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U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT  
DACCA, BANGLADESH

MEMORANDUM

To : General Distribution February 18, 1981  
From : Charles H. Antholt, Chief, F&AGR  
Subject: Foodgrain Situation - 1980/81

Attached is the Office of Food and Agriculture's foodgrain outlook for 1980/81. Akhter Ahmed, Ziaul Haque, and Latifur Rahman under the leadership of Dr. Church authored the report.

# **BANGLADESH FOODGRAIN SITUATION - 1980/81**

## **Summary**

### **The 1980/81 Crop Year in Review**

#### **The 1980/81 Boro Rice Crop**

**Acreage**

**Yields**

#### **The 1980/81 Wheat Crop**

**Acreage**

**Yields**

#### **The 1981/82 Aus Crop - An Early Outlook**

## **Annex Tables**

- A-1 Comparative Foodgrain Acreage, Output, and Yield Figures**
- A-2/3 Comparative Fertilizer Sales Figures**
- A-4 Comparative Seed Sales Figures**
- A-5/7 Comparative Pump Distribution Figures**

**February 1981**

**Dacca, Bangladesh**

**USAID Mission to Bangladesh**

## BANGLADESH FOODGRAIN SITUATION - 1980/81

### Summary

An early assessment of prospects for the standing wheat and rice crops suggests wheat will be 1.2 million tons and boro rice 2.6 million tons. With 8.0 million ton aman and 3.6 million ton aus rice crops already harvested, there is a promise of achieving a 15.4 million ton foodgrain output for the agricultural (and fiscal) year 1980/81 <sup>1/</sup>. Compared to last year's drought effected foodgrain output of 13.3 million tons, this represents a very respectable 2.1 million ton or (16 percent) increase. All the more encouraging, this recovery in foodgrain output has not been accompanied by dramatic declines in producer prices, due in part to government domestic procurement as well as to farmers and intermediaries building up private stocks to pre-drought levels. Strong producer prices for rice will probably encourage farmers to plant nearly as much aus acreage in the 1981/82 season as in the current 1980/81 season despite BDG efforts to encourage more jute production after two below-average crop years. (Jute output is also affected by weather and prices). A 1981/82 aus crop comparable to the 1980/81 harvest is possible, therefore if favorable growing conditions continue into 1981.

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<sup>1/</sup> The agricultural year in Bangladesh begins on May 1 and ends on April 30 of the following year. For all practical purposes the agricultural and fiscal years coincide.

### The 1980/81 Crop Year in Review

After two years of poor crops which left foodgrain output in 1979/80 no higher than it was in 1977/78, Bangladesh has recouped its productive capacity and propelled itself to what promises to be record crop output levels in 1980/81. This turn-around is due in large measure to very favorable weather, although the government's improved performance at getting seed, fertilizer and power irrigation pumps to farmers also deserves recognition as do its efforts to stabilize foodgrain output prices through domestic procurement.

Table 1 presents a comparison of crop production for the last two years. Annex Table A-1 presents more details on acreage and yields. Improvements are expected in all three rice crops and wheat. The most dramatic recovery was aus rice output which was up due both to greater acreage, itself the result of favorable aus/jute prices, and yields due to vastly improved weather conditions following two consecutive drought years. Aman also registered a 10 percent increase due to timely rains and somewhat higher fertilizer use. The upcoming boro and wheat crops are both expected to register further increases this year due to continued favorable weather, better input delivery and anticipated favorable price conditions, which has stimulated further acreage expansion.

However, wheat, on which the BDG had placed its hopes for achieving an output of 2.0 million tons in order to break the barrier of 16.0 million tons of domestic foodgrain output will perform below target. To blame for this less-than-hoped-for performance are late planting and farmers' preferences for planting pulses and oilseeds, both of which registered very high prices last year due to low plantings and output. These rabi crops affect wheat more than boro because they are grown largely in rainfed areas where wheat not rice is the alternative crop.

**Table 1 : Comparative Foodgrain Output Levels for 1979/80 and 1980/81****(In Millions of Long Tons)**

<u>Crop</u>	<u>1979/80*</u>	<u>1980/81</u>	<u>Change</u>	
			<u>Tons</u>	<u>%</u>
All Rice	12.53	14.20**	1.67	13
Aus	2.80	3.60*	0.80	29
Aman	7.30	8.00**	0.70	10
Boro	2.43	2.60**	0.17	7
Wheat	0.81	1.20**	0.39	48
All Grains	13.34	15.40**	2.06	16

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\* Bangladesh Bureau of Statistics, Agriculture Wing

\*\* Estimates based on field observations and discussions with BDG officials.

