CHAPTER 7

AGRICULTURE

[*Bangladesh is predominantly an agricultural country where agriculture sector plays a pivotal role in accelerating the economic growth. In order to ensure food security and to reduce poverty, the present government is committed to achieve self-sufficiency in food through increased crops production, sustainable growth of agriculture sector and employment opportunity as envisaged in National Strategy for Accelerated Poverty Reduction (NSAPR), National Agricultural Policy (NAP) and Millennium Develop Goals (MDGs). With a view to developing the agriculture sector, the government has taken a number of steps. These include, among others, expansion of small irrigation facilities, enhancing the production of domestic food grains, production of improved quality and high yielding varieties of seeds and their preservation and distribution, development and expansion of the varieties of crops adaptable for the weather and environment of a particular region and producing crops suitable for a particular kind of land as well as proper use of fertilizer. In FY 2010-11, the food grains production was about 360.65 lakh metric tonnes (MT) according to DAE estimation. In the same fiscal year, the total import of food grains through public and private sectors was 53.89 lakh MT (rice 15.93 lakh MT and wheat 37.96 lakh MT), the Achievement of seeds distribution by BADC was 1,30,937 MT, the total quantity of fertilizer used was 38.17 lakh MT and the irrigated area was 74.49 lakh hectare. In addition, an amount of Tk.12617.40 crore was targeted to be disbursed as agricultural credit against which Tk.12184.32 crore was disbursed till June 2011, which was 96.57 percent of the set target. In the same fiscal year, an amount of Tk. 5000.00 crore was allocated in the revised budget to provide subsidy on fertilizer and for other agricultural inputs.****]***

Agriculture sector plays an important role in the overall economic development of Bangladesh and it is regarded as the lifeline of Bangladesh economy. It is also an important social sector concerned with issues like food and nutritional security, income generation, and poverty reduction. The contribution of agriculture sector in GDP stood at 20.29 percent in FY 2009-10. According to the provisional estimation of BBS, the overall contribution of the broad agriculture sector at constant price was 19.95 percent of GDP in FY 2010-11. Within the broad agriculture sector in FY 2010-11, the contribution of agriculture and forestry and fisheries were estimated at 15.52 percent and 4.43 percent respectively while the contribution of the three sub-sectors namely crops and vegetables, livestock and forestry were 11.24 percent, 2.57 percent and 1.71 percent respectively. Though the direct contribution of agriculture sector has decreased slightly, its indirect contribution to the overall growth of GDP is significant. The growth of broad service sector, particularly the growth of wholesale and retail trade, hotel and restaurants, transport and communication sector was strongly supported by the agriculture sector. Besides, about 43.6 percent of the total labour forces of the country are engaged in agriculture sector (MES, 2009, BBS). In FY 2010-11, Bangladesh earned US$ 1316 million by exporting agricultural products which was 5.74 percent of total export earning (US$ 22924 million). In addition to the exports of main agricultural commodities such as, raw jute, jute goods, tea, frozen foods, the Government has taken steps to increase exports of non-traditional agricultural commodities.

Management of Agriculture

The management of agriculture sector broadly aims at creating an enabling environment for sustainable growth of agriculture sector for reducing poverty and ensuring food security through increased crop production and employment opportunity as envisaged in National Strategy for Accelerated Poverty Reduction (NSAPR), National Agricultural Policy (NAP) and Millennium Develop Goals (MDGs). Implementation of National Agriculture Extension Policy, National Seed Policy, and Integrated Pest Management Policy are underway to ensure overall development of agriculture sector. Besides, the 'National Agriculture Policy' will be finalised very soon after making necessary amendments to the existing National Agriculture Policy 1999. In order to increase agricultural production, special emphasis has been laid on building up a modern agricultural system, invention of new technology and creating greater opportunity for agricultural research. The crucial achievement in the agricultural research is the successful decoding of genome sequencing of jute which has opened up a new vista for further invention of new high yielding species of jute which will be salinity- resistant and tolerant to drought, insects and diseases. To avail of this opportunity, the Government has taken up an initiative to establish a research outfit. Already the agro-scientists have successfully invented the species of rice which will be salinity-resistant and this research has been extended to invent species of rice which will be tolerant to drought and flood. Furthermore, steps have been taken to increase subsidy on inputs to agriculture, ensure increased availability of agriculture inputs and irrigation facility as well as fair price of crops and agro-products to increase agricultural productivity. Against the backdrop of global recession coupled with acute shortage of food, emphasis has been given on investment in the areas of expansion of irrigation facility in various regions of the country, removal of water logging, drainage system in low lying areas (*haors*), production and supply of high quality and high yielding seeds, integrated pests management, mechanization of agriculture, agricultural extension, agricultural marketing, agricultural credit, women's participation in agriculture sector, agricultural education and training. Already government has taken an initiative to introduce an 'Agricultural Insurance' scheme to provide the small and medium farmers with crop price support in the event of crop failure due to natural disaster. An 'Endowment Fund' has been established to increase productivity through diversification of crops. Against the backdrop of global recession, a decision has been taken to increase export assistance for jute products from the current level of 7.5 percent to 10 percent and for leather and leather products from current level of 15 percent to 17.50 percent under a stimulus package. Moreover, export assistance for potatoes, eggs, chicken, 100 percent halal meat, agricultural products (vegetables, fruits etc.) and processed agro-products will also continue.

