,632	485	9,465	39	9,504
1962/63	6,192	14,221	1,071	21,484	182	21,666	9.68	11.57	12.25	11.06	6.58	11.02	2,202	6,046	482	8,730	44	8,774
1963/64	6,586	14,604	1,059	22,259	142	22,401	10.98	13.59	12.96	12.79	6.52	12.75	2,657	7,290	509	10,477	34	10,491
1964/65	6,645	15,107	1,053	22,803	132	22,937	10.24	13.08	14.84	12.34	6.39	12.30	2,501	7,262	574	10,337	31	10,368
5-Year Average	6,319	14,518	1,041	21,879	148	22,027	10.50	12.68	13.07	12.07	6.62	12.03	2,437	6,765	500	9,702	36	9,738
1965/66	7,321	14,672	1,137	23,130	138	23,268	10.85	12.61	14.80	12.16	7.51	12.13	2,918	6,799	618	10,335	35	10,370
1966/67	6,965	14,059	1,390	22,414	168	22,582	10.45	11.46	14.27	11.44	6.59	11.42	2,674	5,919	831	9,424	53	9,477
1967/68	8,221	14,672	1,534	24,427	192	24,619	10.16	12.64	19.77	12.25	6.22	12.22	3,069	6,812	1,114	10,995	58	11,053
1968/69	7,658	14,895	2,015	24,568	290	24,858	9.54	12.55	21.78	12.37	6.44	12.33	2,683	6,870	1,612	11,165	92	11,257
1969/70	8,462	14,841	2,183	25,486	295	25,782	9.53	12.75	23.73	12.62	6.47	12.58	2,963	6,949	1,903	11,815	103	11,919
5-Year Average	7,725	14,628	1,652	24,505	216	24,721	10.08	12.41	20.04	12.19	6.57	12.15	2,861	6,670	1,216	10,747	68	10,815
1970/71	7,885	14,184	2,425	24,494	311	24,805	9.88	11.35	24.60	12.19	6.43	12.16	2,863	5,912	2,192	10,967	110	11,077
1971/72	6,965	13,372	2,185	22,522	314	22,836	8.59	11.59	21.65	11.58	6.80	11.56	2,341	5,695	1,738	9,774	113	9,887
1972/73	8,221	14,121	2,434	23,776	297	24,073	8.54	10.77	23.16	11.36	6.25	11.32	2,273	5,587	2,071	9,932	90	10,022
1973/74	7,658	14,133	2,596	24,410	305	24,715	9.93	12.90	23.28	13.07	9.73	13.03	2,802	6,699	2,220	11,721	109	11,830
1974/75	8,462	13,469	2,871	24,802	311	24,908	9.90	12.13	21.33	12.50	10.77	12.47	2,859	6,000	2,250	11,109	115	11,224
5-Year Average	7,725	13,856	2,502	23,974	308	24,282	9.39	11.75	22.78	12.15	9.46	12.12	2,628	5,979	2,094	10,701	107	10,808
1975/76	8,452	14,236	2,837	25,525	371	25,896	10.40	13.47	21.93	13.40	15.77	13.43	3,230	7,045	2,286	12,561	215	12,776
1976/77	7,952	14,355	2,112	24,419	395	24,814	10.31	13.10	21.27	12.89	17.57	12.97	3,011	6,906	1,650	11,567	255	11,822
1977/78	7,814	14,261	2,703	24,778	467	25,245	10.81	14.17	22.55	14.02	19.99	14.13	3,104	7,422	2,239	12,765	343	13,107
1978/79	7,995	14,347	2,650	24,992	654	25,646	11.19	14.09	19.82	13.77	20.22	13.94	3,288	7,429	1,929	12,646	486	13,132
1979/80	7,505	14,762	2,839	25,106	1,071	26,177	10.18	13.47	23.27	13.59	20.59	13.88	2,809	7,303	2,427	12,539	810	13,349
5-Year Average	7,944	14,392	2,626	24,954	592	25,546	10.58	13.66	21.82	13.54	19.43	13.68	3,088	7,221	2,106	12,416	422	12,837
1980/81	7,689	14,918	2,868	25,474	1,461	26,935	11.46	14.29	24.58	14.60	20.03	14.89	3,237	7,837	2,589	13,663	1,075	14,738
1981/82*	..	..	..	..	..	..	..	..	..	..	..	..	3,218	7,095	3,102	13,415	952	14,367

** = not available.
e = estimated.

/a 1 long ton = 27.22 maunds; 1 maund = 82.29 lbs.
/b Gross production, expressed in long tons of rice equivalent.

Source: WORLD BANK REPORT 3762-1B0

APPENDIX G

Procurement

John Warren Smith

APPENDIX G

PROCUREMENT

Prior to 1974/75 procurement of domestic foodgrain by the government had been minimal. The famine of that year shocked the government into compulsory procurement of about 128,000 tons of foodgrain. That was the last year of official compulsory procurement, but the threat of famine that year set in motion a policy of government procurement to accumulate an emergency reserve of foodgrain stocks from domestic harvests and aid-financed imports. The increased government purchases of domestic harvest was possible because of an increase in the government procurement price for paddy from Tk.45/maund to Tk.74/maund at the end of 1975.

Table G-1

PROCUREMENT OF FOODGRAINS

(in long tons of rice equivalent)

<u>Year</u>	<u>Tons</u>
1974/75	127,862
1975/76	414,957
1976/77	313,606
1977/78	550,440
1978/79	355,163
1979/80	348,477
1980/81	1,016,733

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Table 1

FOODGRAIN PROCUREMENT PRICES, 1969-1982
(In Taka per maund)

Year	Effective Date/ ^a	Rice/Paddy							Wheat
		Aus		Rice/Paddy			Boro/IRRI		
		Paddy	Rice	Paddy	Coarse Rice	Medium Rice	Paddy	Rice	
1969/70	Jan. 1, 1970/ ^b	---	---	18.0 R 19.0 B	29.41 R 30.96 B	29.79 R 31.37 B	---	---	---
1970/71	Jan. 1, 1971	---	---	*	*	*	---	---	---
1971/72	Jan. 15, 1972/ ^c	---	---	23.0	37.40	37.85	---	---	---
1972/73	Dec. 14, 1972	---	---	33.0	53.00	54.00	---	---	---
1973/74	Nov. 15, 1973	---	---	45.0	71.69	72.63	---	---	---
	Jan. 2, 1974/ ^d	---	---	45.0 + T	71.69 + T	72.63 + T	---	---	---
1974/75	Nov. 15, 1974/ ^e	---	---	74.0 + 3.0	118.0 + 3.0	120.0 + 3.0	---	---	---
	Apr. 21, 1975	---	---	*	*	*	74.0 + 3.0	118.0 + 3.0	---
1975/76	Aug. 1, 1975	74.0 + 3.0	118.0 + 3.0	*	*	*	*	*	---
	Apr. 1, 1976	*	*	*	*	*	*	*	72.0 + 3.0
1976/77	Sept. 14, 1976	70.0 + 3.0	112.0 + 3.0	*	*	*	*	*	*
	Feb. 19, 1977/ ^f	*	*	74.0 + 4.0	118.0 + 4.0	120.0 + 4.0	*	*	*
	Apr. 1, 1977	*	*	*	*	*	*	*	74.0 + 4.0
	May 1, 1977	*	*	*	*	*	70.0 + 4.0	112.0 + 4.0	*
1977/78	Aug. 1, 1977	70.0 + 4.0	112.0 + 4.0	*	*	*	*	*	*
	Nov. 15, 1977	*	*	80.0 + 4.0	128.0 + 4.0	130.0 + 4.0	*	*	80.0 + 4.0
	May 1, 1978	*	*	*	*	*	80.0 + 4.0	128.0 + 4.0	*
1978/79	Aug. 1, 1978	80.0 + 4.0	128.0 + 4.0	*	*	*	*	*	*
	Apr. 5, 1979	*	*	*	*	*	*	*	86.0 + 4.0
	May 2, 1979	86.0 + 4.0	128.0 + 4.0	*	*	*	86.0 + 4.0	136.0 + 4.0	*
1979/80	Nov. 15, 1979	*	*	96.0 + 4.0	154.0 + 4.0	...	*	*	*
	Nov. 15, 1979/ ^h	105.0 + 5.0	165.0 + 5.0	105.0 + 5.0	165.0 + 5.0	...	105.0 + 5.0	165.0 + 5.0	105.0 + 5.0
1980/81	Nov. 4, 1980	110.0 + 5.0	170.0 + 5.0	110.0 + 5.0	170.0 + 5.0	...	110.0 + 5.0	170.0 + 5.0	110.0 + 5.0
1981/82	Dec. 7, 1981	*	*	119.0 + 5.0	185.0 + 5.0	...	*	*	119.0 + 5.0

--- = no procurement.
 ... = no longer applicable.
 * = no price change.

R = Regular.
 B = 5-mile border belt.
 T = Transport Bonus (variable; see footnote d).

- ^a The announcement of procurement prices is usually (although not always) made prior to sowing/planting, while the effective date generally denotes the date when government purchases at the announced prices will commence.
- ^b Different procurement prices were set for the 5-mile border belt than for the rest of the country in order to encourage procurement and discourage smuggling into India.
- ^c The procurement price differential for the border belt was eliminated effective Jan. 15, 1972.
- ^d Effective Jan. 2, 1974, a "transport bonus" was paid to farmers and traders delivering grains to the purchasing centers. The amount of the bonus depended on the distance travelled to reach the center: Paisa 50 for up to 5 miles, Paisa 75 for 5-10 miles, and Taka 1 for over 10 miles.
- ^e The variable transport bonus was abolished and replaced by a single uniform transport bonus of Taka 3, effective with the procurement price increase of Nov. 15, 1974.
- ^f Effective Feb. 19, 1977, the transport bonus was increased to Taka 4.
- ^g The higher price quotation for medium quality rice was abolished effective Nov. 15, 1979.
- ^h The Government changed the previously announced procurement prices on Nov. 11, i.e., before they became effective. At the same time the transport bonus was increased to Taka 5.

