

CHAPTER 7

AGRICULTURE

In FY 2005-06, the combined contribution of all sub-sectors of agriculture (crop, livestock, forestry and fisheries) to GDP is 21.77 percent. Of this, the contribution of fisheries sector is 4.86 percent (Table 7.1). The crop sub-sector alone is projected to contribute 12.19 percent to GDP. Of the total labour force in Bangladesh, 51.7 percent are engaged in agriculture (BBS Labour Force Survey, 2002-2003). The contribution of agricultural products (including raw jute, jute goods and tea) to the total exports of the country is 6.27 percent (FY2005-06).

In FY 2004-05, while GDP posted a growth of 5.96 percent, the agriculture sector grew by 1.80 percent (Base Year 1995-96=100). Of this, the growth of crop sub-sector was 0.15 percent; livestock sub-sector 7.23 percent and forestry sub-sector 5.09 percent. The growth of the fisheries sector was 3.65 percent in that fiscal year. According to provisional estimates, in FY 2005-06 the growth of agriculture and fisheries sectors would be 4.67 and 3.89 percent respectively. The table below shows the share of agriculture and fisheries sector during FY 1996-97 to 2005-06.

Table 7.1: Share of Agriculture and Fisheries in GDP
(Base year 1995-96)

Sector/ Sub-sector	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	(In percent)	
									04-05	05-06 (Prov)
Agriculture	20.39	19.67	19.35	19.49	19.51	18.58	18.22	17.97	17.27	16.91
Crop	15.21 (74.57)	14.59 (74.15)	14.33 (74.06)	14.59 (74.87)	14.70 (75.37)	13.75 (74.0)	13.43 (73.69)	13.23 (73.63)	12.51 (72.40)	12.19 (72.09)
Livestock	3.27 (16.06)	3.19 (16.22)	3.12 (16.13)	3.02 (15.50)	2.95 (15.10)	2.96 (15.9)	2.93 (16.09)	2.91 (16.19)	2.95 (17.07)	2.93 (17.33)
Forestry	1.91 (9.37)	1.89 (9.63)	1.90 (9.81)	1.88 (9.63)	1.87 (9.53)	1.88 (10.1)	1.86 (10.22)	1.83 (10.18)	1.82 (10.53)	1.79 (10.58)
Fishery	5.48	5.67	5.93	6.09	5.51	5.40	5.25	5.11	5.00	4.86

Source: Bangladesh Bureau of Statistics.

Note: Figures in parentheses indicate share (%) of sub-sectors in agriculture

Food Grains Production

According to the final estimates, the volume of food grains production in 2004-05 was 261.33 lakh metric tons of which Aus accounted for 15 lakh metric ton, Aman 98.2 lakh metric ton, Boro 138.37 lakh metric tons and wheat 9.76 lakh metric tons (Table-7.2). Food grains production target for FY 2005-06 has been estimated at 314.39 lakh metric tons of which Aus accounts for 20.45 lakh metric tons, Aman 130.20 lakh metric tons, Boro 150.54 lakh metric tons and wheat 13.20 lakh metric ton. Meanwhile, Aus and Aman seasons are over. Actual output of Aus against target finally stood at 17.45 lakh metric tons while Aman recorded an output of 108 lakh metric tons. Two crops could not achieve the target due to huge damage caused by floods during last

year. The yield of wheat was 7.35 lakh metric tons in FY 2005-06. For the increased production of Boro (estimated 155.21 lakh metric tons) this year, the total foodgrains production will be around 288.11 lakh metric tons (Table-7.2).

Table 7.2: Foodgrain Production

(In lakh Metric ton)

	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
Aus	16.8	18.71	18.75	16.17	17.34	19.16	18.08	18.51	18.32	15	17.45
Aman	87.9	95.52	88.50	77.36	103.06	112.50	107.26	111.15	115.21	98.20	108.1
Boro	72.2	74.60	81.37	105.52	110.27	119.21	127.66	122.22	128.37	138.37	155.21*
Total rice	176.9	188.83	188.62	199.05	230.67	250.87	243.00	251.88	261.90	251.57	280.76**
Wheat	13.7	14.54	18.02	19.08	18.40	16.70	16.06	15.07	12.53	9.76	7.35
Maize	-	-	-	-	-	1.49	1.52	1.75	2.41	3.56	7.84*
Total (with Maize)	190.6	203.37	206.64	218.13	249.07	269.06	260.58	268.70	276.43	264.89	295.95**
Total (w/o Maize)	190.6	203.37	206.64	218.13	249.07	267.57	259.06	266.95	274.43	261.33	288.11**

Source: Bangladesh Bureau of Statistics.

