

**Grant No. 37**  
**43- Ministry of Agriculture**  
**Medium Term Expenditure**

(Taka in Thousand)

	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-Development</b>	5688,00,00	6743,77,96	7286,58,35
<b>Development</b>	1054,12,00	905,22,04	1395,41,65
<b>Total</b>	6742,12,00	7649,00,00	8682,00,00

## 1. Mission Statement and Major Functions

### 1.1 Mission Statement

Build a profitable, sustainable and environment friendly agricultural system to ensure long-term food security of the people by increasing crop sector production and productivity through innovation and transfer of technology, increase efficiency of input management and assistance to agricultural programmes.

### 1.2 Major Functions

- (a) Agricultural research and education programmes;
- (b) Agricultural extension and training;
- (c) Production, ensure quality, certification, preservation and distribution of seed;
- (d) Soil surveys, examination of the quality of soil and recommendations;
- (e) Preservation and marketing of agricultural products;
- (f) Agricultural support, rehabilitation programmes and agricultural credit related Issues;
- (g) Agricultural inputs and innovation of machinery and equipment, procurement and management;
- (h) Irrigation programmes.

## 2. Medium Term Strategic Objectives and Key Activities

Medium Term Strategic Objectives	Key Activity	Implementing Departments/Agencies
1. Ensure food security through increasing food production and increase in crop sector productivity and profitability	• Development of high yielding varieties of rice, wheat and technology	<ul style="list-style-type: none"> <li>• Bangladesh Rice Research Institute</li> <li>• Bangladesh Institute of Nuclear Agriculture</li> <li>• Bangladesh Agriculture Research Institute</li> </ul>
	• Ensure supply of agricultural inputs at fair price	<ul style="list-style-type: none"> <li>• Department of Agriculture Extension</li> <li>• Bangladesh Agriculture</li> </ul>

Medium Term Strategic Objectives	Key Activity	Implementing Departments/Agencies
	<ul style="list-style-type: none"> <li>Encourage farmers to increase the use of balanced chemical fertiliser, farmyard manure and green fertiliser</li> </ul>	Development Corporation <ul style="list-style-type: none"> <li>Department of Agriculture Extension</li> <li>Bangladesh Agriculture Development Corporation</li> <li>Soil Resource Development Institute</li> </ul>
	<ul style="list-style-type: none"> <li>Provide training to extension workers and farmers</li> </ul>	<ul style="list-style-type: none"> <li>Department of Agricultural Extension</li> <li>Bangladesh Agriculture Development Corporation</li> <li>Bangladesh Agriculture Research Institute</li> <li>Barendra Multipurpose Development Authority</li> <li>Bangladesh Rice Research Institute</li> </ul>
	<ul style="list-style-type: none"> <li>Extension of high yielding varieties of paddy, wheat and production technology among farmers</li> </ul>	<ul style="list-style-type: none"> <li>Department of Agricultural Extension</li> <li>Bangladesh Agriculture Development Corporation</li> </ul>
	<ul style="list-style-type: none"> <li>Publicity and extension of agricultural information and technology through mass media</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture Information Services</li> </ul>
	2. Increase the production of high value and economic crops	<ul style="list-style-type: none"> <li>Innovation in high yielding varieties of different crops and technology including maize, pulse, oil seed, vegetables, fruits and spices and distribution among the farmers</li> </ul>
<ul style="list-style-type: none"> <li>Preparation of a special work plan and its implementation programme for increasing the production of high value crops including cereal type crops, pulse, oil, vegetables, fruits and spices by 7-25%</li> </ul>		<ul style="list-style-type: none"> <li>Bangladesh Agricultural Research Institute</li> <li>Bangladesh Agricultural Research Council</li> <li>Department of Agriculture Extension</li> <li>Bangladesh Agriculture Development Corporation</li> <li>Bangladesh Nuclear Agriculture Research Institute</li> </ul>
<ul style="list-style-type: none"> <li>Innovations in high yielding varieties of jute, "kenaf" and "mesta" and jute seed production technology and distribution among the farmers</li> </ul>		<ul style="list-style-type: none"> <li>Bangladesh Jute Research Institute.</li> <li>Bangladesh Nuclear Agriculture Research Institute</li> </ul>

Medium Term Strategic Objectives	Key Activity	Implementing Departments/Agencies
	<ul style="list-style-type: none"> <li>• Development of production technologies for high yielding varieties of sugarcane and other sweetening crops and plants and provide training to extension workers and farmer in order to increase sugarcane production</li> <li>• Innovation of HYV and production technology, supply of seeds, training and extension to increase cotton production</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Agriculture Development Corporation</li> <li>• Department of Agricultural Extension</li> <li>• Bangladesh Sugarcane Research Institute</li> <li>• Department of Agricultural Extension</li> <li>• Cotton Development Board</li> </ul>
3. Appropriate agricultural land resource base management, development and conservation	<ul style="list-style-type: none"> <li>• Popularise the use of organic fertiliser, green fertiliser and microbe fertiliser among the farmers and inclusion of bean varieties of crops in the crop pattern</li> <li>• Identification of soil and land resources through soil survey and classification of land and soil resources on the basis of their productivity</li> <li>• Innovation and transfer of problem free soil management technology</li> <li>• Extension of soil test facilities up to Upazila and Union levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Agricultural Extension</li> <li>• Agricultural Information Service</li> <li>• Bangladesh Nuclear Agricultural Institute.</li> <li>• Soil Resource Development Institute</li> <li>• Department of Agricultural Extension</li> <li>• Soil Resource Development Institute</li> </ul>
4. Agricultural Research Programme	<ul style="list-style-type: none"> <li>• Innovation and development of climate and environment friendly area based HYV and technology on the basis of farmers' demand</li> <li>• Short and long term training including higher education to agricultural scientists and workers</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Agriculture Research Council</li> <li>• Bangladesh Agriculture Research Institute</li> <li>• Bangladesh Sugarcane Research Institute</li> <li>• Bangladesh Rice Research Institute</li> <li>• Bangladesh Jute Research Institute</li> <li>• Bangladesh Nuclear Agriculture Research Institute.</li> <li>• Cotton Development Board</li> </ul>
5. Agricultural Extension	<ul style="list-style-type: none"> <li>• Target based agricultural extension and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Agricultural Extension</li> </ul>

Medium Term Strategic Objectives	Key Activity	Implementing Departments/Agencies
Programme	development and strengthening of extension programmes including training of the extension workers and farmers	<ul style="list-style-type: none"> <li>• Bangladesh Agriculture Development Corporation</li> </ul>
	<ul style="list-style-type: none"> <li>• Implementation of motivation programmes to develop modern food and nutrition habits</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Applied Nutrition and Human resources Development Board</li> </ul>
6. Efficient management of water resources to facilitate expansion of the irrigation programme	<ul style="list-style-type: none"> <li>• Enhancement of irrigation facilities and easy availability of irrigation equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Agriculture Development Corporation.</li> <li>• Barendra Multipurpose Development Authority</li> </ul>
	<ul style="list-style-type: none"> <li>• Arrangement of proper training for the farmers and farm workers to increase their skills in optimum use of water and efficient on-farm water management</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Agriculture Development Corporation</li> <li>• Barendra Multipurpose Development Authority</li> </ul>
	<ul style="list-style-type: none"> <li>• Increased use of surface water</li> </ul>	<ul style="list-style-type: none"> <li>• Barendra Multipurpose Development Authority</li> <li>• Bangladesh Agriculture Development Corporation</li> </ul>
7. Supply of quality seed and encourage the farmers to use it	<ul style="list-style-type: none"> <li>• Production and distribution of breeder, foundation and standard quality seed</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh Agriculture Development Corporation</li> <li>• Department of Agricultural Extension</li> <li>• Bangladesh Agricultural Research Institute</li> <li>• Bangladesh Rice Research Institute</li> <li>• Bangladesh Nuclear Agriculture Research Institute</li> <li>• Seed Certification Agency</li> </ul>
	<ul style="list-style-type: none"> <li>• Programme for the production of quality seeds at farmers' level</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Agricultural Extension</li> <li>• Bangladesh Agriculture Development Corporation</li> <li>• Barendra Multipurpose Development Authority</li> </ul>
	<ul style="list-style-type: none"> <li>• Ensure right quality of seed</li> </ul>	<ul style="list-style-type: none"> <li>• Seed Certification Agency</li> </ul>
	<ul style="list-style-type: none"> <li>• Encourage participation of the private sector in seed production and distribution</li> </ul>	<ul style="list-style-type: none"> <li>• Seed Wing, Ministry of Agriculture</li> <li>• Bangladesh Agriculture Development Corporation</li> <li>• Bangladesh Jute Research institute.</li> <li>• Cotton Development Board</li> <li>• Seed Certification Agency</li> </ul>

Medium Term Strategic Objectives	Key Activity	Implementing Departments/Agencies
	<ul style="list-style-type: none"> <li>Marketing and ginning of cotton seed</li> </ul>	<ul style="list-style-type: none"> <li>Cotton Development Board</li> </ul>
8. Development of agricultural marketing management	<ul style="list-style-type: none"> <li>Manage different information and publication programmes relating to agricultural marketing and development</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture Information Service</li> <li>Department of Agriculture Marketing</li> </ul>
	<ul style="list-style-type: none"> <li>Provide assistance to obtain fair price for agricultural commodities</li> <li>Development of existing markets and construction of new markets</li> </ul>	<ul style="list-style-type: none"> <li>Department of Agriculture Marketing</li> </ul>
	<ul style="list-style-type: none"> <li>Formation of Farmers Groups, Farmers Clubs, and Farmers Marketing Groups</li> </ul>	<ul style="list-style-type: none"> <li>Department of Agriculture Marketing</li> <li>Department of Agricultural Extension</li> </ul>
9. Encourage investment in agro-processing and agri-business development	<ul style="list-style-type: none"> <li>Provide assistance to the agricultural entrepreneurs in the area of technology and technical supports</li> </ul>	<ul style="list-style-type: none"> <li>Department of Agriculture Marketing</li> <li>Department of Agricultural Extension</li> </ul>
	<ul style="list-style-type: none"> <li>Provide assistance in the preparation of Business Plan to enhance skill and competition</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Agriculture</li> </ul>

### 3. Poverty and Gender Reporting

#### 3.1 Impact of Strategic Objectives on Poverty Reduction and Women's Advancement

##### 3.1.1. Ensure food security through increasing food production and increase in crop sector productivity and profitability

**Impact on Poverty Reduction:** Productivity in food crops will increase as a result of innovations in HYV paddy and wheat, technology and its distribution among the farmers, availability of agricultural inputs at a fair price, encouraging farmers to use balanced fertiliser and above all, providing training to the extension workers and farmers. These steps will have a positive impact on the income of 60% of people engaged in agriculture. This will contribute to the reduction of poverty.