Source: Ministry of Food.

Government procurement prices continued to rise until they reached Tk.119/maund in 1980/81. In spite of the rise in prices, the volume procured fluctuated as regular market prices rose above or fell below the government price. This procurement, along with imports, became the reserve stocks which are the basis for regular offtakes for the various categories of the Public Food Distribution System (PFDS) as well as emergency reserves.

The March 8, 1982 Title III agreement provides a description of the procurement price concept. The primary objective in the establishment of procurement prices and their implementation is the provision of incentives to farmers to produce more through the adoption of high yield varieties and associated technology. Foodgrain production will be encouraged by the establishment and announcement of procurement prices for each major foodgrain crop well in advance of the planting season (July 1 in the case of aman and November 1 in the case of boro and wheat). The agreed procurement price will be maintained throughout the season and all grain of suitable quality available will be procured regardless of lot size. Full and adequate use should be made of private intermediaries, particularly to increase procurement of rice, paddy and wheat from small farmers and remote areas that would otherwise not be served. The BDG Medium-Term Foodgrain production Plan of

February 1981 identified three means to improve foodgrain procurement. This agreement requires these actions to carry out the program. They are:

1. Construct feeder and access roads connecting villages, market places and procurement centers.
2. Increase government grain storage capacity, provide procurement fund allocations, and improve organizational efficiency, so as to remove existing constraints on timely foodgrain procurement from farmers by the public sector agencies.
3. Expand private grain trading by liberalizing the anti-hoarding legislation, improve traders' access to credit and supply better market information to farmers, traders and consumers.

The excellent procurement effort of 1980/81 demonstrated that the procurement mechanism is workable even when put under an great strain. In 1980/81, total procurement was 85 percent greater than the previous record in 1977/78. The BDG mobilized several kinds of resources to undertake the procurement of over a million tons of crop.

The 1980/81 procurement program required an unprecedented expenditure of scarce financial resources. Payments for foodgrains alone amounted to Tk.4.6 billion, the significance of which can be seen in the context of the BDG's overall

current expenditure budget of Tk.14.1 billion. Among the measures taken to enable this achievement were:

1. A refinement and liberalization of the payment system. Buying centers issued Weight Quantity Stock Certificates (WQSC) to sellers and dealers upon delivery of grain. Payment was made by local branches of the commercial banks for a small commission (Tk.0.75 per maund) upon presentation of the WQSC. The commercial banks were then reimbursed by the government upon presentation of consolidated statements. All in all the new system worked well and no complaints concerning lack of funds were received either from temporary procurement centers or at the thana level.

2. A sharp increase in the number of procurement centers. In an effort to reach remote farmers, the number of Temporary Procurement Centers (TPCs) was raised from 361 from the 259 operating in FY 80. In a related effort, the government authorized union parishads and gram sarkers (villages) to procure grain on their own. While the amounts actually purchased by these levels of government were relatively small (estimated at 60,000 tons), they did spread the procurement effort even farther and closer to the small producer.

3. A major effort to expand foodgrain storage facilities. While storage facilities were inadequate to accomodate all

of the grain that might have been purchased in FY 1981 the BDG's efforts in this area were instrumental in enabling the volume of procurement that did take place.

Early in FY 81, the BDG undertook a program to expand permanent foodgrain storage facilities by 386,000 tons; 200,000 tons through the government's "crash" program utilizing its own resources, and another 186,000 tons under projects utilizing assistance from the International Development Agency, Asian Development Bank, Federal Republic of Germany, Japan and the Netherlands. Altogether, 772 warehouse units were to be constructed. Progress on these projects during the year was commendable. A good number of them were functional by the middle of the year. As of June 30, 1981 a total of 347 units (173,500 tons) had been completed and handed over. This brought total government owned storage capacity to 1.35 million tons. The next 155 units (77,500 tons) were expected to be ready by November 1981 followed by another 152 units (76,000 tons) by the end of December 1981. This will bring government owned storage capacity to 1.5 million tons.

A relatively high proportion of the new warehouses were to be constructed in surplus production areas where storage pressure is the greatest. Care has also been taken to ensure that some units are located in the more remote areas with poor transportation connections. This is to allow procurement in these areas and the holding of security stocks for emergency periods.

Table G-3

STORAGE CAPACITY OF THE MINISTRY OF FOOD, 1980
(in long tons; as of September 30, 1980)

<u>Division/District</u>	<u>Local Supply Depots</u>	<u>Central Storage Depots</u>	<u>Foodgrain Silos</u>	<u>Total</u>
<u>Rajshahi</u>	<u>183,730</u>	<u>50,500</u>	<u>26,248</u>	<u>260,470</u>
Dinajpur	53,938	-	-	53,938
Rangpur	37,604	-	-	37,604
Bogra	27,636	20,000	26,248	73,884
Rajshahi	44,052	-	-	44,052
Pabna	20,500	30,500	-	51,000
<u>Khulna</u>	<u>114,071</u>	<u>143,600</u>	<u>-</u>	<u>257,671</u>
Kushtia	17,760	-	-	17,760
Jessore	20,486	-	-	20,486
Khulna	23,675	122,600	-	145,275
Barisal	29,650	21,000	-	50,650
Patuakhali	22,500	-	-	22,500
<u>Dacca</u>	<u>125,750</u>	<u>91,250</u>	<u>52,199</u>	<u>269,199</u>
Jamalpur	12,250	-	-	12,250
Mymensingh	36,250	22,000	-	58,250
Tangail	13,250	-	-	13,250
Dacca	35,500	69,250	52,199	156,949
Faridpur	28,500	-	-	28,500
<u>Chittagong</u>	<u>116,975</u>	<u>116,550</u>	<u>156,117</u>	<u>389,642</u>
Sylhet	28,500	-	-	28,500
Comilla	34,800	12,350	51,813	98,963
Noakhali	23,750	-	-	23,750
Chittagong	22,000	104,200	104,304	230,504
Chittagong Hill Tracts	7,925	-	-	7,925
<u>Total</u>	<u>540,526</u>	<u>401,900</u>	<u>234,564</u>	<u>1,176,990</u>

Note: Storage capacity of hired godowns at LSD sites is not included.

Source: Ministry of Food.

Other efforts to increase total storage capacity included a scheme to repair dilapidated warehouses to bring them back into use, measures to increase the number of hired private warehouses, and the requisitioning of space available at railway sheds, Thana Training and Development Centers, schools and empty warehouses of various government agencies. Hiring and requisitioning of private and government warehouses increased from 150,000 tons on June 30, 1980 to 350,000 tons on June 30, 1981.

In sum, the BDG undertook a most impressive effort to maximize procurement.

There has been a slight upward trend in rate of procurement. In 1978 procurement was 4.6 percent of production. This was the result of a major effort in government purchasing of the aman crop. The government purchased 6.8 percent of the aman season crop. In subsequent years, until 1981, the percentage of aman crop purchased was much lower, although the production level dropped only slightly. 1981 was the major test of government procurement capabilities. Procurement rose from a previous level of 550.4 thousand tons to 1.017 million. Government centers purchased 6.4 percent of total crop. This was the result of good procurement efforts for all rice seasons and for wheat. It is quite likely that procurement would have been larger, but lack of storage facilities was a constraint. The new storage capacity that has been constructed since 1981 will remove that constraint.

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Table C-4
Foodgrain Production and Procurement by Crop,
1977/78-1980-81

<u>Crop Year</u> <u>Ending June 30</u>	<u>Thousands of Tons</u> <u>Production</u>	<u>Procurement^{a/}</u> <u>% of Production</u>	<u>Procurement as</u> <u>% of Production</u>
1. <u>Aus</u>			
1978	3,103	1.6	0.1
1979	3,288	28.6	0.6
1980	2,809	0	0
1981	3,236 ^{b/}	86.9	2.7
2. <u>Aman</u>			
1978	7,422	502.6	6.8
1979	7,429	197.4	2.7
1980	7,303	177.1	2.4
1981	7,837 ^{b/}	501.3	6.4
3. <u>Boro</u>			
1978	2,239	79.8	3.6
1979	1,929	1.0	0.1
1980	2,427	262.2	10.8
1981	2,586 ^{b/}	195.0 ^{c/}	7.5
4. <u>Wheat</u>			
1978	343	13.2	3.9
1979	486	50.7	10.4
1980	810	148.9	18.4
1981	1,075 ^{b/}	163.0	15.2
5. <u>Total Foodgrains</u>			
1978	13,107	597.2	4.6
1797	13,132	267.7	2.0
1980	13,349	588.2	4.4
1981	14,734 ^{b/}	946.2	6.4

^{a/} Procurement of crop grown in the indicated crop year, not necessarily the year of actual purchase.

^{b/} Recently revised estimates.

^{c/} Estimate based on procurement as of November 15, 1981.

Procurement in support of prices was very limited in 1982, since the price of both paddy and rice, as well as that of wheat, exceeded procurement prices most of the time. A few procurement centers reported a decline in the price of grain to below the procurement price for part of the season. Procurement, which had been projected at 760,000 tons for the BDG's Fiscal Year, was only 298,000 tons for the 1981/82 July-June.

Other steps have been taken to encourage the private grain trade. Particularly important has been the relaxation of the restrictions imposed on grain trading through the Anti-Hoarding Laws. The following summarizes the changes which have taken place:

Table G-5
BDG Anti-Hoarding Laws in Practice
For Foodgrains (For Licensed Dealers)

<u>Effective Date</u>	<u>Maximum Amount That Can be held (In Maunds)</u>		<u>Time Limit</u>
	<u>Retailer</u>	<u>Wholesaler</u>	
November 11, 1979	30	300	7 days at one location and 29 days at different locations.
August 4, 1980	100	1,000	No Time Limit
January 3, 1981	250	5,000	No Time Limit

In recent years, the purpose of procurement has expanded to include providing a floor price for producers. As a support price, less emphasis is placed on the role of building reserve stocks through domestic procurement and more on providing an incentive for farmers to increase production.