*Estimate by DAE, ** probable.

Food Budget

In FY 2004-05 the government's internal procurement of food grains was 8.99 lakh metric tons which stood at 9.45 lakh metric tons in 2005-06. In FY 2005-06, Bangladesh received 1.94 lakh metric tons of foodgrains as food aid. During the current fiscal year, the quantity of food grains import by private sector was 22.65 lakh metric tons. The total foodgrains import by private sector in FY 2005-06 was 25.62 lakh metric tons. Food grain import during FY1972-73 to 2005-06 is shown at Appendix-28.

Agricultural Management, Subsidies and Assistance

To fulfill the food and nutritional demand of the growing population of the country and to ensure and sustain dependable food security, special emphasis has been given on building up a modern agricultural system based on appropriate technology. In this context, various reform measures have been taken which include ensuring the availability of agricultural inputs including fertilizer at the door-steps of the farmers, implementation of the agricultural extension policy, simplification of the disbursement procedures of agricultural credit, creating opportunities for investment in agriculture, modernisation of research methods for quality improvement of agro-products, the utilisation and extension of the integrated technologies derived from research.

During FY 2005-06 a total of Tk. 1200 crore has been provisioned for agriculture subsidy on TSP, DAP and MOP fertilizer including Urea as well as for providing other forms of assistance to agriculture sector. In addition, 30 percent cash incentive is being provided to agricultural exports. A programme for providing 25 percent subsidy on the import cost of TSP, DAP, MOP is being

implemented to encourage the use of balanced fertilizer for increased production. These supports are encouraging many people involved in agriculture sector.

Irrigation

Various development projects are implementing in different areas of the country for the development of minor irrigation, proper use of the surface water, extension of irrigation facilities in drought-prone areas and poverty reduction through command area development.

According to the data of national census on small irrigation, the total irrigated land in the country was 45.06 lakh hectares in FY 1999-2000. It increased to 52.61 lakh hectares in FY 2005-06 (Table 7.3).

Table 7.3: Area Under Irrigation

(Aea in Hectare)

Type of irrigation	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-05	2005-06
a. Surface water							
Major irrigation*	422656	469575	492666	571243	548347	605570	607947
LLP	645053	647300	761439	764300	766153	838377	803170
Traditional	224172	222000	182240	176280	175200	25500	28241
Sub-Total (a)	1291881	1338875	1436345	1411823	1489700	1469447	1439360
b. Ground water							
Deep Tube well (DTW)	522066	524330	581599	583692	583692	654189	700662
Light Tube Well (Surface/Deep/Very Deep Sot)	2645474	2673944	2747098	2756558	2776557	3169899	3120607
Others**	46902	86906	62518	58122	44397	-	-
Sub-Total (b)	3214442	3285180	3391215	3398372	3404646	3814088	3821269
Total (a+b)	4506323	4624055	4827560	4910195	4894346	5283535	5260629

Source: Department of Agricultural Extension, Ministry of Agriculture

*Estimated irrigated area under Water Development Board.

** Tredle pump, roar pump, artificial well, hand tube well etc with un-mechanized units.

Fertilizer

The use of fertilizer for agricultural production has been consistently increasing. In FY 1995-96, the total quantity of fertilizer use was 30.23 lakh metric ton which increased to 36.83 lakh metric ton in FY 2005-06. The use of urea fertilizer alone was the highest. In FY 1995-96, the use of urea was 20.46 lakh metric tons which increased to 24.51 lakh metric tons in FY 2005-06. The percentage increase in urea use in FY 2005-06 is nearly 20 percent compared to that of FY 1995-96 (Table -7.4).