Food Grains Production

According to the BBS final estimate, the volume of food grains production in FY 2009-10 was 341.13 lakh MT in which *Aus* accounted for 17.09 lakh MT, *Aman* 122.07 lakh MT, *Boro* 183.41 lakh MT and wheat 9.69 lakh MT and maize 8.87 lakh MT. In the FY 2010-11, the food grains production was about 360.65 lakh MT according to DAE estimation in which *Aus* 21.33 lakh MT, *Aman* 127.91 lakh MT, *Boro* 186.17 lakh MT and wheat 9.72 lakh MT and maize 15.52 lakh MT. The government took various steps

to provide agro-inputs assistance, which include reduction of price of non-urea fertilizers (TSP, MOP, DAP etc.) and cash incentive for diesel. Introduction of non-urea fertilizer ensured use of balanced fertilizers by the farmers. In FY 2009-10, the Government has distributed agro-inputs assistance cards among 1 crore 82 lakh farmer families throughout the country. In addition, an amount of Tk 750 crore has been provided among 92 lakh boro-farmers across the country to help them purchase diesel in the boro-season by these cards of the same fiscal year. The favorable impacts of those steps in turn contributed to the increased yield of *Boro.* Table 7.1 presents the food grains production status from FY 2003-04 to FY 2010-11:

Table 7.1: Food Grains Production

(In Lakh MT)

Food grains	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
Aus	18.32	15.00	17.45	15.12	15.07	18.95	17.09	21.33
Aman	115.21	98.20	108.10	108.41	96.62	116.13	133.07	127.91
Boro	128.37	138.37	139.75	149.65	177.62	178.09	183.41	186.17
Total	**261.90**	**251.57**	**265.53**	**273.18**	**289.31**	**313.17**	**322..57**	**335.41**
Rice	12.53	9.76	7.35	7.25	8.44	8.44	9.69	9.72
Wheat	2.41	3.56	5.22	8.99	13.46	7.30	8.87	15.52
Maize								
Total	**276.44**	**264.89**	**277.87**	**289.42**	**311.21**	**328.96**	**341.13**	**360.65**

Source: Bangladesh Bureau of Statistics (BBS). * DAE

Food Budget

Internal Procurement of Food Grains

In FY 2010-11, the total target of internal procurement was 16 lakh MT (rice 15 lakh MT and wheat 1 lakh MT), was against which as much as 4.62 lakh MT was procured. Government decided not to procure wheat from internal market to stabilize domestic market price.

Food Grains Import (Public sector)

In FY 2010-11, the food grains import in public sector was significant compared to the previous fiscal years. The total amount of import was 22.81 lakh MT of which rice import was 13.03 lakh MT (govt. Import 12.97 lakh MT and aid 0.06 lakh MT) and wheat 9.78 lakh MT (govt. Import 8.20 lakh MT and aid 1.58 lakh MT).

Food Grains Import (Private sector)

In FY 2010-11, the private import of food grains was also significant. It stood at 31.08 lakh MT of which rice was 2.90 lakh MT and wheat 28.18 lakh MT.

Food Grains Import (Overall)

In FY 2010-11, the total import of food grains in public and private sector was 53.89 lakh MT (rice 15.93 lakh MT and wheat 37.96 lakh MT), whereas import in FY 2009-10 was 34.54 lakh MT (rice 0.91 lakh MT, wheat 33.62 lakh MT).

Public Food Distribution

Government provides support for food to the fixed-income government employees and low-income people through different channels of Public Food Distribution System (PFDS). In FY 2010-11, the total distribution of food grains through different channels was 22.92 lakh MT. The major portion of which (rice 12.09 lakh MT and wheat 2.68 lakh MT), was distributed through the monitised channels such as Open Market Sales, Fair Price Cards, 4th Class Employee, Freedom Fighter, Garment Worker etc. And the rest of the quantity (about 8.15 lakh MT) was distributed through the non-monetised channels such as Food for Work Programme, VGD, VGF, TR, GR etc.

Seed Production and Distribution

Quality seed is the prime input to increased agricultural production. Bangladesh Agriculture Development Corporation (BADC) has been producing variety of seeds in the Seed Multiplication Farms (SM Farms) and contract grower zones. It produces quality cereal seeds through its 23 SM Farms and non-cereal seeds like jute, vegetables, potato, pulse and oil in 9 different farms. Besides, foundation seeds and quality seeds of rice, wheat, maize, jute, vegetables, spices, potato, pulse and oil seeds are also being produced through 75 contract growers' zones. Quality seeds are distributed by the BADC to the farmers after being processed in 28 cereal seed processing centres, 19 potato seed cold storages, 2 jute seed processing centres, 3 pulses and oil seed processing centres and 2 vegetable processing centres. In FY 2010-11, BADC executed 9 projects and 9 programmes under crop sector.