### The 1980/81 Boro Rice Crop

A further small increase of about 0.2 million tons of boro rice is projected for the 1980/81 season. While this is only a modest 7 percent increase over last year, it represents a full recovery to the 2.6 million tons and put level that prevailed before the period of adverse weather. More important, this recovery of boro rice output has resulted largely <sup>from</sup> increases in yields, as acreage planted to boro has remained nearly constant. (See Table A-1). It is on expanded acreage under irrigated boro paddy, however, that the BDG is basing much of its long-run program for achieving foodgrain self-sufficiency. Further improvements in yields as well as expanded acreage will be required.

Acreage. We are forecasting no overall increase in boro acreage for 1980/81. It may well be that boro acreage will be down slightly from last year. This we attribute to the relatively high costs of boro cultivation, particularly as a result of: (a) recent price increases in fertilizer; (b) rising costs of fuel for irrigation pumps; (c) higher irrigation pump rental rates; and (d) a new government policy to sell pumps, mainly shallow tubewells, to new irrigation schemes. Moreover, a good 1980/81 aman crop has reduced the need of many farmers to produce a costly boro crop to meet their foodgrain needs.

One difficulty with the government's new program to sell irrigation pumps is that few farmers have the <sup>needed</sup> cash and there is not yet an effective credit mechanism in place to finance pump purchase. Table A-7 shows that shallow tubewell pump distribution as of January 31, 1981 was far below 1980/81 targets (22 percent) and 1979/80 actual performance (57 percent). The government must move quickly if all pumps are to be in place to irrigate boro paddy, the transplanting of which is nearing completion.

Yields. Early indications of boro yield performance are mixed. We have already referred to potential problems in fielding irrigation pumps required for most boro cultivation. Moreover, while July-December 1980 fertilizer sales were up slightly by 3 percent compared to the same period one year earlier, January sales which are used almost exclusively on boro, have been running [REDACTED] behind last year for several of the important boro districts (See Table A-3). On the positive side widespread rains in January and early February plus higher than average soil moisture are expected to help tillering\* and establishment of the transplanted boro crop. We are hopeful, therefore, for a modest boro yield increase to boost boro production to 2.6 million tons in 1980/81.

#### The 1980/81 Wheat Crop

Wheat production in 1980/81 will definitely continue to increase in response to the government's continued efforts to establish it as a widely cultivated foodgrain crop particularly in rainfed areas. Under its wheat program the BDG set very ambitious targets of 4.0 million acres and 3.0 million tons for 1980/81. More realistic assessments predict 1.5 million acres of wheat will be planted and 1.2 million tons produced. This still represents a 48 percent increase in wheat acreage and production over the 1979/80 record crop year.

Acreage. Increased cultivation of wheat on previously fallow rainfed land is responsible for the 48 percent increase in wheat acreage this year. Favorable growing conditions have motivated this increased use of fallow land. As reported earlier, higher soil moisture resulting

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\* Tillering is the process of putting out stalks, each with its own grain panicles from the seedling. The more tillers or stalks the better the yield. For good tillering water is needed about six weeks after broadcasting grain or shortly after transplanting seedlings.

from uniform monsoon rains last year plus occasional rainfall during the November/December planting period, when few rains are normally reported, have encouraged more extensive wheat cultivation.

Costs of cultivating wheat have increased as a result of higher fertilizer prices and, in irrigated areas, due to higher pump rental and fuel costs. However, wheat prices have remained fairly stable despite the major expansion of wheat production registered last year. More important, a good aman crop has left many farmers with both enough rice reserves and cash income, to enable them to invest in wheat cultivation, particularly, in rainfed areas where risks may be somewhat higher, but cultivation costs are relatively low. An ambitious wheat extension program, particularly in the rainfed northwest area of the country has further stimulated an expansion of wheat acreage.

Expansion of wheat acreage beyond the 1.5 million acres forecast for this year, was hampered by competition with oilseeds, pulses and other winter (rabi) crops for land. Because many rabi crops had very good prices in 1979/80 they were preferred by some farmers over wheat this year. A late aman harvest which postponed the wheat planting season in some areas also kept wheat acreage from going higher. Observers believe that greater availability of draft animals accompanied by the adoption of minimum tillage practices will be needed to assure further wheat acreage expansion in the future. The lateness of seed arrival and distribution, which constrained expansion of wheat acreage in 1979/80, was probably less of a problem in 1980/81. In fact wheat seed sales were very low this year (See Table A-4) because many farmers used their own seed for wheat cultivation.