The Market Monitoring and Information System (MMIS) of the Ministry of Agriculture has been regularly monitoring the fertilizer situation in the country. In order to ensure smooth supply to districts as per estimated demand of Urea, restriction has been imposed on inter-district movement of urea. There is no such restriction on the movement of super granules Urea.

Since 1995-96 Urea super/mega granules are being manufactured and marketed through private sector. Super/mega-granules are also being used in other rabi crops. Besides, use of different types of mixed fertilizer is being encouraged for balanced use of fertilizer. TSP complex in Chittagong has started production and marketing of NPKS fertilizer on experimental basis. Several factories in

the private sector have started producing and marketing NPKS. Import of NPKS is also being encouraged under private sector.

Table 7.4: Use of Chemical Fertilizer

('000' metric ton)

Type	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
Urea	2045.5	2141.0	1867.0	1902.0	2151.0	2121.0	2247.42	2239.0	2324.08	2523.39	2451.37
TSP	111.1	72.6	62.4	170.2	259.3	399.5	425.31	405.0	361.0	420.02	436.47
DAP	0	0	6.8	38.6	109.2	90.1	127.03	112.0	90.0	140.72	145.0
MP	155.9	219.3	193.5	210.8	239.5	139.8	222.26	250.0	240.0	260.38	290.67
SSP	596.9	525.3	473.3	362.4	237.2	138.6	127.13	130.0	148.0	170.93	130.39
NPKS	0	0	0	0	0	10.2	12.87	30.0	45.0	90.00	110.0
AS	8.7	11.7	9.7	12.4	26.0	13.0	20.19	10.0	9.0	5.59	6.32
Zinc	1.0	1.2	0.7	0.3	1.2	3.0	0.24	2.0	7.0	8.00	7.50
Gypsum	103.6	86.6	113.4	128.2	189.4	102.3	96.05	120.0	140.0	135.70	104.95
Total	3022.7	3057.7	2726.8	2824.9	3212.9	3017.5	3278.50	3298.0	3364.08	3754.75	3682.67

Source: Ministry of Agriculture

Agricultural Credit

Agricultural credit remains a significant input as agriculture in Bangladesh still remains at the subsistence level employing over fifty percent of labour force. During FY 2004-05, disbursement stood at Tk. 4956.78 crore against the target of Tk 5537.91 crore. The target of credit disbursement through Bangladesh Krishi Bank, Rajshahi Krishi Unnayan Bank, Nationalised Commercial Banks, Bangladesh Rural Development Board and Bangladesh Samobai Bank has been fixed at Tk.5542.21 crore for the fiscal year 2005-06. In FY 2005-06 Tk.5789.71 crore has disbursed which is 104.47 percent of the target. The overall situation relating to agricultural credit during FY 1995-96 to 2005-06 is presented in Table 7.5.

Table 7.5: Agricultural Credit Disbursement, Recovery and Outstanding Balance

(In crore Tk.)

Financial year	Target	Disbursement	Recovery	Balance
1995-96	2434.27	1635.81	1340.02	7769.07
1996-97	2394.22	1672.43	1646.38	8256.00
1997-98	2525.83	1814.53	1779.29	8515.04
1998-99	3270.01	3245.36	2039.65	9702.51
1999-00	3331.00	2851.29	2996.29	10648.90
2000-01	3265.92	3019.67	2877.87	11137.26
2001-02	3326.64	2954.91	3250.27	11355.58
2002-03	3560.53	3278.37	3516.31	11913.35
2003-04	4388.94	4048.41	3135.32	12705.95
2004-05	5537.91	4956.78	3171.15	14408.94
2005-06	5542.21	5789.71	4123.91	16182.44

Source: Bangladesh Bank.

Annual Development Programme (ADP) in Agriculture Sector

In the RADP of FY2005-06, a total of Tk. 631.70 crore was allocated for implementation of 75 projects. Of the total project cost, Tk. 521.14 crore was financed from GOB and the remains Tk. 110.56 crore was financed from project aid. In FY2005-06, a total of Tk.600.66 crore has been spent which is 95 percent of the total allocation.