The Title III agreement provides that the BDG will support foodgrain prices at levels sufficient to induce investments in HYV technologies. The present amendment to the agreement specifies further that announcements of procurement prices will be made well in advance of the related planting seasons in order to provide the desired effect on farmers' intentions, and it is understood that this provision is to apply to the aman season in particular. No announcement was made in advance of the 1982/83 aman planting season.

Apart from the announcement itself, success or failure of the procurement program is normally judged by the level of farmgate prices during the course of the year. The benchmark for this purpose is that farmgate prices should be no more than 5 to 10 Taka below the procurement price. The benchmark criterion has not been examined in recent years and may well be in need of review as a yardstick with which to measure performance. Another measurement problem arises in the absence of a complete and consistent series of farmgate prices.

A survey of 39 of the 68 subdivisions in Bangladesh was undertaken for the evaluation team to examine the operational effectiveness of the procurement and price support program at the field level.

The only major government purchase of domestic foodgrain was in 1981. At that time a little more than a million tons of foodgrain, about 6.4 percent of the estimated production, was

purchased. Not only was the government procurement mechanism under stress from the bumper crop, but there were also shipments of imported foodgrains arriving at the same time. A shortage of storage capacity quickly developed which curtailed the government's ability to purchase all domestic foodgrain offered at collection centers. In many areas the floor-prices could not be maintained. The survey attempted to find out what some of the problems were at that time, if they had been solved, and the status of procurement at the present. Unfortunately, the memory recall of subdivision officials was poor when questioned about procurement in 1981, and the reliability of the answers are doubtful. Storage problems were recalled, but problems of availability of government funds, transportation and payment procedures were not mentioned.

Whenever there is a change in the government procurement price, it is publicized nationally through radio, TV and newspapers. Announcement at the subdivision level includes announcements on loudspeakers, banners posted at LSD, and of course, word of mouth communication. Dealers and traders are usually knowledgeable about the procurement price, but the farmers are usually not aware of the government price. Indeed, knowledge of the exact procurement price is of little practical significance to the farmer because most small farmers have access only to trades, not directly to government purchasing centers. This means that the timing of announcements of a

government price change is usually a moot question for the farmer. He probably won't hear about it, and if he does, he is still a price taker at the farm level.

Although the survey did not provide any new insights into the 1981 procurement, it is known that government storage capacity has been greatly increased. Still, about 20 percent of the Subdivision Controllers of Food said foodgrain storage capacity was insufficient. Most of these respondents qualified the statement by saying they only had capacity for 6 months and needed storage capacity for one year. Many respondents said that godown construction was still going on. Present storage capacity is probably sufficient for most practical purposes.

The government procurement price for paddy was Tk 135/maund when the survey was conducted. The SC/F was asked about the average regular market price. The response was usually in terms of a price range so it was difficult to derive a meaningful average from the survey. However, in only one subdivision was the regular market price said to be below the procurement price. In this case the regular market price was Tk.135/maund. In over half the subdivisions the regular market price was Tk.150/maund or more. The SC/F was asked his estimate of the average farmgate price for paddy in his subdivision. In eleven subdivisions the farmgate price of paddy reported to be equal to or less than the government procurement price. However, more than half of the SC/F thought

the farmgate price was Tk.140/maund or more. This survey did not inquire deeply enough into prices to make reliable statements about precise price levels. However, this investigation indicates that government prices are generally below the effective free market level for procurement purposes.

In general, farmgate prices were only 5-10 taka below the regular market price. This narrow profit margin indicates a high degree of market efficiency in bringing the paddy from the production area to the market.

To encourage government procurement from small traders, the concept of mobile units has been introduced. About half of the subdivisions surveyed said they had mobile units, but several subdivisions indicated that for all practical purposes they were on paper only, that is, the mobile procurement program was not operational. Those units that were operational did not follow the purchasing procedures that were designed to bring government procurement closer to the producer. The mobile units were to purchase directly from producer or small traders in local ghats and bazaars. A bank representative was to accompany the procurement agent and pay cash on the spot so the producer or trader would not have to travel to a bank. In actual practice, a prosperous dealer with cash would accompany the thana food inspector and purchase from the small traders, paying cash on the spot. No government financial officer accompanied them. The mobile unit would take the grain to the

LSD and the dealer was reimbursed through WQSC as usual.

The survey collected evidence of compulsory procurement by government officials. Dealers were persuaded to sell a quantity of grain to the LSD even with the dealer taking a loss. Apparently it is understood that the dealer would later receive special consideration from government officials in terms of his retail operation. Certain producing areas were cordoned off to outside traders which reduced demand and lowered the regular market price to the level when it could be purchased by government agents.

The survey pointed out the high degree of decision making autonomy at the subdivision level for both OMS and procurement. This raises the question of effective communication between Dhaka Headquarters where policy is determined and the subdivisions and thanas where the policy is to be implemented. It appears from the survey that local policy often supercedes national policy. Further investigation should inquire into the orientation and training in policy implementation provided at the local levels. The quality of administrators at the subdivision level seemed to be adequate, but they may not have the disciplinary authority required to control the thana food officials. Also, the Ministry of Food representative is only one of several local officials of equal or higher rank. His decisions are circumscribed by the influence of others. Clearly, successful policy implementation must be focused at the subdivision and thana level.

Although the procurement of foodgrains has been emphasized, the intent of the Title III agreement was primarily to provide a floor-price for foodgrain. This includes a mechanism for increasing demand whenever the equilibrium market price falls below a predetermined level. In this concept, the fact that foodgrains from domestic harvest are purchased by the government is merely a by-product of maintaining the floor-price. Procurement per se is not an objective. Conceptually, there would be no predetermined procurement amount, no target to be met either in amount or percentage of harvest collected.

It may be that the wording of the agreement is misleading in specifying that the floor-price is an incentive to adopt HYV technology. Certainly, farmgate prices do affect input decisions but adoption of HYV technology is a highly complex process, and the continued use of the technology depends on far more than the government floor-price. Just as important, or more so, is the availability of imports in terms of timing and amount, the availability of technical information and the individual producers perception of the opportunity cost of his time and resources for HYV vis a vis expected return.

Information that the mission has already received about compulsory procurement indicates that the Ministry of Food is not fully tuned in to the mission's intent. Information from the survey not only showed "levying" dealers and traders

directly, but there is evidence of cordoning off areas to exclude outside traders who create demand and keep farmgate prices above the government price. By excluding these dealers through administration manipulation, subdivision officials have been able to drive prices down to their level, and then purchase at the "market price."

Compulsory procurement obviously subverts the intent and spirit of the agreement. However, in the agreement there is an emphasis on procurement. The agreement requires that private intermediaries are to be used to increase procurement, roads will be constructed to increase accessibility to procurement centers, and storage capacity will be increased to remove the constraints to procurement. These provisions are certainly necessary, but the floor-price rationale is not stressed and may be sending the wrong signals to the Bangladesh Government. Since the agreement is the official guide for BDG actions, the language may need to be changed in a future amendment to more clearly reflect the intent of the agreement.

Table 6-6

PROCUREMENT OF FOODGRAINS BY DISTRICT (SUMMARY), 1974/75 - 1980/81
(in long tons of rice equivalent)

<u>Division/District</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
<u>Rajshahi</u>	73,130	196,813	175,009	236,803	164,580	209,742	482,009
Dinajpur	34,213	79,233	75,160	89,458	65,859	61,205	190,455
Rangpur	16,252	41,990	32,675	51,419	20,185	37,499	82,315
Bogra	8,368	23,749	19,944	26,676	19,320	33,012	50,479
Rajshahi	13,686	43,999	42,352	65,200	54,658	58,671	122,793
Pabna	611	7,842	4,878	4,050	4,558	19,355	35,967
<u>Khulna</u>	33,428	87,535	44,653	111,259	40,776	44,287	108,035
Kushtia	1,066	8,878	3,079	2,188	3,106	9,177	10,279
Jessore	1,733	14,827	3,074	7,793	5,652	8,745	8,130
Khulna	10,511	21,778	10,789	15,016	2,118	6,865	25,914
Barisal	4,029	15,776	13,627	30,310	11,318	5,837	27,039
Patuakhali	16,089	26,276	14,084	55,952	18,582	13,663	36,673
<u>Dacca</u>	9,593	63,131	41,213	90,305	64,220	55,179	201,135
Jamalpur /a					3,771	8,520	35,076
Mymensingh	8,828	52,557	37,898	86,341	47,002	28,204	99,590
Tangail	202	2,551	365	1,550	1,938	4,788	22,869
Dacca	526	4,485	1,518	1,705	10,655	11,487	38,235
Faridpur	37	3,538	1,432	709	854	2,180	5,365
<u>Chittagong</u>	11,711	67,478	52,731	112,073	85,587	39,269	225,554
Sylhet	4,049	33,376	28,712	39,807	34,705	13,512	92,320
Comilla	455	13,326	5,953	19,016	25,868	16,372	41,725
Noakhali	2,627	11,587	9,818	22,746	8,592	2,577	45,844
Chittagong	3,950	8,270	7,128	25,884	12,575	4,417	29,561
Chittagong Hill Tracts	630	919	1,120	4,620	3,847	2,391	16,104
<u>TOTAL</u>	<u>127,862</u>	<u>414,957</u>	<u>313,606</u>	<u>550,440</u>	<u>355,163</u>	<u>348,477</u>	<u>1,016,733</u>

/a Jamalpur was a subdivision of Mymensingh until December 26, 1978.