Taking into account the demand for quality seeds in Bangladesh, BADC set a target in FY 2010-11 to produce 1,43,190 MT seeds (90950 MT paddy seeds, 27000 MT wheat seeds, 500 MT maize seeds, 20000 MT potato seeds, 1440 MT jute seeds, 1225 MT pulse seeds, 1275 MT oil seeds, 100 MT vegetable seeds and 700 MT spices seeds), against which 1,43,190 MT of seeds were actually produced. In the same fiscal year, the target of seeds distribution was 1,43,190 MT, against which 1,30,937 MT of seeds were actually distributed. Achievement of production and distribution of seeds through BADC's own farms and contract growers for FY 2009-10 and the production and distribution of seeds for FY 2010-11 are shown in Table 7.2:

Table 7.2: Seed Production and Distribution through Seed Multiplication Farms and Contract Grower Zones

(Million metric tonne)

Name of Seed	Actual Achieve in FY 2009-10		Production in FY 2010-11		Distribution in FY 2010-11	
	production	Distribution	Target	Achievement	Target	Achievement
Total Seed Paddy	84,247	62,944	90,950	90,893	90.950	80,204
Wheat Seed	26,000	23,429	27,000	27,303	27,000	27,069
Maize Seed	191	40	500	295	500	131
Potato Seed	18,000	13,987	20,000	20,341	20,000	18,899
Jute Seed	1,263	1,230	1,440	1,460	1,440	1,601
Pulse seed	1,014	668	1,225	1,426	1,225	1,208
Oil Seed	1,188	727	1,275	1,092	1,275	1,006
Vegetable Seed	102	86	100	120	100	102
Spices Seed	632	461	700	167	700	717
Total	**1,32,637**	**1,03,572**	**1,43,190**	**1,43,097**	**1,43,190**	**1,30,937**

Source: Bangladesh Agricultural Development Corporation (BADC), M/O. Agriculture.

Fertilizer

Fertilizer is one of the critical inputs required for increasing crop production. The expansion of modern agricultural farming practices together with intensified cultivation has led to an increasing demand for fertilizers. It is, therefore, necessary to ensure timely supply of fertilizers to meet the growing demand. However, there is an overriding concern that the fertility of soil has been diminishing due to continuous use of fertilizers. To address this concern, Government has taken steps to produce crops suitable for a particular kind of land with the help of soil survey that facilitates analysis of soil fertility, identification of land resources and assessment of land fertility. A programme has already been undertaken to use *'Guti'* (granular) urea and leaf colour chart to introduce austerity in the use of urea. Up to 30 percent of urea can be saved by using '*Guti'* urea and it increases crop production by 15 percent. On the other hand, the use of leaf colour chart helps determine the appropriate time and quantity required for use of urea fertilizer. Moreover, a pilot programme has been taken up in 30 upazilas to introduce use of urea by analysing the soil fertility digitally. The process of introducing similar programmes in further 120 upazilas is underway.

In FY 2009-10, the total quantity of fertilizer used was 31.34 lakh MT which increased to 38.17 lakh MT in FY 2010-11. The use of urea fertilizer alone was 25.53 lakh MT which is the highest so far. The super/ mega-granules *(guti* urea) are mostly used in paddy cultivation and also being used in other *rabi* crops. Besides, use of different types of mixed fertilizer is being encouraged for balanced use of fertilizer. A number of private organisations are producing and marketing mixed Nitrogen, Phosphorus, Potassium, Sulpher (NPKS) fertilizers of different grades. Importation of nutrition- rich fertilizer i.e. TSP, DAP and MOP and their use by farmers are also being encouraged. In order to encourage balanced use of fertilizer

to augment production, subsidy on import cost of TSP, DAP and MOP has been continuing since FY 2004-05. Furthermore, maintaining quality, preventing adulteration of fertilizer and its production/ import are being handled strictly in accordance with the 'Fertilizer (Management) Act, 2006'. The year wise use of fertilizer since FY 2004-05 is shown in Table 7.3:

Table 7.3: Use of Chemical Fertilizer

('000' metric tonne)

Type of Fertilizers	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Urea	2523.39	2451.37	2515.00	2685.00	2400.00	2300.00	2553.00
TSP	420.02	436.47	340.00	380.00	200.00	300.00	435.00
DAP	140.72	145.00	115.00	240.00	50.00	90.00	242.00
MOP	260.38	290.67	230.00	380.00	150.00	210.00	365.00
SSP	170.93	130.39	122.00	100.00	25.00	0.00	0.00
NPKS	90.00	110.00	125.00	100.00	50.00	102.00	72.00
AS	5.59	6.32	6.700	0.00	0.00	0.00	0.00
Zinc	8.00	7.50	26.00	45.00	30.00	32.00	38.00
Gypsum	135.70	104.95	72.00	160.00	100.00	100.00	105.00
Total	**3754.73**	**3682.67**	**3551.70**	**4090.00**	**3005.00**	**3134.00**	**3817.00**

Source: Department of Agriculture Extension (DAE).

Irrigation

Irrigation is considered as one of the most essential inputs for increased crop production. Efforts have been continuing to ensure the use of underground and surface water in an integrated and planned manner to increase cropping intensity, diversification and yield while maintaining environmental balance. In parallel, a number of projects are being implemented in different regions of Bangladesh to motivate farmers for efficient water use management. In FY 2008-09, different demonstrations were carried out in b*oro* season on AWD (Alternate Wetting and Drying) which received better responses from the farmer. Area under irrigation is expanding gradually. In FY 2004-05, it was 53.65 lakh hectares, which was scaled up to 56.90 lakh hectares in FY 2009-2010 and in FY 2010-11 the irrigated area was expanded to 74.49 lakh hectares.