**Impact on Women's Advancement:** About 30% of adult women from farming families (about 1.1crore) through out the country have direct/ indirect involvement in agricultural activities. Employment opportunities will be created for these women through income generating activities at the family level resulting from increased food crop production and also the opportunity of access to more nutritious food intake will be created for both women and children.

##### 3.1.2 Increase the production of high Value and economic Crops.

**Impact on Poverty Reduction:** It will be possible to increase the production of high value and economic crops through innovations in HYV and

production technology of different crops including maize, pulse, oilseed, vegetables, fruits and spices, jute, sugar cane and distribution among the farmers and training of the farm workers and farmers. Targeted beneficiaries of these activities are small and marginal farmers (30% to 60%) and also women farmers in specific cases. Scope has been created to increase the income of marginal farmers through their involvement in increasing cash crops (jute, sugar cane, cotton, betel leaves) production activities with micro-credit assistance.

**Impact on Women's Advancement.** Opportunities are being created for the involvement of women in high value crop production activities on a priority basis under agricultural programmes. About 50% of the participants in the NCDP Ges Agri-business Development Project are women's group and more than 50% of the credit beneficiaries are women sponsors. Income and employment opportunities will increase as a result of the participation of women in the production of high value crops including fruits.

### **3.1.3 Appropriate agricultural land resource base management, development and conservation**

**Impact on Poverty Reduction:** Popularisation of the use of balanced organic, green and microbe fertiliser through testing of soil will reduce the cost of conservation of soil productivity through out the country, particularly those small and marginal farmers from drought, "Monga" and flood affected areas. As a result, the cost of crop production will be reduced, financial affordability of the people will increase and poverty will reduce.

**Impact on Women's Advancement:** Involvement of the women in preparation of organic and compost fertiliser will open opportunities for their employment and increase in income.

### **3.1.4 Agricultural Research Programme**

**Impact on Poverty Reduction:** Innovations in climate and environment friendly area based HYV and development of technology through research and related training, including higher education for agricultural scientists and workers, will help to increase crop production appropriate to the poor people of saline, drought, "Manga," and flood affected areas. As a result, the conditions of the poor people will improve and particularly, the process will be helpful in the reduction of poverty amongst the small and marginal farmers.

**Impact on Women's Advancement:** Opportunities for employment and increased income are created through involvement of the women in development works which have been feasible by opening new possibilities and target based programmes of agriculture research.

### **3.1.5 Agricultural Extension Programme**

**Impact on Poverty Reduction:** Agricultural technology expansion programmes appropriate for cultivation in the saline, drought, "Monga," water logging, river erosion and flood prone areas are being taken up on priority basis. In addition, target based development of agricultural extension, infrastructure and extension programmes including training of extension workers and farmers are being strengthened. These will result in the increase of income, production and employment of the poor people in those areas.

**Impact on Women's Advancement:** Implementation of the New National Agricultural Extension Policy will create opportunities for employment and increases of income through participation of women in agricultural target based programmes and cultivation management.

### **3.1.6 Efficient management of water resources to facilitate expansion of irrigation programme**

**Impact on Poverty Reduction:** Irrigation is overwhelmingly important in the production of crops particularly paddy, wheat and different varieties of vegetables. The production level of crops will increase and the cost of production will decrease following easy availability of irrigation equipment, efficient management of irrigation and increased use of surface water. This will help the small and marginal farmers to improve their economic condition.

**Impact on Women's Advancement:** 50% of the 10,000 irrigation pumps under BMDA are being operated by women. This creates employment opportunities for them. In addition, as large numbers of women are involved in the BADC operated irrigation programmes through out the country, there is significant scope for creation of employment for women in irrigation activities.

### **3.1.7 Supply of quality seed and encourage the farmer to use it.**

**Impact on Poverty Reduction:** It is possible to increase crop production through the production and distribution of quality seed among the farmers under agricultural programmes. This will increase production per acre and reduce the cost of production, which will have direct contribution in the reduction of poverty.

**Impact on Women's Advancement:** As a result of increasing involvement of women from agricultural families in post procurement activities of seed crop, participation of women will increase in income generating activities.

### **3.1.8 Development of agricultural marketing management**

**Impact on Poverty Reduction:** Financial affordability of the farmers will increase as a result of improvements in the agricultural marketing system and providing assistance to farmers in getting a fair price for agricultural commodities. The role of the middle men is being reduced in the agricultural marketing process following establishment of new markets and making arrangement for storage facilities during post harvest period and for the farmers to get a fair price for their products. As a result of these activities, economic conditions of the small and marginal farmers will improve which will contribute to reduction in poverty.

**Impact on Women's Advancement:** Areas have been specially identified and reserved for women in the 61 Growers Markets and 16 Whole Sale Markets developed under the NCDP project. Women's participation is encouraged in Farmers' Management Groups. Following these activities, women's participation in the labour market will increase.

### **3.1.9 Encourage investment in agro-processing and agri-business development**

**Impact on Poverty Reduction:** Under agribusiness and agricultural investment support programmes, opportunities for village labour including

agricultural labour will be created by employing them in small businesses such as producing mushrooms, flowers, different fruits, cactus and aesthetic plants. Agricultural credit programmes are being strengthened by providing priority based credit through PKSF, RKB, RDRS and BRAC to small and marginal farmers from river erosion, drought, and “Monga” affected areas. Consequently, income generating opportunities are being created for poor people.

**Impact on Women's Advancement:** Opportunities for employment will be created and income increased through participation of the women in agro-processing and agri-business target based programmes. There will be increase of the Government programmes in drought and “Monga” affected areas and consequently, landless, small and marginal farmers and women labour from poor families will have the opportunities to get involved on a priority basis in these activities and increase their income.

### 3.2 Allocation for Poverty Reduction and Women's Advancement

(Taka in Thousand)

Particulars	Budget 2010-11	Projection 2011-12	Projection 2012-13
Poverty Reduction	1790,36,69	1947,58,83	2297,41,51
Gender	723,68,69	790,65,17	928,03,71

## 4. Priority Spending Areas/Programmes

Priority Spending Areas/Programmes	Related Strategic Objectives
<p><b>1. Research programmes to increase the production of different crops including paddy, wheat and sugarcane:</b> Agricultural land is reduced at a rate of about 1% per year due to increasing industrialisation, urbanisation and population growth. On the other hand, the increase of food production is indispensable to meet the growing demand from an increasing population. On realisation of this and with an aim to enhance per acre yield of different crops, including paddy, and to increase more production of relay crops within a short time, research programmes have been given highest priority.</p>	<ul style="list-style-type: none"> <li>• Agricultural Research Programme</li> </ul>
<p><b>2. Production of standard quality seed and determination of right quality:</b> Good seed is a precondition for increased production. Considering this and in order to ensure production and distribution of quality seed on the basis of farmer demand, the production of quality seed is identified as 2nd priority programme.</p>	<ul style="list-style-type: none"> <li>• Supply of quality seed and encourage the farmers to use it</li> </ul>
<p><b>3. Innovation, conservation and distribution of HYV of High Value and Economic crops; Jute, “Kenaf” and “Mesta,” sugarcane, cotton etc and distribution among the farmers:</b> The production of high value and economic crops are</p>	<ul style="list-style-type: none"> <li>• 5Increase the production of high value and economic Crops.</li> </ul>

Priority Spending Areas/Programmes	Related Strategic Objectives
essential to expand agriculture based industries, to meet local demand and promote export to earn foreign revenue. For this reason, innovations in HYV of jute, "kenaf," "Mesta," sugar cane, cotton etc economic crops and its distribution among the farmers has been assigned 3rd priority.	
<p><b>4. Innovations in HYV of potato, pulse and vegetables and distribution among farmers:</b></p> <p>Potato, pulse and vegetables occupy a large part of our daily food. In order to meet the demands of the people, this sector has been assigned 4th priority programme to innovate HYV of potato, pulse and vegetables and distribute them among the farmers.</p>	<ul style="list-style-type: none"> <li>• Ensure food security through increased food production and increase crop sector productivity and profitability</li> </ul>
<p><b>5. Extension programme for farmers on improved crop production technology (training, demonstrations, field days, rallies, fairs and publicity through mass media):</b></p> <p>It is essential to expand innovated agricultural technology to the field level. Agricultural extension is assigned priority to continue training, demonstrations, field days, rallies, fairs and publicity through mass media in order to make farmers aware of the innovations in agricultural technology.</p>	<ul style="list-style-type: none"> <li>• Agricultural Extension</li> </ul>
<p><b>6. Agricultural land resource base management:</b></p> <p>Fertility of the soil is decreasing day by day due to the excessive use of chemical fertiliser, intensive cultivation and continuous crop production. On the other hand, subsidies to the agriculture sector have been increasing gradually following increases in fertiliser prices in the international market. In these circumstances, a reduction of the use of chemical fertiliser and an increased use of organic, green manure and microbe fertiliser and a balanced application of fertiliser following proper examination of the soil is needed to continue the increase of crop production.</p>	<p><b>Strategic Objective Number 3</b></p> <ul style="list-style-type: none"> <li>• Agricultural land resource base management, development and conservation</li> </ul>