Note: All grains procured are shown here expressed in terms of "rice equivalent"; i.e., 1 unit of wheat equals 1 unit of cleaned rice and 3 units of paddy procured equal 2 units of cleaned rice. (For 1974/75, a paddy/rice conversion ratio of 1 to 0.65 was used.)

Source: Ministry of Food.

APPENDIX H

Open Market Sales

John Warren Smith

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APPENDIX II

OPEN MARKET SALES

The inequities inherent in the SR and MR food ration systems have led to the concept of Open Market Sales (OMS) system included in the Title III Agreement. The essence of OMS is the injection of government foodgrain stocks into the regular market through private dealers with a minimum of resale restrictions to stabilize prices. Sales are made to the public at large. By maintaining foodgrain prices at a level which are affordable by the majority of the population all consumers who purchase from the market will benefit. It is during the lean periods, when prices are high, that the population suffers privation most acutely. Increasing the supply of foodgrain to the market during this period dampens the extreme price surges which devastate the financial resources of the poor.

The major emphasis of the OMS program is to make wheat, rice and paddy available at reasonable prices throughout the country at times of unusually high market prices for foodgrains. OMS is designed to be triggered both by major interruptions in the long-term supply trends and seasonal price variations. The thrust of the agreement is that OMS will have replaced the ration system as the principal means of public food distribution by the time foodgrain self-sufficiency is achieved.

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1. The OMS price structure: There are basically three aspects to the OMS price mechanism - initial prices, the adjustment mechanism, and minimum prices.

a. Initial Prices: An initial OMS rice price will be set approximately fifteen (15) percent above the rice procurement price of Tk. 190 per maund (with transportation bonus), except for the statutory rationing (SR) areas where the difference will be about twenty (20) percent. With OMS rice retailing about ten (10) taka above the wholesale OMS price, the aim will be to constrain the seasonal movement of coarse rice prices within a range of twenty (20) to twenty-five (25) percent of the procurement price. OMS paddy and wheat prices would be set at their appropriate ratios to the coarse rice price.

b. Adjustment Mechanism: OMS rice, wheat and paddy will move at their established prices whenever market conditions warrant. Changes in OMS prices will be dictated by the movement of coarse rice prices only. Prices will be adjusted on a subdivision basis according to a price schedule promulgated by the Food Ministry in Dhaka. The basic principles underlying the price schedule will be that: (1) OMS Prices will be adjusted, upward or downward, whenever the subdivisional average coarse rice price has moved ten (10) percent from its level at the last previous change in prices;

(2) the amount of change in OMS price will be one-half the percentage change in the coarse rice price itself (i.e., if the subdivisional average coarse rice price reached 241, the rice OMS price would move to 230), wheat and paddy OMS prices will move so as to maintain the initial wheat, rice and paddy to rice ratios discussed above; and (3) OMS prices in SR areas will always be five (5) percent higher than OMS prices elsewhere.

c. Minimum Prices: In no event will the rice OMS price be less than fifteen (15) percent above the rice procurement price (including transportation bonus), nor will the wheat OMS price be less than five (5) taka per maund above the wheat procurement price. (Since paddy procurement prices can be presumed to move in tandem with rice procurement prices, no similar provision is required with respect to the paddy OMS price.)

2. If operating experience with the OMS program proves it necessary, the BDG and USG may use implementation letters to agree on changes in the OMS price setting mechanisms and percentages indicated above.

*3. The BDG will provide sufficient commodities to all areas to satisfy all dealers (licensed or unlicensed) wishing to lift OMS wheat, rice or paddy. Sales will be in any

*Deleted in the October 14, 1982 amendment.

quantity with a lot size of 10 to 200 maunds except that unlicensed dealers may be limited to 150 maunds (about one 5-ton truck load). The foodgrain dealers will be free to resell their OMS rice, wheat or paddy in any quantity, at any price, to any buyer in any location.

*4. All the wheat covered by the agreement may be used for open market sales. If foodgrain stocks fall below 500,000 tons, the BDG may suspend open market sales, postponing the use of commodities provided for open market sales under this agreement until a later time.

5. Recognizing that open market sales of rice and paddy can have a greater impact than open market sales of wheat on rising prices, the BDG will include rice and paddy in the open market sales program. For paddy OMS sales, the BDG will be allowed to use wheat provided under this agreement on a ton for ton basis for flour millers. For rice sales, every two tons of OMS rice sold will allow the BDG to utilize three tons of wheat provided under this agreement for the government distribution categories designated as flour millers. The BDG will deposit in the Special Account the full CCC value of any wheat supplied under this agreement that is exchanged for rice or paddy and used in OMS. These ratios may be reviewed if relative prices of wheat, paddy and rice change.

*Deleted in the October 14, 1982 amendment.

6. The BDG will advertise locally the official OMS wholesale price through the public media. In addition, the OMS price will be posted at the point of sale in the foodgrain warehouse.

On October 14, 1982 the PL 480 Title III agreement was amended. The new amendment required that all the Title III grain provided under the amendment had to be used for OMS, but at the same time it deleted the language which restricted the BDG from setting resale conditions on OMS dealers. This amendment was part of an initiative to make initial Title I/III commitments early in the new U.S. fiscal year. It provided Bangladesh with 100,000 MT of wheat and 10,000 MT of soybean oil valued at \$21.6 million leaving an authorized balance of \$38.4 million for the fiscal year.

Although the concept of OMS was acceptable to the BDG and was tried several times, OMS was not successful as a mechanism for moderating the upward movement of prices until the fall of 1982. Prior to that time, the combination of several factors worked against the successful operation of OMS. Until 1982 only wheat was sold through OMS. With wheat as the only commodity OMS was relatively ineffective, the cross-elasticity of wheat and rice was less than originally supposed and relatively small amounts were injected into the system. In addition, the ration price of rice was only 75-80 percent of the market price. The concept was new to the distribution system and there was misunderstanding and procedural snags at all levels.

From September 1981 through May 1982 stocks registered a continuous decline from a zenith of 1,343,000 tons to only 487,000 tons, a level at which the agreement permitted the suspension of OMS. During this period, the combination of low imports and limited procurement resulted in the deletion of wheat stocks, which were drawn down to only 14,000 tons. Thus, OMS sales in March and April were of necessity largely limited to rice and paddy, and constituted the only way for the BDG to move rice into the market without resorting to a corresponding increase in the ration.

The shortfall of the aman rice crop in 1982 created an increase in foodgrain sales prices which triggered substantial OMS sales in September, October and November 1982. In September OMS offtake for rice was 14.5 percent and wheat was 12.6 percent of total PFDS offtake. Total rationing system offtake was 44.1 percent of the total, compared to 13.3 percent for OMS. In October, retail foodgrain prices rose rapidly and OMS was increased. OMS of wheat equaled the total MR and SR ration sales at about 26 percent of total offtake for the month. OMS rice was 28 percent of the total offtake, but MR sales soared to 46.3 percent. Because of the substantial injection of foodgrains into the October market, prices did not reach their expected high and began to moderate earlier than usual. By the end of November OMS offtake was down to 6.5 percent of the total offtake.

A survey of 39 of the 68 subdivisions in Bangladesh was undertaken for the evaluation team to examine the operational effectiveness of OMS at the field level.

The most recent Title III agreement was signed March 8, 1982. In the subdivisions surveyed, about 40 percent of the Subdivision Controllers of Food have held their position in the subdivision since the agreement was signed. This would be ample time for them to become familiar with the general procedures, including the amendments in the March 8 agreement. Another 14 percent had held their position from 6 months to a year.

In general, the Subdivision Controllers of Food were experienced and knowledgeable about government food allocations. In subdivisions where the Food Controller was newly appointed, longer tenured employees assisted in answering the questions. In almost all subdivisions records on OMS sales (and other government offtake) were readily available. It is unlikely that procedural deviation from the Title III agreement would derive from short tenure by the Subdivision Controllers of Food.

Sales of OMS stocks in September, October and November were countrywide. In only 6 of the subdivisions surveyed were there any thanas which did not have OMS during this period. In each of these subdivisions only a single thana did not have OMS representation. Reasons for no OMS in these thanas were

remoteness, lack of communication and low prices on the regular market. In two thanas dealers could not be found who would accept OMS stocks.

The pervasiveness of OMS activity throughout the country indicates that the mechanism is in place and sales activities are operating in all but the most remote areas of the country. Although the survey did not obtain information on the amounts of OMS stock sold in each thana, the fact that it was there is an indication that the effects and benefits are well distributed geographically.

In the early days of OMS there appeared to be a lack of support from Headquarters in Dhaka. This seems to have changed. Subdivision Food Controllers reported no problems in obtaining OMS allocations either in terms of promptness or quantity. Indeed, OMS allocations generally exceeded the amount sold. In all subdivisions except one the amount of wheat and rice allocated by the District Controller of Food to OMS were greater than the actual sales. Headquarters in Dhaka allocates OMS stocks to the District level, and the District makes specific allocations to each subdivision under its control. The Subdivision Controllers of Food said they had very little influence on the OMS stocks allotted them. Many said they did not know the basis for the amount allocated. Those that did answer usually cited allocations based on population, geographic size and market price. In general, the Subdivision Controllers of Food were satisfied with allocation procedures.

OMS of wheat in September were 16.2 thousand tons. This was very close to the amount allocated. Seventy percent of the subdivisions reported that wheat sales for the month were 75 percent or more of the amount allocated. Although total OMS wheat sales in October more than tripled from September, the paper amount allocated was even higher. The theoretical allocations were so high that the subdivisions with 75 percent of sales to allocations dropped to about half and dropped to a third in November. Rice sales were significantly lower in total amount and in percentage of sales to allocations. In September only a third of the subdivisions sold 75 percent or more of their allocations of rice. In October the proportion had slipped to a quarter and by November only 9 percent of the subdivisions sold 75 percent or more of their allocations.