Development programmes financed under non-development budget

Twenty-seven development programmes are being implemented under the non-development budget in FY2005-06. In the revised non-development budget, a total of Tk. 16113.85 crore has been allocated for the implementation of these programmes, out of which Tk. 11258.61 crore has been spent which was about 70 percent of the allocation.

Fisheries

Total production of fish in 2005-06, was projected at about 24.00 lakh metric tons in which the shares of inland open water body, fisheries and shrimp and marine fisheries were 8.74 lakh metric tons, 9.99 lakh metric tons and 5.27 lakh metric tons respectively. In 2004-05, the total fish production was 22.16 lakh metric tons and the earning amounted to Tk.2363.47 crore from the export of 54,141 metric tons of fish and fish products.

Out of total 52.31 lakh hectares of inland waters, 5.28 lakh hectares comprised closed water bodies which include 3.05 lakh hectares of ponds, 0.55 lakh hectares of baors and 2.18 lakh hectares of shrimp farm. Modern aquaculture technology is expanding to only 2.01 lakh hectares of closed inland water body and the remaining areas of closed water body produce fish without using any aquaculture technology. Though closed water bodies have high potentials the production is about 2.5 metric tons per hectare. It can be raised upto 4-5 metric tons per hectare if we can apply modern fish culture technologies. However, culture fisheries contribute in compensating the declined production from open water sources. During 2004-05, the aqua culture sector contributes about 29.80 percent of the country's total fish production. At the same time, due to successful implementation of some development projects, the production of fish increased significantly in the projects areas. Similarly from poly culture of fish and shrimp, 554 kg of shrimp per hectare was produced.

According to Survey of 2004, there are 112 fish hatcheries in the public sector and 756 hatcheries in the private sector. Altogether 868 hatcheries and farms are there in the country. About 520 crore of fingerlings and 345.23 metric tons of fish spawn were produced from private farm and hatcheries in 2004. Trend of fish production during 1997-98 to 2005-06 is presented in Table 7.6.

Table 7.6: Fish Production
(1997-98 to 2005-06)

(Lakh metric ton)										
Water Body	Area (lakh ha)	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06 (Projected)
Inland fisheries:										
Open water	10.32	1.57	1.51	1.54	1.50	1.44	1.38	1.37	1.40	1.82
River & estuaries										
Sunderbans	-	0.07	0.11	0.12	0.12	0.12	0.14	0.15	0.16	0.16
Beels	1.14	0.68	0.70	0.73	0.75	0.76	0.75	0.75	0.75	0.97
Kaptai Lake	0.69	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.09
Flood plain	28.33	3.78	4.10	4.25	4.45	4.49	4.75	4.98	6.21	5.70
Total open water	40.47	6.16	6.49	6.71	6.89	6.88	7.09	7.32	8.59	8.74
Closed water										
Ponds	2.42	4.84	4.99	5.61	6.16	6.85	7.52	7.96	7.57	8.70
Baor	0.05	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
Shrimp farm	1.41	0.88	0.90	0.92	0.93	0.98	1.01	1.15	1.21	1.24
Total closed water	3.88	5.75	5.93	6.57	7.13	7.87	8.59	9.15	8.82	9.99
Total inland	44.36	11.91	12.42	13.28	14.02	14.75	15.66	16.47	17.41	18.73
Marine Fisheries:										
Commercial	0.48 sq*	0.15	0.16	0.16	0.24	0.25	0.28	0.32	0.34	0.32
Artisanal	-	2.58	2.94	3.17	3.55	3.90	4.04	4.23	4.41	4.95
Total marine		2.73	3.10	3.33	3.79	4.15	4.32	4.55	4.75	5.27
Grand total		14.64	15.52	16.61	17.81	18.90	19.98	21.02	22.16	24.00

Source: Department of Fisheries, Ministry of Fisheries and Livestock. * Square Nautical Mile

Revised Annual Development Programme (RADP) in the fisheries sector

Seventeen development projects (13 investment and 4 technical assistance projects) were included in RADP of FY 2005-06 with an allocation of Tk. 106.23 crore (Tk 33.90 crore in local currency and Tk. 72.33 crore project aid) for this sector. Up to June'06, Tk. 102.63 crore has been spent (Tk.32.57 crore local currency and 69.96 crore foreign currency) implying 97 percent utilisation of total allocation.