### Key Performance Indicators (KPIs)

Indicators	Related Strategic Objectives	Unit	Target 2008-09	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
							2010-11	2011-12	2012-13
1. Agricultural Research	4	Number	133	102	105	104	104	99	99
2. Supply of quality seed		M.T.		57,464	66,400	64,700	69,300	72,250	75,000
a) Paddy seed	7	M.T.		10,700	13,000	12,044	13,600	14,000	14,600
b) Wheat seed	7	M.T.		1,332	1,350	1,350	1,374	1,424	1,500
c) Jute seed (Local)	7	M.T.		28	32	33	40	42	43
d) Jute seed (Toshali)	7	M.T.		25	27	28	30	32	35

Indicators	Related Strategic Objectives	Unit	Target 2008-09	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
							2010-11	2011-12	2012-13
3. Test of soil quality and recommendation for application of fertiliser	3	Thousand		40	40	40	50	50	50
4. Irrigation Programmes	6	lakh hactor		5.21	5.33	5.34	5.60	5.81	5.83
5. Cereal variety crop production									
a) Rice	1	m.m.t		34.21	33.00	34.23	34.40	34.50	35.00
b) Wheat	1	m.m.t		0.96	0.85	1.02	0.90	0.85	1.00
c) Pulse	2	m.m.t		0.58	0.65	0.67	0.68	0.70	0.71
d) Oil seed	2	m.m.t		0.84	0.70	0.85	0.75	0.78	0.84
6. Economic crop									
a) Jute	2	Lakh bale		65	70	75	80	90	100
b) Cotton	2	Thousand bale		50	85	82	93	95	98
c) Sugarcane	2	Lakh m.t		77	80	82	85	90	95
d) Potato	2	m.m.t		6.75	8.75	7.01	9.82	10.00	9.25

## 5. Recent Achievements, Key Activities and Outputs of the Departments and Agencies under the Ministry

### 5.1 Department of Agricultural Extension (DAE)

**5.1.1 Recent Achievements:** During the last three years, the Department of Agricultural Extension, (DAE) was able to produce bumper crops of paddy, wheat, maize and potato through transfer of improved technology to meet the food demand of growing population. In 2007-08 10.11 lakh hectares of land was placed under hybrid cultivation during the Boro season alone. In addition, the production of oil, pulse, vegetables, spices and jute has increased by 10-15% over the same period. 54 HYVs of paddy and 68 HYVs of other crops including pulse and oil were innovated in the research institutions and made popular and extended to farmer level. Use of granular super urea saves urea and it was made popular through its appropriate use. It was extended in 80 Upazilas to increase production. In order to increase production and use of organic fertilizer to protect soil health, it was possible to establish 19.5 lakh of "Mada" of compost fertiliser in and around farmers' homestead during 2008-09. Training on sustainable modern technology was provided to 20 lakh male and female farmers and 81,476 extension officers of whom 31% are women. 14,000 women have been involved in different income generating activities including the cultivation of mushrooms. Under the agricultural rehabilitation programme, 12.74 lakh small and marginal farmers were affected by 2007-08 flood and were provided with seeds of different crops and fertilizer free of cost against 1 bigha of land each farmer; a total of 1.6 lakh hectare for cultivation and to Sidre affected 2.31 lakh small and marginal farmers at the rate of 1 bigha each, a total of 0.30 Lakh hectare. Cyclone Aila affected 1.76 lakh small and marginal farmers were provided with seed and fertilizer free of cost for planting aman in 23,801 hectare of land

and 2,025 small and marginal farmers affected by hail storm were provided for Aush paddy cultivation in 270 hectares of land during 2008-09

### 5.1.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Ensure supply of agricultural inputs at fair price	<ul style="list-style-type: none"> <li>Provide subsidy at 10-25% for purchase of agricultural machineries of power tiller, tractor, power thresher, harvester etc</li> </ul>	1
2. Encourage farmers to increase the use of balanced chemical fertiliser, farmyard manure and green fertiliser	<ul style="list-style-type: none"> <li>Saving of 1.1 lakh MT of urea through use of LCC and 12 thousand MT of urea through Use of granular urea</li> </ul>	1
3. Provide training to extension workers and farmers	<ul style="list-style-type: none"> <li>Provide training on sustainable modern technology to 22.65 lakh male/female farmers including 30% women and 2.22 lakh extension officers/staff</li> </ul>	1
4. Distribution of high yielding varieties of paddy, wheat and production technology among farmers	<ul style="list-style-type: none"> <li>Expansion of hybrid variety to 30% of total paddy land as Special Strategy for Production Increase</li> <li>Cultivation of hybrid paddy in 12 lakh hectare of land every year on average during Boro Season</li> <li>Extension of BRRI-47 to 50% land of 1 million hectare costal saline area</li> </ul>	1
5. Innovation in high yielding varieties of different crops and technology including maize, pulse, oil seed, vegetables, fruits and spices and distribution among the farmers.	<ul style="list-style-type: none"> <li>Innovation of HYV and technology of 1744 MT oil seed, 4298 pulse seed and 52 MT onion seed</li> <li>Expansion of maize and peanuts in 4 lakh hectares of land in haor and char areas</li> </ul>	2
6. Preparation of a special work plan and its implementation for increasing the production of high value crops including cereal type crops, pulse, oil, vegetables, fruits and spices by 7-25%	<ul style="list-style-type: none"> <li>Preparation of work plan through 13 regional workshops and initiative for implementation to increase production of oil, pulse, vegetables, spices and jute by 10-15%</li> </ul>	2
7. Innovation of Production technology of HYV of jute, kenaf and mesta and jute seed and distribution among the farmers	<ul style="list-style-type: none"> <li>Popularise at farmers level 4 varieties of HYV of jute, kenaf and mesta jute</li> <li>Innovation of jute production technology and increase of extension by 15%</li> </ul>	2

Key Activity	Outputs related to the Activity	Related Strategic Objectives
8. Development of production technologies for high yielding varieties of sugarcane and other sweetening crops and plants and provide training to extension workers and farmer to increase cotton production	<ul style="list-style-type: none"> <li>Popularise at farmers level 20 varieties of sugarcane.</li> <li>Training to extension workers and farmers in sugarcane production</li> </ul>	2
9. Popularise organic fertilizer, farm-yard manure and microbe fertilizer to the farmer and inclusion of bean variety in crop pattern	<ul style="list-style-type: none"> <li>Establishment of MADA in an around the homestead areas of 97 lakh farmers family</li> </ul>	3
10. Extension of soil test facilities up to Upazila and Union levels	<ul style="list-style-type: none"> <li>Establishment of 1500 mini soil lab in order to apply fertiliser after testing the soil at Upazila and Union levels</li> </ul>	3
11. Target-based Agriculture extension, infrastructure development, strengthening of extension programme including training of extension workers and farmers	<ul style="list-style-type: none"> <li>Establishment 6 new regions and development of 13 old regions</li> <li>Establishment of NATA in order to create skilled manpower in agricultural activities at national level</li> </ul>	5
12. Production and distribution of breeder, foundation and quality seed	<ul style="list-style-type: none"> <li>Production and distribution of 30-40% of different quality seeds including paddy and wheat to ensure production and use of improved seeds</li> </ul>	7
13. Programme for production of improved seed at farmers level	<ul style="list-style-type: none"> <li>Production of 72,000 MT of paddy seeds, 14,000 MT of wheat and 95 MT of jute seeds</li> </ul>	7
14. Formation of Farmers Group, Farmers Club and Farmers Marketing Group	<ul style="list-style-type: none"> <li>Formation of 10,000 ICM Farmers Group, 5,000 ICM Farmers Club and 4,000 IPM Farmers Group</li> </ul>	8
15. Provide technology, credit and technical assistance to agricultural entrepreneur	<ul style="list-style-type: none"> <li>Provide micro-credit of taka 90 crore to the agriculture entrepreneurs as technology, credit and technical assistance</li> </ul>	9

### 5.1.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Expansion of hybrid paddy	Lakh Hectare	9.39	11.70	10.00	11.90	12.00	12.50
2. Establishment of "Mada" of compost fertiliser	Number (Lakh)	19.50	25.00	21.50	30.00	35.00	32.00
3. Training (Male and female farmers)	Lakh	6.35	7.00	6.50	7.15	8.00	7.50
4. Training (officers and staff)	lakh	0.39	0.60	0.47	0.70	0.80	0.82
5. Improved and quality seed							

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
production programme at farmers level							
Paddy seed production	mt	57464	66400	64700	69300	72250	75000
Wheat seed Production		10700	13000	12044	13600	14000	14600
Pulse seed Production		1332	1350	1350	1374	1424	1500
Oil seed Production		552	558	558	564	580	600
Jute seed production		70	94	94	95	100	105

#### 5.1.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	504,97,24	557,65,84	649,86,69	772,46,38	697,35,79
<b>Development</b>	207,20,00	233,30,00	363,22,00	152,46,67	52,88,70
<b>Total</b>	712,17,24	790,95,84	1013,08,69	824,93,06	750,24,49