The survey data shows that the "paper" allocations from Dhaka Headquarters and the district were more than sufficient to cover sales activity. However, it was subsequently learned that there were not always sufficient stocks in the LSDs to accommodate the official amount allocated. It appears that in some cases the paper allocation is considered an upper limit for official purposes, but the actual amount allocated from the LSD is decided by the Subdivision Controller of Food based on amounts in storage and his other commitments. It is not clear from the survey whether the difference in Dhaka allocations and subdivision allocations are known and given tacit approval at

headquarters. Some Subdivision Controllers of Food mentioned being short of stocks for OMS.

The formal procedure for initiating actual sales of OMS stocks is for the subdivision controller to notify headquarters in Dhaka that the average price of coarse rice in his subdivision averages 15 percent or more above the OMS level set by headquarters, and that he plans to begin sales of OMS stocks. It is assumed that headquarters will concur with the decision of the subdivision controller. It appears that OMS activity did start at about the right time in terms of price levels. As might be expected, the decision to initiate OMS does not rest with any single person. The decision is usually made by the Subdivision Controller of Food in consultation with other subdivision officials. The Subdivision Controller of Food informs the District Controller and headquarters in Dhaka that he plans to initiate OMS. Factors other than price that determine the initiation of OMS is the general level of stocks, market strength and political considerations. Approval is nearly always automatic and the subdivision has authorization to proceed with sales immediately, without official approval in case of emergency. In many subdivisions the Subdivision Controller of Food approved OMS on a thana by thana basis. The official prescription for starting OMS is based on averaging prices from all thanas in the subdivision. However, the Subdivision Controller of Food would begin OMS earlier in some thanas than in others.

OMS prices were adjusted according to the requirements of the government circulars. All but two subdivisions said they had price revisions in OMS as market prices changed. The government circulars price instructions were clear and the Subdivision Controller of Food felt confident in taking the initiative of making price changes, although usually in consultation with other officials. In most subdivisions three or more price changes were made.

When the decision to begin OMS is made it is announced by the beat of drums, in the newspaper, through loudspeakers and banners on the shops of the OMS dealers. This is primarily for the benefit of consumers as dealers already know when sales will begin.

We note a high degree of decision making autonomy at the subdivision level. The decision of when to start and to stop OMS is one of the key elements in the process. The actual amount of OMS stock allocated from the warehouse is the Subdivision Controller of Food's decision. As we see below, the dealers are selected by the Subdivision Controller of Food and other officials and the specific sales restrictions are made at the subdivision level.

When the decision to start OMS has been made, the next step is to organize the dealers who will lift stocks and carry out the retailing. Dealers frequently apply through the food inspectors who will recommend them to the Subdivision

Controller of Food. In some thanas reluctant dealers must be recruited. In none of the subdivisions did any of the OMS dealers cite any problem receiving approval. Indeed, the survey indicates the food inspectors had some problem persuading the dealers to participate.

In general, the criteria for selecting dealers are that they are known to the local food inspector and there is a good rapport between dealer and inspector. The selection criteria most frequently mentioned were: a licensed dealer, good geographic location, financially responsible and honest. In some subdivisions preference was given to dealers who carry other government offtake stocks (MR, GERD). In other subdivisions OMS stocks are given to non-government dealers. About 60 percent of the dealers interviewed were MR or GERD dealers. About the same percentage has some milling or crushing activity in the shop. The dealers commonly sold grocery items and edible oil as well as paddy in addition to milled rice.

The willingness of dealers to participate in OMS is reduced by the restriction placed on lifting stocks, sales procedures and profit margins. Prosperous dealers usually are not dependent on government stocks for their supply, and the government impediments to efficient selling are likely to dissuade the better dealers from participating in OMS. Some Subdivision Food Controllers were concerned about dealers black

marketing OMS stocks (selling them at regular market prices, rather than those fixed by the government) and said they limited the number of dealers in order to have better control of OMS retail regulations.

The March 1982 agreement stated that dealers were to lift OMS stocks in lot sizes ranging from 10 maunds to 200 maunds. This stipulation was not followed in any subdivision. Typical lot sizes were 50-100 maunds. Reducing the upper limit of lot size lengthened the distribution over time. It also made the dealers more vulnerable to "monitoring" by local officials. Raising the lower limit cut the small dealers out of the market for OMS stocks. Some of the major complaints of dealers were that lot size was less than optimal. Per unit transportation cost would have been less if they had been allowed to lift larger lot sizes. Long lines of sometimes unruly persons would form in front of the shop with OMS stocks. Extra labor was required to maintain order. In some cases a person would have to be hired to maintain the necessary records. Some of the dealers complained that profit margin was too low for the volume of business they could do. However, the survey found that the profit margin varied widely from subdivision to subdivision.

The major recipients, according to dealers, were daily laborers, the poor people, the floating people. In some cases the OMS wheat and rice was being purchased for direct

consumption. In other cases recipients were either selling it or collecting it for wealthier persons who would pay them a commission. In some areas the major recipients were workers in the tea gardens. In all subdivisions dealers and government officials said that OMS had a significant effect on checking the upward trend of prices and bringing it down more quickly than expected. Dealers seemed to attribute the reduction of prices to OMS. It is difficult to know just how much of price changes can be attributed to OMS and how much to other factors. Nonetheless, the perception of subdivision officials and OMS dealers is that OMS was effective. Perhaps of greater significance than the positive comments from the Subdivision Controllers of Food and OMS dealers was the lack of negative comments. The interviewers gave the respondents full opportunity to voice complaints. Indeed, we were interested in ferreting out the problems. The controls on lifting stocks and restrictions on selling were greater than expected and belie the title Open Market Sales; but it is obviously more open than other PFDS sales.

Table H-2

PFDS OFFTAKE OF FOODGRAIN BY TONNAGE AND PERCENTAGE
(In Long Tons)

	<u>FY</u> <u>1977/78</u>	<u>FY</u> <u>1978/79</u>	<u>FY</u> <u>1979/80</u>	<u>FY</u> <u>1980/81</u>	<u>FY</u> <u>1981/82</u>
1. Statutory Rationing Percentage	451,010 24.4%	417,149 23.2%	491,404 20.5%	342,910 22.5%	307,511 15.1%
2. Modified Rationing Percentage	352,732 19.1%	311,583 17.3%	384,569 16.0%	179,138 11.8%	482,916 23.7%
3. Essential Priorities Percentage	121,777 6.6%	94,952 5.3%	84,069 3.5%	87,651 5.8%	100,714 4.9%
4. Other Priorities Percentage	327,261 17.7%	392,622 21.9%	538,734 22.4%	357,193 23.5%	375,711 18.5%
5. Large Employers Percentage	89,066 4.8%	75,413 4.2%	105,994 4.4%	30,768 2.0%	55,894 2.7%
6. Flour Mills Percentage	214,925 11.7%	182,932 10.2%	178,368 7.4%	124,855 8.2%	123,374 6.1%
7. Marketing Operation Percentage	5,530 0.3%	8,932 0.5%	10,068 0.4%	19 0%	107,957 5.3%
8. Open Market Sales Percentage	- -	52,811 2.9%	110,883 4.6%	124 0%	46,385 2.3%
9. Food For Work Percentage	254,669 13.8%	215,892 12.0%	440,431 18.4%	349,305 22.9%	365,818 18.0%
10. Relief Percentage	30,160 1.6%	44,550 2.5%	57,090 2.4%	49,936 3.3%	69,624 3.4%
Total Percentage	1,847,130 100%	1,796,836 100%	2,401,610 100%	1,521,899 100%	2,035,904 100%

Source: Directorate of Food.

Table H-3

OFFTAKE OF FOODGRAINS BY CATEGORY
(1982, in tons)

	September			October			November		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total
Statutory Rationing	6,649	19,116	25,765	6,128	18,282	24,410	7,563	19,895	27,458
Modified Rationing	34,669	24,881	59,550	35,499	34,607	70,106	16,046	16,514	32,560
Essential Priorities	5,088	3,458	8,546	4,344	3,491	7,835	4,530	2,505	7,035
Other Priorities	9,325	25,824	35,149	9,124	26,230	35,354	7,935	23,819	31,754
Large Employer of Labor	11	8,733	8,744	11	8,778	8,789	10	6,108	6,118
Open Market Sale	9,475	16,152	25,627	21,422	52,266	73,688	2,862	8,117	10,979
Market Operations	-	-	-	31	15	46	37	139	176
Flour Mills	-	<u>14,413</u>	<u>14,413</u>	-	<u>13,973</u>	<u>13,973</u>	-	<u>13,339</u>	<u>13,339</u>
Sub Total	65,217	112,577	177,794	76,559	157,642	234,201	38,983	90,436	129,419
Food for Work	38	8,410	8,448	61	35,566	35,627	9	30,873	30,882
Canal Digging	-	-	-	-	133	133	-	10	10
Vulnerable group	-	4,415	4,415	-	5,238	5,238	-	5,597	5,597
Gratuitous Relief	<u>1</u>	<u>2,432</u>	<u>2,433</u>	<u>1</u>	<u>1,066</u>	<u>1,067</u>	<u>1</u>	<u>2,295</u>	<u>2,296</u>
Sub Total	39	15,257	15,296	62	42,003	42,065	10	38,775	38,785
GRAND TOTAL	65,256	127,834	193,090	76,621	199,645	176,260	38,993	129,211	168,204

APPENDIX I

The Role of the Private Sector
in Agriculture in Bangladesh

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APPENDIX I

THE ROLE OF THE PRIVATE SECTOR
IN AGRICULTURE IN BANGLADESH

Agriculture in Bangladesh has traditionally been in the private sector. With large numbers of predominantly poor farmers who lacked resources and knowledge of modern agricultural practices required for raising agricultural productivity. The government has had to come forward with resources, technology and information to help farmers break out of traditional agriculture. This process began in the early 1960s with the introduction of modern inputs, High Yielding Varieties of seeds (HYV) and creation of a number of institutions for agriculture and rural development.