Bangladesh Agricultural Development Corporation (BADC) provided irrigation facilities to 4.75 lakh hectares of land in FY 2005-06, 4.88 lakh hectares of land in FY 2006-07 and 4.95 lakh hectares of land in FY 2007-08 and 5 lakh hectares of land in FY 2008-09 through deep tube wells, shallow tube wells, floating pumps and low lift pumps as well as re-excavation of canals and construction of sluice gates and water control structures under different irrigation and area development projects. BADC has planned to provide irrigation facilities to 5.35 lakh hectares of land in FY 2010-11 and 5.55 lakh hectares of land in FY 2011-12. The irrigated land area from FY 2004-05 to FY 2010-11 is shown in Table 7.4:

Table 7.4: Area under Irrigation

(Area in lakh Hectare)

Irrigation method	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
a) Surface							
Major irrigation	6.06	7.85	6.19	6.37	5.75	10.41	10.11
LLP	8.38	8.03	8.10	10.45	11.57	8.95	11.37
Indigenous method	1.07	0.00	1.37	0.00	0.44	1.58	2.30
Sub-total-a	15.51	15.88	15.66	16.82	17.75	20.54	23.78
b) Underground							
Deep tube well	6.54	7.01	7.25	7.55	7.90	6.60	8.43
Shallow tube well (surface/deep/very deep)	31.60	31.21	31.96	33.70	33.72	29.31	42.28
Others	0.00	0.00	0.14	0.00	0.15	0.05	0
Sub-total-b:	38.14	38.21	39.36	41.25	41.77	35.96	50.71
Total (a+b):	**53.65**	**54.10**	**55.01**	**58.07**	**59.54**	**56.90**	**74.49**

Source: Department of Agricultural Extension (DAE), Ministry of Agriculture.

BADC has also planned to implement 36 of Minor Irrigation Development Programmes (Karmasuchi) in the whole area of the country to increase crop production area using surface water rapidly in certain areas like inundated areas, *haor* and southern region of the country including the coastal areas. Under these programmes, a target has been fixed up to excavate and re-excavate 1446.91 km *khal* (canal), to construct 44.50 km ring dam (beri bandh) and 432.20 km *pucca* irrigation channel. Up to 30 June 2011, 1440.32 km *canal* have been excavated/re-excavated and 44.50 km ring dam and 426.90 km irrigation channel have been constructed. Once the programmes are completed, it will be possible to bring fellow lands under cultivation and to convert single cropped land into double cropped land and to expand irrigation facilities to an estimated area of about 1,48,052 hectares. As a result, near about 2,47,830 MT of additional food crops will be produced.

Fish Production

Fisheries sector has been playing a vital role in the socio-economic development of Bangladesh. The Government promised to raise the production of fish to meet the demand for animal protein as part of attaining food autarky. In order to meet this commitment, a number of projects and programmes have been undertaken to enhance protein supply through increased fish production. These include: Strengthening Community Based Aquaculture, Ensuring Access of Fishermen to the *khas Jalmahals*, Establishment of *Beel* Nursery, Release of Fish Fries in the open water, Extension of *Gher*, Pane and Cage Culture, Habitat Restoration through Re-excavation of Silted Rivers and Innovation of New Technologies through Research and Extension.

Total fish production in FY 2009-10 was 28.99 lakh MT, whereas this production was raised to 30.62 lakh MT in FY 2010-11. During the last few years, the production from open water and marine were also

satisfactory. Due to expansion of community based fish culture in the open water and conservation of *hilsha* fishery, the production raised up to around 57 percent in FY 2009-10 in comparison to FY 2003-04. Table-7.5 shows the trend of fish production from FY 2003-04 to FY 2010-11.

Table 7.5. Fish production trends in different resources

(In lakh metric tonne)

Sector	Area (Lakh hector)	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
1.Inland									
(a) Capture									
(i) River & Estuaries	8.54	1.37	1.40	1.38	1.37	1.37	1.69	1.35	1.45
(ii) Sundarban	1.78	0.15	0.16	0.16	0.18	0.18	0.20	0.18	0.22
(iii) Beel	1.14	0.75	0.75	0.78	0.75	0.78	0.93	0.64	0.82
(iv) Kaptai lake	0.69	0.07	0.07	0.07	0.08	0.08	0.09	0.07	0.09
(v) Flood plain	28.10	4.98	6.21	7.18	7.68	8.19	6.17	7.51	7.97
Sub-Total (Capture)	**40.25**	**7.32**	**8.59**	**9.57**	**10.06**	**10.60**	**9.08**	**9.75**	**10.55**
(b) Culture									
(i) Pond	3.71	7.96	7.57	7.60	8.12	8.66	10.27	12.98	12.20
(ii) Semi closed water	0.25	--	--	--	--	--	--	--	0.51
bodies	0.06	0.04	0.04	0.04	0.04	0.05	0.06	0.05	0.05
(iii) Baors	2.77	1.15	1.21	1.28	1.29	1.35	1.49	1.23	1.85
(iv)Shrimp/Prawn Farms									
Sub -Total (Culture)	**6.78**	**9.15**	**8.82**	**8.92**	**9.46**	**10.06**	**11.82**	**14.26**	**14.60**
Total (Inland)	**47.03**	**16.47**	**17.41**	**18.49**	**19.52**	**20.66**	**20.90**	**24.02**	**25.15**
2. Marine Fisheries	0.48 sq.								
(a) Industrial	nautical	0.32	0.34	0.34	0.35	0.34	0.48	0.45	0.42
(b) Artisanal	mile	4.23	4.41	4.46	4.52	4.63	5.63	4.52	5.05
Total (Marine)	**-**	**4.55**	**4.75**	**4.80**	**4.87**	**4.97**	**6.11**	**4.97**	**5.46**
Country Total	**-**	**21.02**	**22.16**	**23.29**	**24.40**	**25.63**	**27.01**	**28.99**	**30.62**

Source: Department of Fisheries, Ministry of Fisheries and Livestock.