#### 5.1.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit ( Non-Development)	
Department of Agricultural Extension	1
Approved Programmes	
1. Use of Granular Urea to save Urea Programme.	1
2. Development of Information and Communication Project.	
3. Popularisation of Use Leaf Colour Chart and Saving of Urea through its Use.	
4. Strengthening of Quarantine Service Programme	
5. Extension Programme in Saline and Fallow Land of Greater Barishal and Khulna Regions	
Approved Projects:	
1 Increase Production and Creation of Employment for Rural People through Engineering Technology Expansion.	1
2 Integrated Agricultural Farm Development in Pabna, Sirajganj, Natore, Bogra and Manikgang districts.	1
3 Strengthening of Agricultural Extension Services.	
4 Eastern Areas Integrated Agricultural Development Project-DAE part.	
5 Greater Rangpur Agriculture and Rural Development Project.	
6 Agricultural Sector Support Programme -2 <sup>nd</sup> Phase-DAE part.	
7 2007-Emergency Cyclone Recovery and Restoration Project (ECRRP) of Agricultural Sector (crops) and Improvement Programme (RAISIP).	
8 National Agriculture Technology Project	
9 Pilot Project to Increase Agricultural Production in Monga affected	

Operational Unit/Project/Programme	Related Key Activity
Areas through Use of Improved Minor Irrigation Technology (Revised)	
10 Strengthening Mushroom Development Project.	
11 Expansion of Granular Urea Technology in 80 Additional Upazilas	
12 Integrated Agricultural Extension Approach for Poverty Reduction and Food Security	
13 Establishment of an Agricultural Training Institute in Zhinaidah District Head Quarter.	
14 Modernisation and Upgrading of the National Agricultural Training Academy (earlier CERDI)	
15 Quality Improvement of the Agricultural Training Institutes of Sherpur, Gaibandha and Daulatpur Khulna	
16 Integrated Soya Bean Cultivation Project	
17 Orange Development Project	
18 Integrated Onion, Garlic, Ginger, Turmeric and Chilly's Production Project (DAE)	
19 Second Crop Diversification Project	
20 Production, Preservation and Distribution of Paddy, Wheat and Jute seeds at Farm level	
21 Production, Preservation and Distribution of High Quality Pulse, Oil, and Onion seeds at Farm level	
Unapproved Projects:	
1 Agriculture Support for Small Holder in Cyclone Sidre Affected Areas	1
2 Training of the Farmers for Transfer of Technology at Upazila Level	
3 Reduction of Yield Difference of Paddy	
4 Integrated Pest Management Project	
5 Integrated Quality Horticulture Development Project	
6 Integrated Agriculture Development Project Reduction of Poverty and Food Security	
7 Expansion of Urea Deep Placement Technology	
8 Sugarcane and Molasses Development Project	
9 Increase of Crop Production through Farm Mechanisation	
10 Fruit Garden Management, Post Harvest Technology, Dissemination Improvement of Spices Cultivation in Hill Tracts region	
11 Socio Economic Development and Reduction Poverty through creation of Fruit Garden in Fallow Land of Khagrachari Hill Tracts	
12 Procurement of Small Size Agro-Machineries	
13 Strengthening Sanitary and Phyto Sanitary in Bangladesh	
14 Isolated Coconut Seed Garden and Horticulture Development Project	
15 Project of Strengthening Need Based Planning of DAE	
16 Quality Compost Production Pilot Project	
17 Emergency Safety Net for Vulnerable groups affected by High Food	

Operational Unit/Project/Programme	Related Key Activity
Prices and Natural Disaster in Bangladesh Homestead Gardening	
18 Strengthening Agriculture Extension Services through Mobility Improvement of Upazila Level	
19 Innovations in Agricultural Technologies, Identification, Dissemination and Adaptation to Climate Change.	
20 Hill and Costal Area Agriculture Development and Environmental Hazard Protection Project	
21 Capacity Building of National Agricultural Training Academy	
22 Construction of District and Regional Office Building	2
23 Establishment of Krishibid Institution Complex	
Probable Programme/Projects:	
1 Palm Oil Production Project	1
2 Enhancement of Bangladesh Crop Intensity Project	
3 Production of Fruits through out the Whole Year Project	

## 5.2. Bangladesh Agriculture Development Corporation (BADC)

**5.2.1 Recent Achievements:** Through implementation of different projects/programmes under Seed and Horticulture Wing, a total of 88,217 MT of seeds of different crops during 2008-09, 32,327 saplings of horticultural crops during 2005-06, 291,310 MT of vegetables and 50,690 MT of fruits were supplied during 2008-09. Under horticulture crops, 25,750 sapling, 253,600 MT of vegetables and 40,966 MT of fruits were supplied during 2008-09. Assistance is provided to non-Government entrepreneurs to facilitate their exports of vegetables, fruits, and fish through the 120 MT capacity cold storage near Shahjalal International Airport. Use of deep tube wells, shallow tube wells, floating pumps, power driven pumps, the renovation of canal-creeks and construction of sluice gates/siphon/flume etc infrastructures have enabled the provision of irrigation to 5.00 lakh hectares of land. Responsibility of import of MOP from Belarush and TSP from Morocco and its distribution among the farmers was given to BADC. During 2008-09, BADC imported 148,819 MT of TSP and 79,597 MT of MOP and distributed among the farmers.

### 5.2.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Ensure the supply of agricultural inputs at fair price	<ul style="list-style-type: none"> <li>Supply of 18 lakh mt of TSP and MOP at fair price during the coming 3 years.</li> </ul>	1
2. Encourage the farmers in use of balanced organic fertiliser, green fertiliser and microbe fertilizer	<ul style="list-style-type: none"> <li>Distribution of 15 lakh MT of TSP and MOP fertiliser</li> </ul>	1

<b>Key Activity</b>	<b>Outputs related to the Activity</b>	<b>Related Strategic Objectives</b>
3. Training to extension workers and farmers	<ul style="list-style-type: none"> <li>• Selection and training to 60,000 contract growers, non-Government seed producers and entrepreneurs</li> </ul>	1
4. Distribution of HYVs of paddy and wheat and production technology	<ul style="list-style-type: none"> <li>• Distribution of 377,660 MT of paddy and wheat among the farmers</li> </ul>	1
5. Expansion of HYVs and technology of different crops including maize, pulse, oil seeds, vegetables, fruits and spices among the farmers.	<ul style="list-style-type: none"> <li>• Production and distribution of about 17,000 MT of maize, pulse, oil seeds, vegetables and spices among the farmers</li> </ul>	2
6. Preparation of a special work plan and its implementation programme for increasing the production of high value crops including cereal type crops, pulse, oil, vegetables, fruits and spices by 7-25%	<ul style="list-style-type: none"> <li>• Inclusion of Special Work Plan for increase of HYV of crops including cereal type crops, pulse, oil, vegetables, fruits, and spices by 7-25% in the 6<sup>th</sup> Five Year Plan and Master Plan</li> </ul>	2
7. Innovations in high yielding varieties of jute, "kenaf" and "mesta" and jute seed production technology and distribution among the farmers	<ul style="list-style-type: none"> <li>• 4,760 MT of jute, kenaf, and mesta varieties and jute seed production and distribution among the farmers</li> </ul>	2
8. Target based extension, infrastructure development and strengthening of extension programme including training to extension workers and farmers	<ul style="list-style-type: none"> <li>• Training to 33,800 persons</li> </ul>	5
9. Enhancement of irrigation facilities and for easy availability of irrigation equipments	<ul style="list-style-type: none"> <li>• Irrigation facilities will be provided on 5 lakh hectare of land along with increase of opportunities for easy availability of irrigation machineries and equipment</li> </ul>	6
10. Arrangement of proper training for the farmers and farm workers to increase their skills in optimum use of water and efficient on-farm water management	<ul style="list-style-type: none"> <li>• Arrangement for proper training to 114,200 farmers and farm workers for optimum use of water and to increase skill in field level water management in the coming 3 years.</li> </ul>	6
11. Increased use of surface water	<ul style="list-style-type: none"> <li>• Increase use of surface water and bring 1.5 lakh hectares of land under irrigation</li> </ul>	6
12. Production and distribution of breeder, foundation and quality seed	<ul style="list-style-type: none"> <li>• Production of 25,875 MT of foundation seeds of different varieties, 151,550 MT of quality seeds and 2,650 MT of hybrid seeds</li> </ul>	7

Key Activity	Outputs related to the Activity	Related Strategic Objectives
13. Programme for the production of quality seeds at farmers' level	<ul style="list-style-type: none"> <li>Production of 151,550 MT of seeds involving 281,880 farmers through contract grower programme</li> </ul>	5
14. Encourage the participation of the private sector in seed production and distribution	<ul style="list-style-type: none"> <li>Increase per acre yield by 25 % through appointment of dealers, preservation of private seeds in cold storage and supply of improved seeds</li> </ul>	7

### 5.2.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Seed production, procurement and distribution	MT	88,217	132,637	132,637	143,190	154,213	166,252
2. Irrigation area expansion	Lakh hectare	5.00	5.10	5.10	5.35	5.55	5.60
3. Import and distribution of Fertiliser	MT	228,416	181,378	350,000	500,000	650,000	700,000

### 5.2.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	165,91,00	481,53,03	403,32,99	253,03,06	268,31,55
<b>Development</b>	180,53,00	225,15,00	218,71,00	84,25,87	65,95,36
<b>Total</b>	346,44,00	706,68,03	622,03,99	337,28,93	334,26,91