Wheat Yields. The same favorable agroclimatic conditions which stimulated more wheat acreage are also expected to contribute to slightly better wheat yields in 1980/81. Rainfall in November/December as well as residual soil moisture from a favorable monsoon have had a favorable effect on seed germination while rains in late January and early February are expected to improve tillering. Moreover, several of the major wheat growing areas, notably Dinajpur, Rangpur, Bogra and Pabna, registered fertilizer sales well above the previous year's levels during the wheat planting season. Some improvement in wheat yields can also be attributed to a strong extension effort this year. On balance, then we expect about a 5 percent improvement in wheat yields over last year.

The 1981/82 Aus Crop -- Early Prospects

The aus rice crop which follows wheat and boro, begins the new agricultural year, even though it is planted and harvested during the calendar year. Early estimates of the aus crop are important because they will provide an indicator of the country's capacity to get through the remainder of the calendar year without resort to imports. With good wheat and boro crops expected and unseasonably large public and private stock levels on hand, there is the possibility that a good aus crop could carry the country through to the end of 1981 and the next aman crop.

The very favorable 3.60 million ton output of aus rice last year was due to recovery of yields and acreage under cultivation resulting from favorable weather and aus/jute prices. It would be very optimistic to expect these favorable conditions to prevail again this year. After two years of declining jute acreage and production, the BDG is again seeking to expand output of their important export crop. As a result, an increased jute acreage can be expected, to a small degree, at the

expense of acreage under aus rice. We forecast that aus acreage may be down by 0.2 to 0.6 million acres with a resulting decline in aus production of 0.1 to 0.3 million tons of aus rice. It is unlikely that aus yields could be increased enough to compensate for the expected decline in aus acreage. The net result, is that domestic foodgrain production during calendar year 1981 will probably be about 15.1 - 15.3 million tons, or slightly lower than the 15.4 million tons forecasted for the 1980/81 agricultural year.

**Table A-1: Comparative Foodgrain Acreage and Production in Bangladesh**

(Area in Million Acres, Production in Million Tons and Yields in <sup>Maunds</sup> ~~Tons~~/acre)

<u>Crop</u>	1978/79*			1979/80*			1980/81		
	Area	Production	Yields	Area	Production	Yields	Area	Production	Yields
All Rice	24.98	12.63	-	25.10	12.53	-	25.99**	14.20**	-
Aus	7.99	3.28	11.19	7.50	2.80	10.18	8.20*	3.60*	11.95
Aman	14.34	7.42	14.09	14.76	7.30	13.47	14.95**	8.00**	14.56
Boro	2.65	1.93	19.82	2.84	2.43	23.27	2.84**	2.60**	24.9
Wheat	0.65	0.48	20.23	1.07	0.81	20.59	1.50**	1.20**	21.78
Total	25.63	13.11	-	26.17	13.34	-	27.49**	15.40**	-

Source: \* Bangladesh Bureau of Statistics, Agriculture Wing.

\*\* Estimates based on field observations and discussions with BDC officials.

**Table A-2: Comparative Fertilizer Sales - July/December 1979 & 1980**

(In Tons)

<u>District</u>	<u>July - December</u>		<u>% Change in Sales Over 1979/80</u>
	<u>1979/80</u>	<u>1980/81</u>	
Dacca	38748	47263	(+) 22
Kishoreganj	14760	23624	(+) 60
Mymensingh	23017	23069	-
Tangail	11832	15643	(+) 32
Faridpur	6505	4744	(-) 27
Chittagong	28986	25308	(-) 13
Chittagong Hill Tracts	1310	2105	(+) 61
Noakhali	18154	17019	(-) 6
Comilla	70317	66228	(-) 6
Sylhet	10273	8832	(-) 14
Rajshahi	28083	30304	(+) 8
Dinajpur	26932	28078	(+) 4
Rangpur	22885	31518	(+) 38
Bogra	29581	37998	(+) 28
Pabna	18133	20920	(+) 15
Khulna	5831	7915	(+) 35
Barisal	8000	8441	(+) 6
Patuakhali	3016	2109	(-) 30
Jessore	20957	20828	(-) 1
Kushtia	25814	25373	(-) 2
Bangladesh	413134	447319	(+) 8

Source: BADC

Table A-3: Comparative Fertilizer Sales - January 1980 and 1981

(In Tons)

<u>District</u>	<u>January</u>		<u>% Change in Sales over January 1980</u>
	<u>1980</u>	<u>1981</u>	
Chittagong	8216	6157	(-) 25
Comilla	18136	12911	(-) 40
Chittagong Hill Tracts	391	443	(+) 13
Noakhali	3334	2065	(-) 38
Sylhet	3727	2835	(-) 31
Dacca	8632	6956	(-) 24
Faridpur	3423	1096	(-) 212
Jamalpur	-*	2508	-
Kishoreganj	8092	6449	(-) 25
Mymensingh	3759*	1318	(-) 185
Tangail	3785	3508	(-) 7
Barisal	2074	1679	(-) 23
Jessore	2966	2570	(-) 13
Khulna	1257	660	(+) 13
Kushtia	2656	2483	(-) 6
Patuakhali	294	95	(-) 209
Bogra	4750	4929	(+) 4
Dinajpur	2903	2373	(-) 20
Pabna	2758	2510	(-) 9
Rajshahi	5960	6247	(+) 5
Rangpur	4960	6202	(+) 25
Bangladesh	92073	75994	(-) 17