Production of Fish Spawn and Fingerlings

Availability of high quality fish fingerlings is the basic requirement for increasing fish production. The production and collection of fry/fingerling from natural sources has declined due to climate changes and man-made hindrances such as construction of unplanned flood dam, irresponsible use of insecticides in the crop fields, pollution of water etc. During the last five years, Government took several steps for the restoration of the natural breeding habitats. Inbreeding is the major problem for fish seed production in the hatchery. To overcome this problem, Department of Fisheries (DoF) developed infrastructure facilities in 33 government farms and raised brood stock to collect fries from the natural stocks. These brood fishes are distributed to private hatchery owners at a concessional price. At present, 122 government hatcheries (Fish Seed Multiplication Farms) along with 862 private hatcheries are operational to meet the increasing demand of fingerlings. Furthermore, as part of government efforts, a total of 222 MT of fish fries has

been released in FY 2010-11. In addition, 137 MT of fish fries have been released in Padma, greater *hoar* areas of Jessore and Faridpur and Kaptai lake under various projects and programmes. This has helped raising per capita fish availability to 23.7 grams per day. The production statistics of fish spawn and fish fries both from public and private sectors are shown in Table 7.6:

Table 7.6: Production statistics of carp spawn/ fingerling from public and private hatcheries

Year	No. of hatcheries		Spawn (MT.)			No. of fry/ fingerlings (crore)		
	Public	Private	Public	Private	Total	Public	Private	Total
2004	112	756	4.80	345.23	350.03	1.84	520.00	521.84
2005	112	731	5.13	315.89	321.02	2.08	461.03	463.11
2006	112	764	4.82	407.83	412.65	1.24	428.28	429.52
2007	115	860	6.24	457.29	463.53	2.03	622.13	624.16
2008	119	754	7.04	416.95	423.99	2.76	549.03	551.76
2009	119	735	4.52	459.80	464.32	1.67	960.01	961.68
2010	122	862	5.59	482.04	487.63	2.11	983.87	988.09

Source: Department of Fisheries, Ministry of Fisheries and Livestock

Protection and Conservation Programme for Jatka

Hilsha accounts for about 12 percent of the country's total fish production. To ensure the target of *hilsha* production, the government adopted a coordinated programme to protect *Jatka* in 2003-04. Since 2007, *Jatka* Conservation Week is observed in various upazilas and districts as a national programme to protect *Jatka* and allow them to grow as *Hilsha*. The objective of this programme is to make all stakeholders aware of the importance of *Hilsha* fishery in our national economy. Government also has been executing a comprehensive programme for the protection of *hilsha* to ensure participation of all stakeholders including local public representatives, local administration, Coast Guards, Bangladesh Navy, DoF, fishers and mass people residing on the bank of the river-system.

During the ban period, the *Jatka/Hilsha* fishers of 59 Upazila under 10 districts were provided with food grains at the rate of 30 kg per household (164740 families and total 19768.60 MT food grains) for 4 months from February to May in 2009-10. Government also makes available financial incentives and trade materials at a cost of about Tk.5 crore to 14.746 thousand Jatka/Hilsha fishermen for alternative income generation (AIG) in FY 2009-10 for not catching *Jatka*. *Jatka/Hilsha* fishers were provided with alternative income generating activities like small business, rearing of poultry and livestock, operation of rickshaw, van, cart, fruit and vegetables business, running of grocery and tea stall, use of pump and sewing machine, net making etc. As a result, *Hilsha* production increased from 1.99 lakh MT.(2003-04) to 3.13 lakh MT in FY 2009-10 and the value of the produced Hilsa was about Tk 7825 crore. In FY 2010-11, 186264 *Jatka/Hilsha* fishers family of 85 upazila under 15 districts have taken food-grains about 14470.64 MT (20 kg per household) and around 6869 *Jatka/Hilsha* fisher families have received Tk/

517.10 lakh for alternative income sources and Tk. 65.00 lakh for training purpose. As a result, in FY 2010-11, *hilsha* production increased to 3.40 lakh MT, the value of which was about Tk 8500 crore.

Development of Shrimp Aquaculture

Shrimp is one of the major export items in Bangladesh. To meet up the increasing export demand of shrimp, shrimp farm area has been expanded from 64000 to 140000 hectares. As a result, shrimp farm production has increased from 0.68 lakh MT in FY 1995-96 to 1.56 lakh MT in FY 2009-10. Furthermore, in order to promote environment-friendly shrimp cultivation, a total of 22,175 shrimp farmers have been trained and 188 demonstration firms have been set up. As a part of enforcing quality control each stage, starting from production to consumption, as many as 1,80,000 production firms have been registered. However, different programmes and development projects are also in operation for the production and promotion of shrimp aquaculture in Bangladesh.