### 5.2.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operation Unit	
Bangladesh Agriculture Development Corporation (BADC)	1-14
Approved Programmes:	
1 High Quality Cereal Crops Production Programme through Seed Development Farm	1
2 National Vegetable Seed Production Programme	2
3 Buffer stock and its Management Programme of Seed	1
4 Agro-services Centre Programme	3
5 Improved Cereal Crops Seed programme through the Contract Growers	1
6 Jute Seed Programme	3
7 Procurement, Processing and Distribution of High quality Cereal Crops Seed Programme	1

Operational Unit/Project/Programme	Related Key Activity
8 Removal Of Water Logging And Increase of Agriculture Production Programme	1,6,8,9,10,11
9 Removal of Water Logging and Increase of Agriculture Production Programme in Khulna-Bagherhat-Satkhira-Perojpur Districts	1,6,8,9,10,11
10 Removal of Water Logging and Increase of Agriculture Production Programme in Kustia-Jhenaidha Districts	1,6,8,9,10,11
11 Removal of Water Logging and Increase of Agriculture Production Programme in Pabna-Natore Districts	1,6,8,9,10,11
12 Removal of Water Logging and Increase of Crop Production Programme in Noakhali-Comilla-Sunamgonj Districts	1,6,8,9,10,11
13 Removal of Water Logging and Increase of Crop Production Programme in Tangail District	1,6,8,9,10,11
14 Forecasting of Quality of Irrigation Water, Entry of Saline Water in Surface Area and Under Ground and Observation of Water Logging of Southern Region	1,6,8,9,10,11
15 Field Survey, Collection of Information and Preparation Report to Increase Crop Cultivation through Removal of Water Logging in Different Areas of the Country	1,6,8,9,10,11
16 Barishal-Jhalakathi Districts Minor Irrigation Development Programme	1,6,8,9,10,11
17 Patuakhali-Barguna Districts Minor Irrigation Development Programme	1,6,8,9,10,11
18 Perojpur District Minor Irrigation Development Programme	1,6,8,9,10,11
19 Bhola District Minor Irrigation Development Programme	1,6,8,9,10,11
20 Khulna District Minor Irrigation Development Programme	1,6,8,9,10,11
21 Madaripur-Shariatpur Districts Minor Irrigation Development Programme	1,6,8,9,10,11
22 Gopalganj District Minor Irrigation Development Programme	1,6,8,9,10,11
23 Faridpur District Minor Irrigation Development Programme	1,6,8,9,10,11
24 Noakhali-Laxmipur Districts Minor Irrigation Development Programme	1,6,8,9,10,11
25 Moulavibazar-Habigonj Districts Minor Irrigation Development Programme	1,6,8,9,10,11
26 Sylhet-Shunamgonj Districts Minor Irrigation Development Programme	1,6,8,9,10,11
27 Kishorgonj District Minor Irrigation Development Programme	1,6,8,9,10,11
28 Itna, Mithamain and Astagram Upazilas of Kishorgonj District Minor Irrigation Development Programme	1,6,8,9,10,11
29 Netrakona Haor Minor Irrigation Development Programme	1,6,8,9,10,11
30 Greater Kustia-Jessore Districts Minor Irrigation Development Programme	1,6,8,9,10,11
31 Narayangonj-Munshigonj Districts Minor Irrigation Development Programme	1,6,8,9,10,11
32 Dhaka District Minor Irrigation Development Programme	1,6,8,9,10,11
33 Tangail District Minor Irrigation Development Programme	1,6,8,9,10,11
34 Mymensingh District Minor Irrigation Development Programme	1,6,8,9,10,11

<b>Operational Unit/Project/Programme</b>	<b>Related Key Activity</b>
35 Brahmanbaria District Minor Irrigation Development Programme	1,6,8,9,10,11
36 Jamalpur District Minor Irrigation Development Programme	1,6,8,9,10,11
37 Bogra District Minor Irrigation Development Programme	1,6,8,9,10,11
38 Sherpur District Minor Irrigation Development Programme	1,6,8,9,10,11
39 Comilla District Minor Irrigation Development Programme	1,6,8,9,10,11
40 Gaibandha District Minor Irrigation Development Programme	1,6,8,9,10,11
41 Rangpur-Nilphamari Districts Minor Irrigation Development Programme	1,6,8,9,10,11
42 Kurigram-Lalmonorhat Districts Minor Irrigation Development Programme	1,6,8,9,10,11
43 Gopalganj Headquarte-Tungipara-Kotalipara of Gopalganj District Minor Irrigation Development Programme	1,6,8,9,10,11
Unapproved Programmes:	
1 Proposed Programme for Import and Distribution of TSP and MOP During Financial Years 2007-08, 2008-09 and 2009-10 by BADC	7
2 Alternate Wetting of Drying Programme in Paddy Cultivation	1
3 Repair and Maintenance of Go-downs to Use for Preservation and Marketing of Fertiliser (I-Phase)	
Approved Projects:	
1 Modernisation and Strengthening of Facilities for the Supply of Quality Seed	2
2 Integrated Project for the Enhancement of Production of Onion, Garlic, Ginger, Turmeric and Chilies (BADC part)	2
3 Pulse and Oil Seed Project (II-Phase)	2
4 Integrated Soya bean Cultivation Project( BADC-part)	2
5 Construction of Rubber Dam over Small and Medium Rivers to Increase Food Production ( BADC-part)	1,6,8,9,10,11
6 Eastern Areas Integrated Agriculture Development Project (BADC Part)	1,6,8,9,10,11
7 Pabna-Sirajgang-Natore-Bogra and Manikgonj Agricultural Integrated Farm Development project (BADC Part)	1,6,8,9,10,11
8 Irrigation Extension Project Using Surface Water through Double Lifting (II-Phase)	1,6,8,9,10,11
9 Innovative use of Surface Water Project (II-Phase)	1,6,8,9,10,11
10 Greater Mymensing-Tangail Integrated Agriculture Area Development Project (II-Phase)	1,6,8,9,10,11
11 Greater Khulna-Jessore-Kustia Integrated Agriculture Area Development Project (II-Phase)	1,6,8,9,10,11
12 Greater Bogra-Rangpur-Dinajpur Integrated Agriculture Area Development Project (II-Phase)	1,6,8,9,10,11
13 Ashugonj-Palash Agro-Irrigation Project (IV-Phase)	1,6,8,9,10,11
14 Greater Barishal-Patuakhali Integrated Agriculture Development Project (BADC Part)	1,6,8,9,10,11

Operational Unit/Project/Programme	Related Key Activity
15 Pilot Project for Development of Agriculture in “Monga” affected areas through the Application of Improved Minor Irrigation Technology (BADC-part).	1,6,8,9,10,11
Unapproved Projects:	
1 Development of Tuberous Crops (BADC-part).	2
2 Developments of Improved Seed of Paddy, Wheat and Maize (BADC-part)	1
3 Integrated Quality Horticulture Development Project ( BADC-Part)	2
4 Agricultural Seed Development and Expansion Project (II-Phase)	1
5. Private Sector Seed Development Project (II-Phase)	2
6 Chittagong Hilltracts Integrated Agriculture Development Project (3 <sup>rd</sup> phase)	7,2
7 Increase Supply of Quality Seed Project	1
8 Faridpur-Gopalgang-Rajbari-Shariatpur-Madaripur Irrigation Area Development Project (III-Phase)	1
9. Greater Dhaka Irrigation Area Development project (II-Phase)	1
10. Pabna-Natore-Shirajgonj Irrigation Area Development project (III-Phase)	1
11 Survey and Investigations for the Development of Minor Irrigation (III-Phase)	1
12 Activate the Inoperative/Useless Deep Tube-ells Project	1
13 Integrated Sylhet Division Irrigation Development Project	1

### 5.3 Bangladesh Rice Research Institute (BRRI)

**5.3.1 Recent Achievements:** During the past three years, 7 HYV of paddy including 2 hybrid were innovated and 262.75 MT of breeder seeds from BRRI innovated paddy were produced and distributed among the seed production-network related 160 Government agencies, Non-Government organizations, and individual entrepreneurs. With an aim to transfer technology, 10,500 farmers, farm workers and officers were provided with training and different booklets including 83,950 copies of Modern Rice Cultivation, rice journals, annual reports of research undertakings were published. 180 Field Demonstrations were organised to make popular the BRRI innovated machinery and equipment. At present, 2 HYV for flood prone area and 1 for saline area are innovated and now under process for releasing to the farmers.