These steps taken by the government produced tangible results in increasing agricultural productivity, but the growing network of public organizations was beginning to create inefficiencies. With growing realization of the need for gradual handing over of its role to private sector, the government initiated the privatization of fertilizer marketing in 1978. Similar measures were soon introduced in other areas of vital agricultural inputs such as pesticides and irrigation equipment.

More recently privatization has gained momentum in view of government's declared policies to allow the private sector to play a greater role in the whole economy. This report evaluates the performance of the government in its effort toward privatization of agriculture. The areas covered for this purpose of the evaluation are:

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- i) marketing of inputs,
- ii) storage,
- iii) extension,
- iv) maintenance and repair,
- v) credit, and
- vi) agro-industries.

Marketing of Inputs

Government's involvement in agricultural input distribution started in the early sixties. About 4,000 union seed stores were established throughout the country in 1960. A Union Agriculture Assistant was appointed in each union for the distribution of seed, fertilizer, etc. Shortly, however, the East Pakistan Agriculture Development Corporation (EPADC) a wholly government-owned corporation under the Ministry of Agriculture, was established in October 1961 to take up the responsibility of distributing agricultural inputs, such as chemical fertilizer, seeds, tractors, irrigation pumps, and spares. This agency was renamed as Bangladesh Agricultural Development Corporation (BADC) in 1972.

Fertilizer: EPADC's original fertilizer marketing system involved private retailers below the thana level, while the agency retained wholesale marketing up to the thana. This system faced several problems due to:

- i) inadequate storage facilities in the public sector,
- ii) low dealer commission,
- iii) inadequate number of dealers, and
- iv) restrictions on movement of inputs from one area to another.

A new marketing system for fertilizer was developed to resolve these problems; and was introduced in Chittagong Division in 1978 on a one year trial basis. The new system was aimed at increasing fertilizer use on an equitable basis throughout Bangladesh. The new system's features are:

1. appointment of wholesale dealers in addition to retailers,
2. complete freedom of private sector movement of fertilizer except for a 5-mile border zone,
3. higher rate of commission to both wholesalers and retailers,
4. reduction of BADC's own selling points including gradual closure of thana sales centres, and
5. credit facilities for dealers and farmers.

The system has been extended over the entire country since July 1980.

Prior to the privatization of wholesale fertilizer marketing the number of active dealers in the country was 22,000. Additionally, there were 6,000 part-time dealers. Now there are 4-5 thousand wholesale dealers and 40-45 thousand retailers working under the new system.

Seeds: BADC has been involved only in the marketing of HYV seeds; the marketing of traditional varieties being always in the private sector. Production of HYV seeds involves several steps, some of which require specialist care. The first step is the production of foundation seed out of breeder seed which is done at BADC's own seed multiplication farms. The next step is the production of certified seeds; and this is mainly done by the contract growers. The certified seeds are examined, processed, preserved and packed in Seed Processing Centres run by BADC. The packed seeds are distributed through the dealers. Some seeds also are imported to augment the local supply.

The contract growers are organized into 13 zones. There are 13 seed processing centres in and around these zones. The number of contract growers has increased from 1,049 in 1976/77 to 20,920 in 1981/82. Contract growers are gaining experience in seed production technology. They have started to organize themselves into groups. The further development of the process could lead to complete privatization of seed HYV production and marketing.

Pesticides: Until 1974, pesticides used to be distributed free of any charges to farmers. In May 1974, the Government withdrew 50 percent subsidy from pesticides and 40 percent subsidy from spray machines. The process of government withdrawal culminated in the total privatization of import and distribution of pesticides and sprayers in 1979. The objective

of this policy was to ensure greater participation of farmers and private traders in this area. At the moment there are about 13 private companies engaged in the import and wholesale trade of pesticides. They employ agents at the district and thana levels, who sell to the union level retailers.

Irrigation: Two public sector agencies, namely, the Bangladesh Water Development Board (BWDB) and the BADC, have been traditionally involved in irrigation programmes. BWDB's main area of concern is large scale irrigation and flood control. They also implement some deep tubewell projects. BADC is engaged in all areas of small irrigation including deep tubewells (DTWs), shallow tubewells (STWs) and low-lift pumps (LLPs). Shallow tubewells have always been distributed through sales. But sales of DTWs started only in 1979-80 and that of LLPs in 1980-81. Before that both BTWs and LLPs were distributed on a rental basis.

Presently, three agencies are involved in the selling of shallow tubewells. BADC, Bangladesh Krishi (Agriculture) Bank (BKB), and Bangladesh Bank (BB). Their total sales in 1980-81 was 17,586 units. The number increased to 26,445 in 1981-82, but then fell to 16,309 in 1982-83. The main reasons identified for the reduced sales in 1982-83 are:

- i) non-availability of popular brands of pumps,
- ii) delays in sanctioning bank loans,
- iii) delays in fixing price of electricity-operated STWs,
and
- iv) organizational problems such as shortage of sales
staff, etc.

It is reported that about 6,000 applications for purchase of STWs are pending with BADC alone. The cumulative sales of STWs till 1981-82 was about 85,000.

The STW is a small pump with average irrigated area per pump being about 11 acres. It is possible for a rich farmer to buy such a unit, and sell water to neighbouring farmers. It is learned that on average each farmer irrigates 5 acres of his own land and 6 acres of others' land.

In comparison to STWs, DTWs and LLPs are larger pumps and can irrigate a much larger area. A 2-cusec DTW can irrigate over 60 acres of land, and a 1-cusec LLP can irrigate about 30 acres of land. Typically farmers form groups to buy these machines. The government provides a high amount of subsidy to reduce the prices of DTWs and LLPs. A DTW that costs about Tk. 350,000 is sold at Tk. 90,000; and a LLP that costs about Tk. 30,000 is sold at about Tk. 18,000.

Sales of both DTWs and LLPs are increasing. In 1980-81, a total of 573 DTWs and 2206 LLPs were sold. The corresponding

numbers in 1981-82 were 2,088 and 5,366 respectively. Besides, 2,022 old LLPs that were on rental also were sold to their users in 1981-82. Sales of DTWs further increased to 2,300 in 1982-83. The target of LLPs for this year is 5,906 units. It is expected that by the end of this year, the cumulative number of DTWs sold will be 4,961 compared to 11,376 on rental. In the case LLPs, the cumulative sales will be about 15,500 units compared to 30,000 on rental.

Storage

The private sector always has been involved in commercial storage of agricultural produce, which forms a part of the marketing system. The government's participation in this area started with the food rationing system, but the role increased and diversified as BADC came into the picture. At present, the government owns and operates Local Supply Depots (LSDs) and Central Storage Depots (CSDs) for foodgrain. The BADC also has its own network of fertilizer godowns (warehouses). However, private sector storage facilities continue to thrive, as indicated by the fact that in 1979, BADC hired 827 private godowns having a total capacity of 205,442 tons, as compared to BADC's own storage capacity of 154,000 tons in 308 godowns. The private storage capacity will increase as privatization of fertilizer, seed and pesticide marketing progresses.

Another area of growing importance in the private sector is cold storage. The total sanctioned capacity of cold storage in the country is 400,000 tons, all of which is in private ownership. Cold storage is mainly used for potatoes, the yearly yeild of which is some 1.1 million tons.

Extension

Agriculture extension work was initiated in this country by the government. At present the government has a large Agriculture Extension and Management Department which has staff in every union of the country. There are also extension training institutes under this Department. Only two non-government groups are working outside this government set-up. One of them is the pesticide manufacturers, and the other is the private voluntary agencies (PVOs).

The 13 pesticide manufacturers in the country have marketing networks up to the union level. The companies arrange training of dealers who in turn spread the knowledge and know-how to the farmers. In addition to this, media advertisement is continuously being used. The government's Plant Protection Department also takes part in the training of the pesticide dealers.

The PVOs play a very extensive role in dissemination of knowledge about modern agricultural practices and various others appropriate rural technologies. There are over one

hundred PVOs in the country; about 56 of them are organized around a coordinating body, called Agriculture Development Agencies of Bangladesh (ADAB). A quick survey of the PVOs reveal that their extension activities cover agriculture, horticulture, poultry farming, seri-culture, api-culture, sanitation, cooperative formation, family planning, etc.

Maintenance and Repair

Agriculture and other rural activities are yet very little mechanized. Irrigation is the only area where machine power has been introduced in a substantial degree. However, semi-mechanized hand-operated equipment for sowing, weeding, pesticide spraying, etc. is being used in increasing number as agriculture is being modernized. Previously, when BADC used to supply irrigation pumps mainly on rent, maintenance and repair of these machines were done by the Corporation itself. But now the private sector is being encouraged to set-up repair workshops in every thana. Institutionalized credit is being extended for this purpose. About 100 such workshops have been given loans by the Bangladesh Krishi Bank (BKB) alone.

Credit

The total amount of institutional credit made available in Bangladesh was Tk.5,488.8 crore in 1980-81 and Tk.6,465.14 crore in 1981-82. Out of this the private sector received

Tk.1,902.64 crore and Tk.2,311.25 crore respectively. The amount disbursed to the agriculture sector (all in the private sector) was Tk.352.28 crore and Tk.412.81 crore in the corresponding years.

The table below shows the trend in agricultural credit expansion in Bangladesh.

Table I-1
Trends in Agricultural Credit
(Disbursements)

	<u>In crore taka</u>
1973-74	34.18
1975-76	46.29
1977-78	160.80
1980-81	352.28
1981-82	412.81

The following table shows the present summary of agriculture credit in the two recent years.