Export of Fish and Fisheries Products

Fisheries sector has been earning a huge foreign exchange by exporting frozen shrimp and other fish and fisheries products to EU, USA, UK, Japan, France, Hongkong, Singapore, Saudi Arab, Sudan and other countries. In order to increase fish production *beel* nursery activities and release of fingerlings in open water bodies have been undertaken. On the other hand, in order to ensure the quality of the fish and fish products, Hazard Analysis and Critical Control Point (HACCP) and Traceability System are being strengthened in the country to meet the requirements of European Union (EU) and USA.

In FYs 2008-09 and 2009-10, Bangladesh earned Tk. 3274 crore and Tk. 3408 crore by exporting 0.73 lakh MT and 0.78 lakh MT of fish and fish products respectively. This earning increased to Tk 4604 crore in FY 2010-11 by exporting 0.96 lakh MT of fish and fish products. Year wise export of fish and fisheries products with monetary value is shown in Table 7.7:

Table 7.7 Year wise export of fish and fisheries products with foreign exchange earning

Financial year	Quantity exported (lakh metric tonne)	Foreign exchange earnings (In crore Taka)
2005-06	0.69	3030
2006-07	0.74	3353
2007-08	0.75	3396
2008-09	0.73	3274
2009-10	0.78	3408
2010-11	0.96	4604

Source: Department of Fisheries, Ministry of Fisheries and Livestock

Amendment of Existing Laws and Formulation of New Laws

In order to implement '*Jal jar Jola tar*' policy (he who possesses the fishing net, possesses the water body) and to fulfill the Government's commitment, 'Fish Feed Act 2010' and 'Fish Hatchery Act 2010' have been passed by the National Parliament. The poor fishermen are now reaping the benefits of these measures. Besides, the finalization of 'Shrimp Policy' is underway. Furthermore, Public Awareness Programme is going on to make the mass people aware these laws. DoF with the help of other law enforcement agencies has been trying to protect fingerlings, brood fish, *Jatka* and to stop the use of *current-net.* These measures will ensure the development of fisheries sub-sector, environmental protection, production of quality fish and increased fish exports.

Livestock

Livestock plays also an important role in the national economy of Bangladesh. The present Government is committed to take necessary steps to achieve self sufficiency in meat, milk, egg, and chicken to meet the protein demand of the nation. To fulfill this commitment, the following activities have been undertaken for the development of livestock sector:

- Production and distribution of vaccine for poultry and livestock.
- Supply of duckling and chicks at a cheaper price.
- Artificial insemination extension programme by using both diluted and frozen semen for improved variety.
- Increased production of semen.
- Artificial foetus transfer technology.
- Prevention and control of Anthrax, Foot and Mouth Diseases and Avian Influenza.

The contribution of the livestock sub sector to GDP at constant prices was at 2.65 percent and at 2.57 percent (provisional) in FY 2009-10 and FY 2010-11 respectively. The growth of this sub-sector stood at 3.38 percent and 3.54 percent (provisional) in FY 2009-10 and FY 2010-11 respectively. Though the share of the livestock sub- sector in GDP is small, it contributes to meeting the daily protein requirements, cultivation, production and exports. According to the estimate of the Ministry of Fisheries and Livestock, the population of livestock and poultry was raised to 5.16 crore and 27.88 crore respectively in FY 2010-11. Table-7.8. shows the growth of the livestock and poultry population of the country over the past few years.

Table 7.8. Number of the Livestock and Poultry in Bangladesh.

(Number in Lakh)

Livestock/ Poultry	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Cattle	226.7	228.0	228.7	229.0	229.76	230.51	231.21
Buffalo	11.1	11.6	12.1	12.6	13.04	13.49	13.94
Goat	191.6	199.4	207.5	215.6	224.01	232.75	241.49
Sheep	24.7	25.7	26.8	27.8	28.77	29.77	30.02
Total livestock	**454.1**	**464.7**	**475.1**	**485.0**	**495.58**	**506.52**	**516.66**
Chicken	1836.5	1948.2	2068.9	2124.7	2213.94	2280.35	2346.86
Duck	372.8	381.7	390.8	398.4	412.34	426.77	441.20
Total Poultry	**2207.3**	**2329.9**	**2459.7**	**2523.1**	**2626.28**	**2707.12**	**2788.06**

Source: Department of Livestock Services, MoFL

The production of animal protein such as milk, meat (beef, mutton and chicken) and eggs have been increasing over the past several years. Table-7.9: summaries the production statistics of milk, meat and eggs from FY 2004-05 to FY 2010-11.

Table 7.9. Production of Milk, Meat and Eggs

Product	Unit	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Milk	Lakh tonnes	21.4	22.7	22.8	26.50	22.86	23.65	29.47
Meat	Lakh tonnes	10.6	11.3	10.4	10.40	10.84	12.64	19.86
Eggs	Lakh	56230	54220	53690	56532	46920	57424	60785

Source: Department of Livestock Services, MoFL

Artificial Insemination of Cattle

Artificial Insemination is an important and successful programme for livestock development. Semen is collected from the bulls reared in the Central Cattle Breeding Station at Savar, Dhaka and other 22 Districts Artificial Insemination (AI) Centers, and processed as diluted and frozen semen to run the Artificial Insemination Extension Programme. A total of 2262 sub-centers and points are in operation to run the Artificial Insemination Extension Programme by using both diluted and frozen semen. The number of inseminated cows stood at 24.42 lakh in FY 2010-11.