#### 5.3.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Innovation of HYV of paddy and technology	• Innovation of 4 HYV including one Hybrid variety	1
2. Provide training to extension workers and farmers	• Training of 10,000 extension workers and farmers	1

Key Activity	Outputs related to the Activity	Related Strategic Objectives
3. Innovation and development of area based climate and environment friendly HYV and technology on the basis of farmers' demand.	<ul style="list-style-type: none"> <li>Construction and maintenance of 3,000square meter research friendly infrastructures in 9 regional offices including head quarter</li> <li>Procurement and maintenance of 900 research supporting machineries and equipments and innovation of 5 climate suitable varieties</li> </ul>	4
4. Short and long term training to agricultural scientists and farmers	<ul style="list-style-type: none"> <li>Provide short-term training to 1,000 agricultural scientists and 3,500 farm workers and long-term based training to 300 agricultural scientists including MS/Ph.D to 70 agricultural scientists</li> </ul>	4
5. Production and distribution of breeder, foundation and standard quality seed	<ul style="list-style-type: none"> <li>Production of 460 MT of breeder seed for distribution among Government, NGOs and individual entrepreneurs</li> </ul>	7

### 5.3.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Innovations in and distribution of climate friendly in-breed and hi-breed seeds	Number	2	2	3	1	2	2
2. Production and distribution of paddy breeder seeds	MT	101.77	130	130	150	180	190
3. Development of and innovations in agricultural machineries and equipments helpful in the processing and production of paddy	Number	1	1	1	1	1	1

### 5.3.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	15,68,81	19,10,77	21,04,92	23,43,42	24,21,65
<b>Development</b>	6,30,00	5,30,00	9,00,00	4,80,00	0
<b>Total</b>	21,98,81	24,40,77	30,04,92	28,23,42	24,21,65

### 5.3.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operation Unit (Non-development)	
1 Bangladesh Rice Research Institute	1,2,3,4,5
2. Continued Rice Research Programme	1,2,3,4,5
Approved Programme	
1. Outreach Research Programme of BRR	1,2,3,4
Approved Projects	
1. Research and Development of Hybrid Rice in Bangladesh.	1,2,3,4,5
2. Strengthening and Capacity Building of the Bio-technological Laboratory of BRR.	1,3,4
3. Maintenance of the Paddy Variety and Strengthening of Production of Breeder Seed	2,3,4,5
Unapproved Programme:	
1. Increase of Cultivation and Production of Paddy in Southern Coastal Area	1,2
Unapproved Projects:	
1. Farm Machinery and Technology Development and Dissemination (Lead Agency-BARI)	2,3,4
2. Minimize Rice Yield Gap (Lead Agency- DAE)	1,2,5
3. Enhancing Quality Seed Supply (Lead Agency-BADC)	1,2,3,4,5
4. Biotechnology Research Facilities Development	1,3,4
Probable Programmes:	
1. Strengthening of Research Related Facilities with Respect to Climate Change	1,2
2. Crop Production at Affordable Cost and Improvement of Farmer Livelihood through Use of Water Saving Technology at Field Level	2
Probable Projects	
1. Strengthening Research and Training of Regional Offices and Farms of BRR	1,2,3,4,5

## 5.4 Bangladesh Agricultural Research Institute (BARI)

**5.4.1 Recent Achievements:** During the period 2006-09, 57 varieties of wheat, maize, potato, vegetables, fruits, flowers, pulses, oilseed and spice variety crops were innovated and 155 advance line varieties are under process for being release. In addition, 1272 germplasms of these varieties were collected. Besides, 195 technologies on soil, fertilizer and water management, diseases, insect-pest control management, new crop pattern for intensification, post harvest technology for processing and transportation and 4 agriculture machineries were innovated. During the last three years, 76,370 scientists, extension and NGO workers and farmers were provided with training. 8,510 persons were made aware of newly invented machineries and equipments

through 78 seminars, symposiums and workshops. In order to transfer the invented technologies, 105 publications were brought out and 6,000 demonstrations block were established. In addition, 106 radio and 22 TV programmes were transmitted. A bilateral MOU was signed with 29 organisations.

#### 5.4.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Development of high yielding variety of wheat and innovation of technology	<ul style="list-style-type: none"> <li>Innovation of 2 HYV Wheat</li> </ul>	1
2. Provide training to extension workers and farmers	<ul style="list-style-type: none"> <li>Training for 77,000 extension and NGO workers and farmers</li> </ul>	1
3. Innovations in high yielding varieties of different crops and technology including maize, pulse, oil seed, vegetables, fruits and spices and distribution among the farmers	<ul style="list-style-type: none"> <li>Innovation of 39 HYV with improved characteristics</li> <li>Innovations of 120 production technologies and distribution among the farmers.</li> </ul>	2
4. Preparation of a special work plan and its implementation programme for increasing the production of high value crops including cereal type crops, pulse, oil, vegetables, fruits and spices by 7-25%	<ul style="list-style-type: none"> <li>Increase crop production to 15-17% by 2012</li> </ul>	2
5. Innovation and development of area based climate and environment friendly HYV and technology on the basis of farmers' demand	<ul style="list-style-type: none"> <li>Innovation of 4 varieties and 6 technologies and distribution among the farmers</li> </ul>	4
6 Training programme for agriculture scientists and workers on short and long term basis	<ul style="list-style-type: none"> <li>Access to higher education of 70 scientists (MS/Ph.d).</li> <li>Short term training to 2,000 agricultural scientists and 4,500 agricultural workers and long term training to 500 agricultural scientists</li> </ul>	4
7. Production and distribution of breeder, foundation and standard quality seed	<ul style="list-style-type: none"> <li>Production of 125 MT of wheat, 37 MT of maize, 197 MT of o pulse, 98 MT of oil seeds, 1,699 MT of tuberous crops, 4.95 MT of vegetables, 150 MT of spices varieties and 2,308 MT of seeds production</li> </ul>	7

### 5.15.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	201-12	2012-13
1. HYV innovation	Number	21	15	15	20	22	18
2. HYV Production Technology	Number	76	45	45	50	45	45
3. Invention of appropriate agricultural machinery and equipment	Number	2	7	7	1	1	1

### 5.4.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	77,76,50	92,32,00	127,89,05	130,00,00	148,56,00
<b>Development</b>	65,81,00	66,12,00	28,55,00	10,17,75	5,05,55
<b>Total</b>	143,57,50	158,44,00	156,44,05	140,17,75	153,61,55

### 5.4.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit Bangladesh Agricultural Research Institute	1,2,3,4,5
Approved Projects	
1. Strengthening of Toxicology Research in Order to Identify the Presence of Pesticide Residue and Determination of its Quantity in Agricultural Products	3,5
2. Development of Bangladesh Hybrid Maize Research	2,3,5
3. Strengthening of Pulses and Oilseed Research Programmes in Bangladesh	2,3,5
4. Establishment of Regional Horticulture Research Centres in Norsingdi-Comilla-Patuakhali districts	1,2,3,5
5. Integrated Soya bean Cultivation Development Project (BARI- part)	2,3,5
6. Strengthening On-going Research Programmes of BARI	1,2,3,4,5
7. Orange Development Project (BARI)	1,2,3,5
8. Agriculture Sector Support Project-2 <sup>nd</sup> Phase (ASPS11/AEC) (BARI-Part)	3,5
9. Onion, Garlic, Turmeric, Ginger and Chillies Production Increase and Integrated Project (BARI-part)	1,2,3,5
10. Strengthening of Post Harvest Research Technology of BARI	5
11. Strengthening of Information Communication Technology and Bio-metrical Facility of BARI	2,5

Operational Unit/Project/Programme	Related Key Activity
Unapproved Projects:	
1. Integrated Quality Horticulture Development Project (BARI-Part)	1,2,3,5
2. Production and Development of Improved Seeds of Paddy, Wheat and Maize (BARI-Part)	3,5
3. Development of Tuberous Crops (BARI Part)	1,2,3,5
4. Innovation and Expansion of Agricultural Technology (BARI Part)	4,5
Probable Projects	
1. Strengthening Research and Training Facilities of Outside Centres of BARI	2,3,4,5,6
2. Strengthening of Research and Development for Reduction of Poverty	3,5
3. Innovation of control system based on organic control system of paste insect resulting from Climate Change and Misuse of Poisonous Diseases Killer Agent	2,3,4,5
4. Determination of Socio-Economic Impact of BARI Innovated Technologies on Poverty Reduction	3,5
5. Strengthening of Regional Horticulture Research Center of Narsingdi-Comilla and Patuakhali Districts	1,2,3,5
6. Strengthening of Pant Pathology Research	3,5
7. Sustain Pesticide Research in Pesticide Analytical Laboratory in BARI	3,5
8. Upgrading of Pulse Research Sub-center in to Regional Pulse Research Centre of Madaripur	2,3,5
9. Strengthening of on Going Research on Spices Varieties of Crops	1,2,3,5
10. Research and Development of Vegetables in Controlled Environment	1,2,3,5
Unapproved Programmes:	
1. Summer Season Onion Variety, Seed production and Conservation Technology Innovation	1,2,3,5
2. Breeder Seed Production Programme of different varieties	7

## 5.5 Bangladesh Jute Research Institute (BJRI)

**5.5.1 Recent Achievements:** In 2007-08, a local variety of jute with white fiber (BJC-2142) was released. This jute can be used without bleaching or with less bleaching for making jute products. An improved quality of jute variety known as red tosha (tosh-5) was released in 2008-09. During 2006-07, 2007-08 and 2008-09, 2000, 2,500 and 2,250 kg of breeder seeds respectively were produced and provided to BADC. 1,900, 3,050 and 2,000 selected farmers, extension officers and field workers respectively were given training during the last three years to extend the modern technologies of production of improved fiber/seeds to farmers. 700 weavers/small entrepreneurs were given training in making jute goods. During last three years, 4 new technologies were innovated.