\* Jamalpur figure is included in Mymensingh

Source: BADC

**Table A-4: Comparative Wheat Seed Sale -- 1979/80 & 1980/81**

(In Maunds)

<u>District</u>	<u>Seed Sold In 1979/80</u>	<u>Seed Sold In 1980/81</u>	<u>% Change in Sales Over 1979/80</u>
Dacca	18,102	13,682	(-) 24%
Kishoreganj	10,218	13,202	(+) 29%
Mymensingh	23,566	11,407	(-) 52%
Jamalpur	-	15,150	-
Tangail	17,854	11,492	(-) 36%
Faridpur	13,708	22,791	(+) 66%
Chittagong	336	747	(+) 122%
Chittagong Hill Tracts	-	486	-
Noakhali	3,587	2,581	(-) 28%
Comilla	21,998	15,474	(-) 30%
Sylhet	3,995	3,140	(-) 21%
Rajshahi	32,759	44,232	(+) 35%
Dinajpur	43,967	75,545	(+) 72%
Rangpur	69,041	74,802	(+) 8%
Bogra	16,830	8,956	(-) 47%
Pabna	22,931	15,863	(-) 31%
Khulna	13,038	6,925	(-) 47%
Barisal	3,057	4,113	(+) 35%
Patuakhali	125	339	(+) 171%
Jessore	43,644	30,685	(-) 30%
Kushtia	33,764	16,667	(-) 27%
Bangladesh	381,520	388,279	(+) 2%

Source: BADC

**Table A-5: Comparison of Deep Tubewells in Operation**

(Number of DTWs)

<u>District</u>	<u>1979/80 Actual (A)</u>	<u>1980/81 Target (B)</u>	<u>1980/81<sup>1/</sup> Actual (C)</u>	<u>(B) as % of (A)</u>	<u>(C) as % of (A)</u>	<u>(C) as % of (B)</u>
Dinajpur	651	798	265	123	41	33
Rangpur	915	1,275	303	139	33	24
Bogra	865	921	383	106	44	42
Chittagong	57	63	-	111	-	-
Noakhali	74	100	17	135	23	17
Khulna	3	59	47	137	109	80
Jessore	476	554	422	116	89	76
Kushtia	347	421	421	121	121	100
Bangladesh	9,795	11,666	5,743	119	59	49

1/ As of January 31, 1981

Source: BADC

**Table A-6: Comparison of Low-Lift Pumps Fielded**

(Number of LLPs)

<u>District</u>	<u>1979/80 Actual (A)</u>	<u>1980/81 Target (B)</u>	<u>1980/81<sup>1/</sup> Actual (C)</u>	<u>(B) as % of (A)</u>	<u>(C) as % of (A)</u>	<u>(C) as % of (B)</u>
Dinajpur	342	400	108	117	32	27
Rangpur	1,045	1,400	449	134	43	32
Bogra	643	700	257	109	40	37
Chittagong	3,771	4,300	1,741	114	46	40
Noakhali	950	1,000	613	105	65	61
Khulna	550	1,100	452	200	82	41
Jessore	991	1,200	599	121	60	50
Kushtia	684	900	617	132	90	69
Bangladesh	38,594	42,000	22,597	109	59	54

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<sup>1/</sup> As of January 31, 1981

Source: BADC

**Table A-7: Comparison of Shallow Tubewells Sold**

(Number of STWs)

<u>District</u>	<u>1979/80 Actual (A)</u>	<u>1980/81 Target (B)</u>	<u>1980/81<sup>1/</sup> Actual (C)</u>	<u>(B) as % of (A)</u>	<u>(C) as % of (A)</u>	<u>(C) as % of (B)</u>
Dinajpur	425	2,300	174	541	41	8
Rangpur	471	3,600	287	764	61	8
Bogra	1,985	3,700	800	186	40	22
Chittagong	195	500	114	256	58	23
Noakhali	97	100	14	103	14	14
Khulna	345	700	134	203	39	19
Jessore	665	1,000	258	150	39	26
Kushtia	1,331	900	48	68	4	5
Bangladesh	11,379	30,000	6,464	264	57	22

<sup>1/</sup> As of January 31, 1981

Source: BADC