Vaccination of Livestock and Poultry to Control Disease

The Government has been producing 19 different types of livestock and poultry vaccines to immune livestock and poultry population from certain diseases. During FY 2010-11, a total of 22.12 crore doses of vaccines was produced. Treatment has given to 61.98 lakh cattle and 448.36 lakh poultry in FY 2010-11.

Laws and Policies relating to Livestock

To control diseases and to protect diseases of the livestock coming from abroad and to ensure public health a number of laws like 'Livestock Disease Act-2005', 'Fish and Cattle Feed Ordinance 2008', 'Animal and Animal Products Quarantine Act 2005' have been enacted. Besides, there is a policy called the "National Livestock Development Policy-2007'in place to guide the process of implementation of these laws. 'Fisheries and Livestock Feed Act-2010' has also been approved to protect quality of livestock feed.

Development of Infrastructure

Sixty-four District Veterinary Hospitasl and 464 Upazila Livestock Development Centers (ULDC) have been established for the expansion of modern veterinary services to the farmers. Technical supports are provided to poultry and dairy farms to test the quality of animal and poultry feeds, besides ensuring the modern veterinary services.

Avian Influenza/ Bird Flu

Outbreak of Avian Influenza/Bird Flu was first identified in March 2007. Since then this has been a threat to the livestock of Bangladesh. During FY 2010-11 a total of 60 commercial farms was infected and a total of 1,77,539 hens and 1,97,805 eggs was culled and properly disposed. A massive program has been taken up to address this menace. A total of Tk 16.91 crore was distributed among farmers as compensation from the starting year of this menace up to FY 2010-11. Besides, *Avian Influenza Preparedness and Response Project* supported by the World Bank and *Strengthening of Support Services for Combating Avian Influenza in Bangladesh project* funded by USAID are being implemented to control avian influenza in the country. Furthermore, a Digital SMS gateway system is working effectively to encode and decode avian influenza attack messages promptly.

Agricultural Credit

With a view to strengthening food security and improving the socio-economic condition of the country, agricultural credit program is being operated through the commercial and specialised banks. Since October 2008, participation in agricultural credit programme has been made mandatory for all scheduled banks operating in Bangladesh including the private and the foreign banks. Some new policies have been formulated recently to ensure easy access of the farmers to the agricultural credit (3 years revolving crop loan and credit for share-croppers). All these efforts aim at increasing the pace of agricultural credit programme at the marginal level. Besides, commercial and agricultural banks are operating to finance the agricultural sector and also to disburse micro-credit for poverty alleviation.

In FY 2010-11, a total of Tk.12617.40 crore was targeted to be disbursed as agricultural credit through four State owned Commercial Banks (SCBs), BRDB, Bangladesh Krishi Bank, Rajshahi Krishi Uunnyan Bank, Bangladesh Samabaya Bank Limited and the private and foreign banks. Against this targeted amount, Tk.12184.32 crore was disbursed up to June 2011, which was 96.57 percent of the set target and it was 9.60 percent higher than the previous year's (FY 2009-10) disbursement (Tk.11116.88 crores).

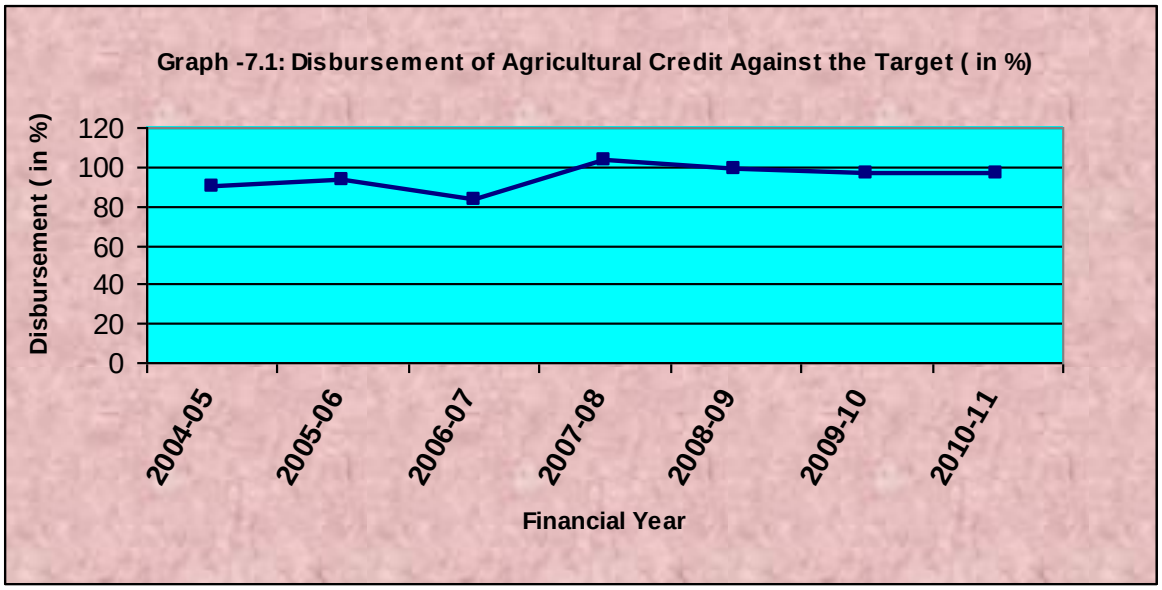
Table-7.10 shows a summary of agricultural credit disbursement and recovery position from FY 2004-05 to FY 2009-11 and Graph-7.1.shows the trend of disbursement of agricultural credit (in percent) against the target from FY 2004-05 to FY 2009-11

Table 7.10. Agricultural Credit Disbursement, Recovery and Outstanding Balance

(In Crore Taka.)