### 5.5.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Innovations of high yielding varieties of jute, "kenaf" and "mesta" and jute seed production technology and distribution among the farmers	• Innovation of 5 High Yielding Varieties and 3 technologies	2
2. Innovation and development of area based climate and environment friendly HYV and technology within short time	• Innovation of 2 climate and environment friendly technologies	4
3. Training programme for agriculture scientists and workers on short and long term basis	• Provide training to 3,000 farmers and others and opportunities to do Ph.D to 10	4
4. Encourage participation of the private sector in seed production and development	• Organisation of 6 seminars, 4 workshops and 3 MOUs	7

### 5.5.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Production of breeder seeds.	kg	2250	2700		2800	2900	3000
2. Variety Innovation	Number	1	2		2	2	1
3. Training	Persons	2000	1000		1000	1000	1000
4. Jute Technology Innovation	Number	3	1		1	1	1
5. Human Resources Development (MS/Ph.D)	Number	Ph.D-3 MS-8	Ph.D-4 MS-6		Ph.D-4	Ph.D-3	Ph.D-3

### 5.5.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	15,77,39	16,29,16	16,77,00	16,90,50	17,62,00
<b>Development</b>	0	0	0	0	0
<b>Total</b>	15,77,39	16,29,16	16,77,00	16,90,50	17,62,00

### 5.5.5 List of Projects, Programmes and Operational Units: Not Applicable

## 5.6 Bangladesh Institute of Nuclear Agriculture (BINA)

**5.6.1 Recent Achievements:** A HYV of summer mug (pigeon pea), BINA-6 and a short life HYV mug, BINA-2 were registered. A HYV aman, BINA-7 having shortest life was released. This variety has created enthusiasm as one of the advanced varieties among the Monga affected farmers. During the last few years, high quality mutant lines of paddy-2, mug-2, mug-kalai-2, lentil-3,

mustard-2, sesame-2, soya bean-3, tomato-2 and peanuts-2, in all 20 have been innovated. Adequate breeder and quality seeds of BINA were innovated. 41 varieties were produced. It was possible to isolate 2 drought (PH-11) and 2 saline tolerant (1.5%) rizobium.

### 5.6.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Innovation of HYV of paddy and wheat and technology	<ul style="list-style-type: none"> <li>Innovation of 3 HYV of paddy and wheat</li> </ul>	1
2. Innovations in high yielding varieties of different crops and technologies including maize, pulse, oil seed, vegetables, fruits and spices	<ul style="list-style-type: none"> <li>Innovation of one HYV of each crop</li> </ul>	2
3. Preparation of a special work plan and its implementation for increasing the production of high value crops including cereal type crops, pulse, oil, vegetables, fruits and spices by 7-25%	<ul style="list-style-type: none"> <li>HYV of 3 Pulse, 2 oil seeds and 2 tomato will be innovated</li> </ul>	2
4. Innovations in high yielding varieties of jute, "kenaf" and "mesta" and jute seed production technology	<ul style="list-style-type: none"> <li>Innovations in one HYV of Jute which will be resistant to diseases, pest, insects and calamity in the coming 2-3 years</li> </ul>	2
5. Popularise the use of organic fertiliser, green fertiliser and microbe fertiliser among the farmers and the inclusion of bean varieties of crops in the crop pattern	<ul style="list-style-type: none"> <li>Production of 15-20 MT of microbe fertiliser and distribution among the farmers</li> <li>Improvement of soil fertility by increasing inorganic content by 1-5%. Increase bean variety crops by 20-45%</li> </ul>	3
6. Innovation and development of area based climate and environment friendly HYV and technology	<ul style="list-style-type: none"> <li>Construction of new laboratory, green house and seed store in BINA head quarter.</li> <li>Innovation of paddy-4, wheat-1, pulse and oil seed-4 HYV</li> <li>Innovation of 17 saline, drought, hostile environment tolerant varieties.</li> </ul>	4
7. Training including higher education programme for agriculture scientists and workers on short and long term basis	<ul style="list-style-type: none"> <li>Ph.D for 5 scientists and agricultural diploma to 15 assistant scientists.</li> </ul>	4
8. Production and distribution of breeder, foundation and standard quality seed	<ul style="list-style-type: none"> <li>Increase production of quality seeds of main crops from 130 to 208 MT and supply during 2008-09</li> </ul>	7

### 5.6.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-3
1. HYV innovations	Number	7	5	3	5	3	5
2. Non-Commodity Technology Innovation	Number	13	12	14	17	16	19
3. Seed Production	M.T.	70.00	50.00	57.00	69.40	81.00	100.00
4. Training	Persons	1400	1320	1600	1700	1800	2000
5. Distribution of seed/seedling free of cost	M.T.	23.00	14.00	13.00	15.50	19.00	19.00

### 5.6.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	10,54,15	12,97,25	13,17,78	13,15,50	13,36,44
<b>Development</b>	11,00	11,00	0	0	0
<b>Total</b>	10,65,15	13,08,25	13,17,78	13,15,50	13,36,44

### 5.6.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operation Unit	
Bangladesh Institute of Nuclear Agriculture (BINA)	1,2,3,4,5,7
Approved Programmes:	
1. Research and Development Assistance Programme of BINA to Sustain Food Crops Production Increase	1,2,3,4,5,7
2. BINA: Sub-centres Development Programme (2 <sup>nd</sup> Phase)	1,2,3,4,5,7
3. Microbe Fertiliser Production of Bean Variety Crops and Paddy and Wheat Research and Development Programme	1,2,3,4,5,7
Un-approved Project:	
1. Strengthening of Research Programme of BINA and Strengthening of Sub-Centre of BINA	1,2,3,4,5,7

## 5.7 Bangladesh Sugarcane Research Institute (BSRI)

**5.7.1 Recent Achievements:** During the last three years (2007-08, 2008-09 and 2009-10), 3 varieties of sugarcane named Ishwardi-38, Ishwardi-39 and Ishwardi-40 were released. 7 relay crop packages suitable for different environment regions were innovated. 5 Integrated Pest Management (IPM) research programmes were taken up during last three years in the area of control of diseases and pests and insects harmful to sugar cane. In addition, 1 molasses making oven, 1 trencher for sugar cane plantation and 1 threshing machine suitable to produce improved molasses were innovated.

### 5.7.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Innovation of production technologies for high yielding varieties of sugarcane and other different sweetening crops/plants and training for sugarcane cultivation	<ul style="list-style-type: none"> <li>40 varieties have been innovated</li> <li>Production of sugar and molasses from palm trees, 1 date trees and fan palm leaf trees</li> <li>Training to 4,500 extension workers and farmers</li> </ul>	2
2. Innovation and development of area based climate and environment friendly HYV and technologies on the basis of farmers' demand	<ul style="list-style-type: none"> <li>Innovation of 7 sugarcane varieties</li> <li>Release of 11 relay crops packages</li> </ul>	4
3. Short/Long term based training programme including higher education for Agriculture scientists and farm workers	<ul style="list-style-type: none"> <li>Ph.D degree for 10, long term training for 15 scientists and short term training for 6 farm workers</li> </ul>	4

### 5.7.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Clean sugar cane seed production.	MT	250	220	270	300	350	400
2. HYV, high sugar content, tolerant to diseases and adverse environment sugar cane variety innovation.	Number	1	1	1	1	1	1
3. Training to farmers and extension workers.	Person	1100	1100	1200	1300	1500	1800
4. Demonstrations of BSRI innovated technologies	Number	250	225	260	270	280	300

### 5.7.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	9,41,00	10,97,72	12,26,80	14,15,15	14,73,30
<b>Development</b>	1,46,00	1,53,00	2,00,00	0	0
<b>Total</b>	10,87,00	12,50,72	14,26,80	14,15,15	14,73,30

### 5.7.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit	
Bangladesh Sugar Cane Research Institute	1,2,3,4
Approved Project:	
1. Development of BSRI Research Infrastructure and Extension of Innovated Technologies	2, 3
Unapproved Projects:	
1. BSRI Sub-centre Development Project	2

## 5.8 Barendra Multipurpose Development Authority (BMDA)

**5.8.1 Recent Achievements:** Through installation 1,516 deep tube wells and electrification of 1,764 deep tube wells and construction of 3,055 irrigation canals, 45,600 hectares of land were brought under regulated irrigation over the last three years. Another 1,525 obsolete deep tube wells of BADC were made operational for irrigation. The re-excavation of 696 km of canals, re-excavation of 465 dead ponds and preservation of surface water through construction of 419 cross dams, brought 30,000 hectares of land under supplementary irrigation. 1,650 MT of paddy seeds were produced, preserved and distributed among the farmers at a fair price and 15,000 farmers were provided with training. 9 lakh fruit trees and medicinal saplings were planted in the Barendra area.

### 5.8.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Provide training to extension workers and farmers	<ul style="list-style-type: none"> <li>• Provide training to 18,000 persons</li> </ul>	1
2. Extension of irrigation facilities and easy availability of irrigation machineries and equipment	<ul style="list-style-type: none"> <li>• Installation and electrification of 2,415 deep tube wells</li> <li>• Construction of 4,300 irrigation canals</li> <li>• Extension of 220 km of irrigation canals</li> <li>• Bring 0.75 lakh hectare of land under regulated irrigation</li> <li>• Activate 1,200 inactive/obsolete deep tube wells installed by BADC</li> </ul>	6

Key Activity	Outputs related to the Activity	Related Strategic Objectives
3. Arrangement of training for the farmers and farm workers to increase their skills in the optimum use of water and increase the skill of field level water management	<ul style="list-style-type: none"> <li>• Training to 18,000 persons on modern technique and technology relating to agriculture, irrigation systems, fisheries and mechanisation of agriculture</li> </ul>	6
4. Increased use of surface water	<ul style="list-style-type: none"> <li>• Re-excavation of 100 ponds and 250 km canals</li> <li>• Construction of 50 cross-dams</li> <li>• Bring 8,000 hectares of land under supplementary irrigation</li> <li>• Extension of irrigation area through use of 50 power pumps of different capacities</li> </ul>	6
5. Production of improved seeds at farmers' level	<ul style="list-style-type: none"> <li>• Production, procurement and preservation of 1,500 MT of seeds and distribution among the farmers</li> </ul>	7

### 5.8.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 200-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Irrigation area expansion through deep tube well installation and canal construction	Hectare	20,500	22,500	24,170	25,415	26,270	23,315
2. Preservation and use of surface water through re-excavation of canal and ponds and construction of cross-dam	Hectare	9,700	8000	9,200	2,000	5,000	8,000
3. Seed production, preservation and distribution	MT	500	250	250	350	500	650
4. Training	Persons	7000	8000	8000	7500	7500	3000