Livestock

Livestock is now considered as one of the important sectors that generates employment opportunities in rural areas and contributes towards poverty reduction. The role of this sub-sector in earning foreign exchange through export of livestock products like leather, feather, wool, bone etc. is quite important. The contribution of this sub-sector to GDP in FY 2004-05 accounts for 2.95 percent and the growth rate of this sub-sector was about 7.23 percent. In tandem with mechanised cultivation, 75 percent of tilling is still done by bullocks. Nearly 25 percent of population is dependent on this sub-sector on full time basis and 50 percent on part time basis.

Involvements of private entrepreneurs and NGOs in this venture have created ample opportunities to run this sector commercially.

According to Ministry of Fisheries and Livestock, the number of cattle and poultry population in 1991-92 were 4.19 crore and 11.05 crore respectively. In 2005-06, this number increased to 4.65 crore and 23.30 crore respectively. Production of eggs (hen and duck) stood at 379 crore in 1999-2000. In 2005-06, this figure increased to 607 crore. Milk and meat output grew from 13.52 lakh metric tons and 4.60 lakh metric tons respectively in 1991-92 to 22.40 lakh metric tons and 11.60 metric tons in FY 2005-06. The Household Income and Expenditure Survey, 2000 reveal that per capita milk consumption rose to 45 ml. in FY 2005-06 which was 32.5 ml. in FY 1995-96.

Artificial Insemination

Artificial insemination (A.I) is an effective tool to upgrade the productivity and quality of indigenous cattle. Currently, the Department of Livestock Services (DLS) has extended its artificial insemination activities through 22 Districts A.I. Centres and 433 Upazila A.I. Centres. Semen of upgraded bulls are being collected and processed at Savar A.I. Laboratory and 22 District A.I. Centres and distributed as 'liquid semen' and 'frozen semen' through 1624 A.I. centres, sub-centres, and A.I points to cattle farmers. In 2001-02, the number of dairy cattle and crossbred calf was 1.18 million and 0.4 million respectively, which increased to 1.61 million and 0.52 million respectively in FY 2005-06. Through Multiple Ovulation and Embryo transfer (MOET) technique, 17 improved variety calves have been produced at Central Cattle Breeding Station in Savar, Dhaka.

Vaccination of Livestock and poultry to control disease

The government has been producing 12 types of livestock and poultry vaccines to prevent different diseases. About 214.22 million doses of vaccines have been produced and distributed in 2005-06. Contemplating the significance, the government has started production of PPR vaccine since January 2002. 21.09 million doses of vaccines have been produced and distributed upto FY 2005-06.

Goat Rearing: A Special Initiative

Black Bengal Goat is an important livestock resource in Bangladesh. Ministry of Fisheries and Livestock has undertaken a national programme namely **"Poverty Reduction Through Improvement of Goat and Increasing Its Production"**. Under this programme, in FY 2003-04 a total amount of Tk 15.00 crore has already been disbursed as micro credit to 26,400 selected beneficiaries of 400 upazilas of 64 districts for purchasing goats. Those beneficiaries have purchased 1,08,000 goats with the help of that micro credit. In 2004-05, Tk.75 million was distributed among 12980 selected beneficiaries of 440 upazilas of 64 districts and in FY 2005-06, Tk.37.50 million have been distributed among 6620 selected beneficiaries of 440 upazilas of 64 districts. Moreover Tk. 2.50 million and Tk. 1.5 million have been distributed as micro credit for

sheep and poultry development programme. There is a provision for the beneficiaries to get anthelmintics, vaccines and other inputs free of cost. In addition, training on vaccination, animal breeding, duck management, fodder cultivation are offered at field level.

Revised Annual Development Programme (RADP) in livestock sector

In FY 2005-06, a total of 13 projects have been implemented by DLS. About Tk.410.40 million have been allocated against those projects, among which 338.30 million was in local currency and 72.10 was project aid. So far Tk.354.75 million have spent which is 87 percent of total allocation