Fiscal Year	Target	Disbursement	Recovery	Balance
2004-05	5537.91	4956.78	3171.15	14039.84
2005-06	5892.21	5496.21	4164.35	15376.79
2006-07	6351.30	5292.51	4676.00	14582.56
2007-08	8308.55	8580.66	6003.70	17822.50
2008-09	9379.23	9284.46	8377.62	19598.15
2009-10	11512.30	11116.88	10112.75	22588.58
2010-11	12617.40	12184.32	12148.61	25492.13

Source: Bangladesh Bank.



Source: Bangladesh Bank.

Budget Allocation for Agriculture Sector

In order to ensure increased agricultural production, poverty reduction and food security, the Government was allocated Tk. 7745.46 crore (Tk. 6697.11 crore for non-development and Tk. 1048.35 crore for development) in the revised budget of FY 2010-11 for the Ministry of Agriculture. With a view to supporting the farmers, an amount of Tk. 5000.00 crore was allocated in the revised budget of FY 2010-11 to provide subsidy on fertilizer and for other agricultural inputs. Beside this, an allocation of Tk. 55.00 crore was made for agricultural rehabilitation.

In addition to the normal allocation in agriculture sector, the Government has taken initiatives to provide 30 percent cash incentives for exporting agricultural products. The Government is also allowing 20 percent rebate on electricity bills to the entrepreneurs of agro-based industries and has reduced the rate of interest from 8 percent to 4 percent for disbursement of loan for the production of pulse, oil-seeds and spices.

Development Activities in Agriculture Sector

(A) Annual Development Programme (ADP)

In the Revised Annual Development Programme (RADP) of FY 2010-11, there were 64 Development Projects in crop and irrigation sub- sector under the Ministry of Agriculture. Among them, 61 projects were investment projects while the remaining 3 were technical assistance projects. A total of TK. 1048.85 crore was been allocated for the implementation of these projects of which TK. 909.67 crore was financed by GoB (86.74 percent of total) and the remaining TK. 139.18 crore (13.26 percent of total) funded from project Aid. A total of TK. 1020.64 crore was spent during July 2010- June 2011 which is about 97 percent of the total revised allocation. It is to be noted that a total of Tk. 967.77 crore was allocated for the implementation of 76 development projects in crop and irrigation sub- sectors under the Ministry of Agriculture in the RADP of FY 2009-10.

(B) Programmes under Non- development Budget

In the revised budget of FY 2010-11, an amount of Tk. 277.91 crore was allocated for 94 approved programmes under the non-development budget for the Ministry of Agriculture. Up to June, 2011 an amount of Tk. 252.21 crore was utilized for 94 programmes in the revenue budget, which was 91 percent of the annual allocation for 94 programmes. During the corresponding period of the previous fiscal year (2009-10), a total of 66 programmes were under implementation and Tk. 323.21 crore was allocated for these programmes in the revised budget.

Budget in Fisheries and Livestock Sector

In the revised budget of FY 2010-11, a total of Tk.801.19 crore (Tk.493.88 crore from non-development budget and Tk.307.31 crore from development budget) was allocated for the Ministry of Fisheries and Livestock.

(A.1) ADP for Fisheries Sub-Sector

In the RADP of FY 2010-11, a total of Tk. 154.98 crore (GOB: Tk. 114.76 crore and Project Aid: Tk. 40.22 crore) has been allocated for 27 on going development projects (22 investment projects and 6 TA projects). Up to June 2011, an amount of Tk. 150.24 crore (GoB Tk 105.68. crore, Project Aid Tk. 44.56 crore) has been spent which is 97 percent of the allocation.

(A.2) ADP for Livestock Sub-sector

In the RADP of FY 2010-11, an amount of Tk.137.48 crore (GOB Tk 56.97 crore and Project Aid 80.51 crore) was allocated for 16 development projects (14 investment projects and 2 TA projects) under the livestock sub-sector. The total expenditure up to June 2011 stood Tk. 119.25 crore which is 87 percent of the total allocation.

(B) Programmes under Non- development Budget for MoFL

In the revised budget of FY 2010-11, an amount of Tk. 37.24 crore was allocated for 12 approved programmes under the non-development budget for the Ministry of Fisheries and Livestock (MoFL). Up to June, 2011 an amount of Tk. 34.64 crore was utilized for 12 programmes in the revenue budget, which was 93.02 percent of the annual allocation for 12 programmes. During the corresponding period of the previous fiscal year (2009-10), a total of 12 programmes was under implementation and an amount of Tk. 37.02 crore was allocated for these programmes in the revised budget.