Table I-2
Summary of Agricultural Credit

	<u>1980-81</u>	<u>In crore taka</u> <u>1981-82</u>
Loan target	548.31	653.74
Disbursement	352.28	412.81
Recovery	225.75	254.19
Outstanding	653.22	799.77

Several banks and other institutions are engaged in the distribution of institutionalized agriculture credit. They are:

Bangladesh Krishi Bank (BKB)

Bangladesh Samabaya Bank Ltd. (BSBL)

Cooperative Land Mortgage Banks (CLMB)

Central Cooperative Banks (CCB)

Nationalized Commercial Banks (NCL)

Rural Development Board, along with its affiliated organizations, namely:

Thana Central Cooperative Associations

Krishak Samabaya Samity

The Rural Development Board and its affiliated cooperative organizations themselves do not disburse any credit; they facilitate the credit programmes of banking institutions.

Two tracks of credit programmes are now underway:

Normal Programme (NP)

Special Agriculture Credit Programme (SACP)

The NP is the major programme of institutionalized credit. It is available to all kinds of agro-oriented projects except crop production which is financed under SACP. The major beneficiaries of the credit programme are: (i) projects in pond fisheries, (ii) livestock, (iii) poultry, (iv) fruit plantations, (v) irrigation, (vi) food processing such as rice/wheat mills, and (vii) storage. Besides special projects

such as Integrated Rural Development Programmes of Rural Development Board are also financed by agriculture credit. Institution-wise, disbursement of credit in the last two years is presented below:

Table I-3
Credit Disbursements by Institution

(In crore Taka)

	1980 - 81			1981 - 82		
	<u>N.P.</u>	<u>SACP</u>	<u>Total</u>	<u>N.P.</u>	<u>SACP</u>	<u>Total</u>
BSBL	25.70	-	25.70	18.58	-	18.58
BKB	185.32	24.42	209.74	251.22	19.78	271.00
NCBS	65.58	48.26	116.84	81.63	41.60	123.23

It may be mentioned here that the institutionalized agri-credit is highly concessionary in terms. The rate of interest of agri-credit is only 6 percent although the current bank rate is 10.5 percent.

Apart from the banking system, some PVOs also are extending credit for agriculture and cottage industries to the rural poor. Their credits are often given to groups of people rather than to individuals. The total amount of such credit is small compared to that available from the banking system. However, because of close supervision and guidance these credits are reported to be highly effective.

Specific Industries

Important agro-related industries in Bangladesh are jute, handloom, rice mills, edible oil mills, sugar mills, tanneries, etc. Except the jute and sugar mills that were nationalized in 1972, all other mills are in the private sector. Both jute and sugar mills are large enterprises; no units of them are likely to come up in the near future. Some of the jute mills that were formerly owned by local entrepreneurs are being returned to their former owners.

It is difficult to estimate the number of small private factories in various industries. Their number is on the increase as indicated by the increased rate of bank lending, electricity hookups, etc. BKB in 1980-81 extended a total loan of Tk.34.79 crore for agro-related industries like flour mills, fish freezing units, oil mills, rice mills and cold storage. The figure for 1981-82 is not yet available, but is reported to be higher.

APPENDIX J

The Government of Bangladesh:
Structure and Function

Daniel H. Erickson

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APPENDIX J
THE GOVERNMENT OF BANGLADESH:
STRUCTURE AND FUNCTION

I. NATIONAL GOVERNMENT^{1/}

Bangladesh has a unitary form of government. Under the present martial law regime (declared in March 1982), the Head of State is a civilian President whose position is largely ceremonial, with real power in the hands of the Chief Martial Law Administrator (CMLA) and an informal council of senior military leaders. Two Deputy MLAs (the chiefs of the Navy and Air Force) and five Zonal MLAs (military officers commanding the five military zones within Bangladesh) assist the CMLA in governing the country. The CMLA's cabinet is composed of active and retired military officers, with a few senior civilian ministers holding key portfolios.

The judiciary is nominally independent, but its power is circumscribed by the CMLA's authority to appoint and remove judges, and by martial law tribunals that may adjudicate a wide range of civil and criminal matters, without appeal to the civilian courts.

The centerpiece of the CMLA's domestic reform program is the decentralization of basic administrative functions to the thana (roughly, county) level, which decentralization began in November 1982. This program is designed to bring administrative decision-making closer to the people, and to

^{1/}Adapted from BANGLADESH: A COUNTRY PROFILE, originally prepared by Evaluation Technologies, Inc., Arlington, Virginia under contract AID-otr-C-1553 and extensively revised and updated by George G. Wood, Assistant Food for Peace Officer, USAID/BANGLADESH.

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make the government more responsive to local needs.

The martial law regime has promised a return to representative democracy in the future, but no specific date for elections has been announced.

II. LOCAL GOVERNMENT^{2/}

The majority of government services provided to the people of Bangladesh are delivered by the national government's civil service of administrators and technicians. Outside Dhaka, personnel of the functional (nation building) ministries such as agriculture, health, education, etc., are stationed at some or all of the four administrative levels which, from highest to lowest, are called divisions, districts, subdivisions and thanas. At each level of administration, the technical staff of the various nation building ministries is managed by a chief administrator for that level and is under the general supervision and guidance of the technical staff from the respective ministry at the next higher level of administration. Thanas are supervised by a subdivision, subdivisions are supervised by a district and districts are supervised by divisions.

The Public Food Distribution System is centrally administered by the Food Directorate (FD) a unit within the

2/Adapted from United States International Development Cooperation, Agency for International Development, Project Paper, Bangladesh Zilla Roads Maintenance and Improvement, 388-0056, p. 35, extracted from Maniruzzaman, RDE/USAID, Dhaka, Bangladesh, The Functioning of Local Government in Rural Bangladesh.

Food Divisions of the Ministry of Food. The FD administers the PFDS through subordinate officials whose responsibilities encompass successively lower echelon administrative units within the country. Reporting to or through the chain of command to the DSDR are four Divisional Controllers of Food with responsibility for internal procurement and movement of the commodities to warehouses at Central Storage Depots (CSDs) and Local Supply Depots (LSDs), twenty-two District Controllers of Food and seventy-two Subdivisional Controllers of Food. The Subdivision Controllers supervise thana inspectors.

In addition to the national government staff, the national government has authorized the operation of four types of local self governments and the quasi self government to carry out specific services either in whole or in part. Local self governments are established at the district level - zilla parishad; at the union level - union parishad; at the village level - gram sarkar; and in incorporated urban areas - pourashava. The first three are concerned with government in the rural areas while the last is municipal government. The quasi self government - the thana parishad - is a coordinating body which joins elected local government officials from the union parishads with the national bureaucracy stationed at the thana level. Presently most officials at the union parishads, gram sarkars and pourashavas are elected. Elections for the zilla parishads have not as yet occurred and this local government is now managed by the District Commissioner - the

chief administrator of the national government's district administration.

Local governments are assigned a wide variety of functions. However, because of the financial limitations and the parallel activities of the central ministries, their main concerns are roads, irrigation, community centers, organization of self-help and food for work activities and the settlement of minor village or union level disputes. One of the most important functions assigned solely to local governments is the responsibility to construct and maintain the farm to market, village and farm access road network. Zilla parishads are not significantly involved in the other functions mentioned as these are carried out by thanas, unions and gram sarkars.

Zilla and union parishads have taxation and revenue authority and finance more than 50 percent of their expenditures from local sources. The balance of revenue spent by these local bodies as well as all of the funds for the thana parishad is provided by a number of grants-in-aid from the central government. Local governments are guided and supervised by the Ministry of Local Government, Rural Development and Cooperatives which has the authority to set the rules and regulations related to policies, responsibilities and procedures of local governments.

Traditionally, in South Asia the district, by whatever name, has been a key administrative unit. Government at this level has been important in routine public administration, maintenance of law and order and administration of justice.

Briefly, the operation of district administration is built firmly on methods originated by the Moghuls and refined by the British in the 18th and 19th centuries. The aim of administration is seen as caretaking - with maximum emphasis on budgetary accountability and little concern for speed in execution of activities. Although, since Liberation, more formal emphasis has been placed upon development activity and officers charged with these responsibilities have been posted in the districts, there still has been no change in the system itself. Manuals of procedure dating from the days of the British Raj remain in use at district offices. These patterns of operation constitute a "taken for granted" aspect of district administration, despite increasing awareness on the part of Bangladeshi officers that they are inappropriate to modern needs.

A second related aspect of district administration has been aptly described by Morris-Jones (1962) as "political bilingualism." That is, two separate idioms of social behavior, with their associated cultural traditions, operate in administrative contexts in Bangladesh. There is, first, the "modern" idiom with its impressive vocabulary of concepts (such as plan, policy, implementation); its roots in the western progressive cultural tradition; its reinforcement in modern technical education; and its emphasis on impersonal, task oriented, career directed activities.

Against this idiom is counterposed another "traditional" one. The administrative culture of South Asia has a history dating back several thousand years. The more recent development of Moghul and British forms has built directly upon this tradition. In it, relationships are hierarchic, direct and personalized; functions are not specifically defined; responsibility is not deputed to subordinates; and it is expected that personal loyalties and antagonisms will be uppermost in guiding administrative operations. There is less emphasis on output and more on maintenance of relationships and improvement of one's position vis-a-vis others within the organization. Organizations are neither functionally defined nor functionally autonomous, but are linked closely to higher levels and to parallel organizations such as political parties. The effect of this traditional pattern of administrative organization is to create a host of bureaucratic entities which seethe with rivalry and factionalism, while erecting a multitude of red tape checks and balances which inhibit execution of activity. The interplay of the two "idioms", manifested in differing balance in various organizations, gives a characteristic tone to the operation of South Asian bureaucracies. At the district level in Bangladesh, the "traditional" tends to be uppermost at present.

Creating an hospitable environment for economic development would seem to call for tilting the balance in the direction of more effective developmentally-oriented operations.

APPENDIX K

Comments on Selected Programming Matters

Members of the Evaluation Team

APPENDIX K

COMMENTS ON SELECTED PROGRAMMING MATTERS

There are a number of topics that do not conveniently fit elsewhere, but still merit some discussion. These have been collected in this appendix.

Impact on U.S. Foreign Policy Objectives

United States foreign policy interests in Bangladesh are: (a) humanitarian, i.e., concern for the well-being of the 92,000,000 people of Bangladesh and for the projection of the American image on the world scene as a responsible donor, and (b) maintenance of political stability in Bangladesh as a prerequisite to economic development, and to enhance regional political stability.

In 1975 Bangladesh took a turn away from its statist course, and concurrently began to cooperate with the West. This has been helpful to the USG because Bangladesh is active in international organizations. The BDG has supported the USG position in such fora as the Non-aligned Movement and the Muslim Foreign Ministers Council.

The PL 480 Title 1/III program has been supportive of U.S. foreign policy interests in Bangladesh. The program, along with Development Assistance, has enabled the USG to influence the BDG on development policy issues, and on international issues that have arisen from time to time.

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Staffing

Staffing for the food for development program appears to be adequate for present policy orientation, both on the part of the BDG and USAID/Bangladesh.

The team discussed with BDG officials and USAID staff the possible staffing implications of greater USAID involvement in the design and monitoring of local currency projects that absorb Title III proceeds. The answer would depend on how this task would be approached by the BDG and USAID.

A representative of the BDG indicated that the BDG would need to have additional financial resources for the necessary personnel for the administrative oversight of new projects. Further, it would anticipate that projects would fund their own implementation personnel. Not explicitly stated, but implicitly understood, was the assumption that all such projects would be additive to ongoing efforts.

Using this same assumption, USAID/Bangladesh also would need to increase substantially both professional and supporting staff. The FY 1984 Annual Budget Submission estimates a Development Assistance funding level for FY 1984 of \$86 million and Title III at \$70 million. For this level of effort the mission has programmed 98 workyears: 35 U.S. direct hire, 62 foreign national direct hire and 1 part-time employee. Thus, assuming that everything was additive, full mission participation in the programming of Title III proceeds could be expected to increase the workload by approximately 80 percent,

thus requiring an additional 78 workyears. Since local currency projects would have a highly local orientation, nearly all of the staff increase would be in the foreign service national category.

However, in the approach envisioned by the evaluation team everything would not be additive to existing workload. While some new projects might be involved, we would assume that they would largely fall within program sectors for which the mission -- and BDG -- already are staffed. Also, for the most part we would expect the process to involve projects already ongoing or planned, and consist simply of a more rigorous project review and approval process to enhance the impact and effectiveness of local currency resources. Technical staffs and resources already available would be employed in this process.

Using this latter assumption, we would estimate a possible staffing requirement for the USAID in the range of, say 0-3 local staff positions, and at the most, perhaps two or three times this number on the BDG side.

Impact of Multiple Program Administration in Washington

The interagency Development Coordinating Committee (DCC) which coordinates the U.S. development assistance programs, established the Food Aid Subcommittee (FAS), to coordinate PL 480 issues. The FAS Working Group is chaired by the Department of Agriculture (USDA) and includes as members IDCA/AID/STATE, the Office of Management and Budget, the Department of Treasury

and the Department of Commerce. The FAS reviews and approves all PL 480 programs. PL 480 funding has traditionally been included in the USDA appropriation. Technically no one agency has had full responsibility, and decisions are reached by consensus. Each responsible agency has its own objectives, operating requirements and constituency to satisfy, frequently not in harmony with each other.

One of the complaints the team heard from a number of sources concerned this system of multiple agency administration of the PL 480 program in Washington. It was described as cumbersome and a source of frustrations and delays in the design and implementation of the Bangladesh Title III program, because of the coordination/negotiation process required to obtain program and budget agreements from the seven different agencies with vested (and different) interests in the PL 480 program. While AID typically manages food aid programs in the field once they have been approved, policy and budget approvals are required in Washington and are handled through the FAS interagency system. All of the seven agencies involved in the process probably feel the same sense of frustration about the system at times; the three agencies we contacted expressed similar views.

However, nobody we talked to had any specific, realistic suggestions for something better to replace the existing system. There is a recognition that the other agencies involved have legitimate interests in the program. Everyone

acknowledges that interagency procedures on Title III need to be smoothed out so the system can function more efficiently, i.e., such as it reportedly does for Titles I and II.

While the analogy is not perfect, we are reminded of the complaints sometimes heard about imperfections in democracies and capitalism, and reach the same conclusion regarding the PL 480 interagency system: "despite its imperfections it seems to be the best system available at the moment, and will have to do until someone devises a better system."

Compliance with Title III Reporting Requirements

On September 3, 1980 the mission made and transmitted to the BDG an analysis of the schedules and status of the various compliance reports provided for under the Title III Agreements. Status ranged from "received on a timely basis" to "seriously overdue."

Reporting continues to be a matter of concern. Generally speaking, estimates and forecasts are available on a timely basis but with some question as to their accuracy. Quarterly Compliance and Special Account Reports are consistently received late. Annual Compliance Reports are received but are always a little late and skimpy.

Self-Help Measures

All PL 480 Title I sales agreements since 1967 have contained self-help measures to which recipient countries have

committed themselves. In the March 8, 1982 Title III Agreement the BDG agreed to undertake a number of self-help measures to improve the production, storage and distribution of agricultural commodities. They are to be implemented to contribute directly to development progress in poor rural areas and enable the poor to participate actively in increasing agricultural production through small farm agriculture. The BDG is committed to providing adequate financial, technical and managerial resources for the implementation of these measures.

The self-help measures of the current Title III agreement, together with the present status of their implementation, are set out below:

Self-Help Measures

Implementation Status

1. Encourage increased domestic production by:

a. Implementing the Medium-Term Foodgrain Production Plan (MTFPP) with improved water control, particularly irrigation, as the spearhead of improved agricultural technology.

The Agreement identifies 17 of the projects as eligible for application of Title III proceeds as contributions to local currency costs. The total local currency requirement for the 17 projects is Tk.13,923.58 million. To date Tk.1,913.02 million have been attributed to these projects with resultant BDG loan forgiveness.

b. Continuing to encourage the private sector's contribution to producing, processing, distributing and marketing of foodgrains.

The Ershad Administration is committed to a program of privatization, quite apart from Title III considerations.

c. Pursuing agricultural research goals which contribute to the increase and diversification of food production.

The MTFPP has 12 research and extension projects. One was completed in FY 1982. Title III proceeds are not allocated to the research and extension component of the MTFPP.

d. Taking effective measures to strengthen the crop forecasting system and to disseminate agricultural research information to farmers through extension services and by other means.

2. Announce procurement prices for each major foodgrain crop before the planting season, setting the price at a level to cover all input costs plus a margin of profit sufficient to encourage investment in high yield variety (HYV) technology. Continue procurement operations whenever farmgate prices fall below procurement prices.

3. Maintain a reserve system to provide foodgrain security. The BDG agrees to improve and expand the Open Market Sales (OMS) Program as the release mechanism for the reserve program. OMS will both moderate price increases and provide reasonably priced foodgrains to consumers throughout the country.

4. Continue phasing down the ration system by (a) gradually moving prices upward to reduce the subsidy element, (b) reducing the rice portion of the ration, and (c) lowering the total ration quota for individual card-holders.

The MTFPP has a Phase II of the Training and Visit Extension Project and an Agricultural Information Service Project.

Procurement prices for the 1982-83 Aman crop were announced June 30, 1982, for the 1983 Boro crops

and December 30, 1982 for the 1983 Aus crop. The BDG set Aman procurement prices at Tk.210 per maund for rice and Tk.135 per maund for paddy. The wheat procurement price was set at Tk.135 per maund. The Boro rice price is Tk.210 per maund and the Aus rice price is Tk.190 per maund.

On August 4, 1980 BDG adopted a Food Security Plan. The World Food Programme - Bangladesh has estimated as of December 20, 1982 that the closing stock of foodgrain in Bangladesh will be: rice 153,000 MT and wheat 320,000 MT total 473,000 MT, a reduction from the opening stock July 1, 1982 level of 615,000 MT. Major donor countries and the World Bank believe that food security for Bangladesh requires a permanent stock level of 1.3 to 1.4 million tons. Concerning OMS see Appendix H.

On July 1, 1982 the ration price for rice was increased from Tk.190 to Tk.195 per maund and for wheat from Tk.124 to Tk.134 per maund. With effect from November 7, 1982 the procurement prices were increased to Tk.210 per maund and Tk.135 per maund for

aman rice and wheat, respectively. On January 3, 1982 the ration price of rice was increased to Tk.215 per maund and of wheat to Tk.145 per maund. This is the first time in the history of Bangladesh that the ration price has exceeded the procurement price. The ration quota continues at 2.0 seers per week and the portions of the ration which can be drawn as rice remains at 25 percent, as established on December 12, 1981.

5. Evaluate the operations of the vegetable oil market, including oil sales through the private sector and the oil used in the ration system.

Study has not been undertaken. The Bangladesh Sugar and Food Industries Corporation has a proposal for study under consideration.

6. Implement policies to foster private sector investment in the cotton spinning industry including announcement of all elimination of the 12,500 spindle limitation applicable to new spinning mills. Cotton yarn produced from PL 480 financed cotton will be used to support the local weaving industry.

On June 26, 1982 the Ministry of Industries and Commerce issued letters to all private investors who had received licenses to build cotton spinning mills indicating there would be no limitation on the number of spindles. In June 1982, a decree was issued which allowed expansion of spinning capacity in both private and public sector mills. Forty-one licences have been issued to potential investors for construction of cotton spinning mills. Construction of four has commenced.

In September 1982, the BDG announced the terms and conditions for divestiture of 22 cotton spinning and combination mills. The BDG intends to return approximately 60 percent of power loom weaving capacity and 40 percent of cotton spinning capacity to the private sector.

APPENDIX L

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Appendix L

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