### 5.8.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	0	82,17	1,43,06	1,43,34	0
<b>Development</b>	169,21,00	237,42,00	232,26,00	213,60,00	134,21,74
<b>Total</b>	169,21,00	238,24,17	233,69,06	215,03,34	134,21,74

### 5.8.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operation Unit (Non-Development)	
1. Barendra Multipurpose Development Authority	1-4
Approved Programme:	
1. Fine Rice Production and Marketing Programme	3
Approved Projects:	
1. Barendra Integrated Area Development Project-3 <sup>rd</sup> Phase	1
2. Barendra Rain Water Preservation and Irrigation Project	3
3. Development of Irrigation Area and Training Project-2 <sup>nd</sup> pPhase	1,2
4. Activate Inactive and Useless Deep Tube Well for Irrigation	1
5. Deep Tube Well Installation Unit-2, Thakurgaon	1
6. Farmer Level Improved Seed Production Project	4
7. SMART Card based Pre-paid Usage and Energy Measuring System (PUEM)	1
Unapproved Projects:	
1. Deep Tube Well Installation Project-2 <sup>nd</sup> Phase	1
2. Development of Rural Communication Project for Marketing of Agriculture Products	3
3. Panchagarh, Thakurgaon, Dinajpur and Joypurhat Integrated Agricultural Development Project	1,2,3
4. Expansion of Irrigation Area and Development	1
5. Barendra Rain Water Preservation and Irrigation Project (II-Phase)	3
Probable Projects:	
1. Farmer Level Improved seed Production Project-2 <sup>nd</sup> Phase	4
2. Irrigation through Use of Surface Water	3
3. SMART Card based Pre-paid Usage and Energy Measuring System (PUEM) (II-Phase)	1
4. Development of Hat and Bazar for Marketing of Agriculture Products	1
5. Development of Electrical Network to Ensure Irrigation	1

## 5.9 Bangladesh Agricultural Research Council (BARC)

**5.9.1 Recent Achievements:** BARC reviewed the activities of 6 National Agricultural Research Institutes included in the NARS. Annual research programmes and budgets of 11 NARS 4 institutes were approved by the Executive Council. BARC approved 39 core research programmes through 11 research institutions and their associate organizations. Undertook innovations and transferred 39 agricultural technologies through research institutions and their associate organizations. 7,799 field demonstrations and field days on pulse, oilseed, spices and other crops were organised. Research and transfer of technology through workshops and identification of problems at field level and recommendations for resolving those were

initiated. Provided training to 80 agricultural scientists to develop human resources. 24 agricultural scientists are involved in research activities to obtain Ph.D degree. 291 agricultural scientists, extension officers and farmers were provided short term training in 9 subjects to increase their skill in research and transfer of technology. 842 agricultural scientists, extension officers and farmers participated in 5 seminars and 4 workshops.

### 5.9.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Preparation of a special work plan and its implementation programme for increasing the production of high value crops including cereal type crops, pulse, oil, vegetables, fruits and spices by 7-25%	<ul style="list-style-type: none"> <li>Implementation of 50 projects through non-government agencies under the supervision of Apex Agency and 11 sub-projects through GO/NGO participation. On the other hand, implementation of 13 refinement/validation of sub-projects through NARS Institutes/Agricultural University under the supervision of BARC</li> </ul>	2
2. Training programme for agriculture scientists and workers on short and long term basis	<ul style="list-style-type: none"> <li>Human resources development, specially foundation training for 80 junior scientists and 23 Ph.D and short term training and organisation of seminar and workshops</li> </ul>	5

### 5.9.3 Key Performance Indicators and Targets

Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Targets 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Training	Number	15	36	36	40	42	44
2. Paddy Production	Lakh Ton	170	348.48	348.48	408.25	478.25	560.30
3. Paddy Seed Production	Ton	16800	600	600	700	850	1000
4. Pulse Production	Lakh Ton	5.84	6.40	6.40	7.40	8.45	9.50
5. Pulse Seed Production	Ton	114.82	95.48	95.48	110.00	125.00	145.00
6. Technology Transfer, Refinement and Validation	Number	24	20	20	6	8	10

### 5.9.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	18,43,84	19,63,91	10,76,50	11,52,00	12,31,60
<b>Development</b>	79,16,00	44,38,00	72,23,00	73,81,36	70,90,85
<b>Total</b>	97,59,84	64,01,91	82,99,50	85,33,36	83,22,45

### 5.9.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operation Unit	
Bangladesh Agriculture Research Council	2,3
Approved Programme:	
1. Paddy and Pulse Crop Production Increase by 17.15% and 15% respectively	3
Approved Project:	
1. Agriculture Technology Transfer (ATT)	2

## 5.10 Seed Certification Agency (SCA)

**5.10.1 Recent Achievements:** Certification Tags were provided after inspection and evaluation of notified seed crops in 55,000 hectares of seed crop land during last three years (2006-07-2008-09). Humidity, germination quality and purity of 23,763 samples of different seeds including those of International Seed Testing Association were determined in the national and regional laboratories of seeds in the amount of 80,000 MT. Training was provided to 1,800 farmers, dealers and officers on seed production, processing, preservation and seed laws. 42 Varieties of paddy, 5 varieties of potato, 4 varieties of sugar cane and 1 kind jute were registered and released for cultivation. 2,800 samples have been procured through market monitoring.

### 5.10.2 Key Activities, Outputs related to the Activity and related Strategic Objectives.

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Production and distribution of breeder, foundation and standard quality seed	<ul style="list-style-type: none"> <li>7 HYV of paddy including 1 hybrid, 3 sugarcane, 3 potato and 1 jute have been released</li> <li>Distribution of 60,000 MT (paddy, wheat, potato and jute) of quality seeds</li> </ul>	7
2. Determination of right quality of seed	<ul style="list-style-type: none"> <li>Testing of 24,000 samples seed (ISTA-25 sample)</li> </ul>	7
3. Encourage participation of private sector in seed production and seed development	<ul style="list-style-type: none"> <li>Training of 6,000 persons and 450 farmers through 60 workshops</li> </ul>	7

### 5.10.3 Output Indicators and Targets

Output Indicators	Unit		Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
						2010-11	2011-12	2012-13
1. Field inspection and award of	Number (lakh)	Paddy		45	45	54	60	65
		Wheat		3	3	3.6	4	4.4

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
certification tag	Potato		1.7	1.7	2	2.3	2.5
	Jute		12.6	12.6	15	17	18
2. Variety test(seed)	Number		80	112	120	140	160
3. Sample test (including ISTA)	Tonne		25500	27000	28000	30000	32000
4. Training, workshop and Human skill development	Training		600	800	12000	15000	2000
	Workshop (Person)		1000	1200	15000	20000	2500

#### 5.10.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	4,79,24	5,56,42	6,52,02	7,42,09	7,94,04
<b>Development</b>	4,78,00	4,58,00	0	0	0
<b>Total</b>	9,57,24	10,14,42	6,52,02	7,42,09	7,94,04

#### 5.10.5 List of Projects, Programmes and Operational Units: Not Applicable

### 5.11 Cotton Development Board (CDB)

**5.11.1 Recent Achievements:** During the last three years, the CDB conducted, on average, 35 research programmes in its farms and 22 on-farm trials. During this period, 2 CDB innovated HYV cotton was registered with the National Seed Board and 2 varieties are awaiting release. 6 HYV and 6 hybrid brought from abroad were tested. On average every production year, 42.50 MT of breeder and foundation seeds were produced. 145 MT of certified standard seeds were produced on 247 hectares of land through field level contract cotton farmers and on average, 63,400 bales of fiber cotton were produced. 371 contract cotton farmers were provided with training.

#### 5.11.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Innovation of HYV and production technology, supply of seeds training and extension to increase cotton production	<ul style="list-style-type: none"> <li>Release of 3 newly innovated varieties and conduct research on 6 HYV and 5 hybrid variety</li> </ul>	2
2. Innovation and development of area based climate and environment friendly HYV and technology on the basis of farmers' demand	<ul style="list-style-type: none"> <li>Research on 6 HYV and 5 hybrid of cotton variety</li> <li>Innovation of 1 short life HYV for northern area and 1 HYV of Hill cotton</li> </ul>	4
3. Encourage participation of the private sector in seed	<ul style="list-style-type: none"> <li>6 seminars and 9 regional workshops</li> </ul>	7

Key Activity	Outputs related to the Activity	Related Strategic Objectives
production and distribution	<ul style="list-style-type: none"> <li>• Training to 6 persons on seed production</li> <li>• Encourage 3 companies in production of hybrid variety</li> </ul>	
4. Marketing and ginning of cotton seed and production and supply of hybrid foundation and quality seeds	<ul style="list-style-type: none"> <li>• Production and supply of 5 MT of hybrid, 65 MT of foundation and 280 MT quality seeds</li> </ul>	7

### 5.11.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Training of Cotton Farmers	Number (thousand)	7.68	17.00	11.35	18.00	19.00	20.00
2. Cotton production	Bale (thousand)	50.00	85.00	82.00	92.50	95.00	97.50
3. Research and Trial	Number	56	55	44	57	60	65
4. Seed production and distribution	MT	215	220	200	55	57	60
5. Purchase of seed cotton and ginning	M.T.	252	400	400	450	500	550

### 5.11.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	16,71,84	18,46,89	22,61,60	23,18,50	23,77,12
<b>Development</b>	0	0	0	0	0
<b>Total</b>	16,71,84	18,46,89	22,61,60	23,18,50	23,77,12

### 5.11.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit:	
Cotton Development Board	1-4
Approved Programmes:	
1. Cotton Research, Seed production and Extension Programme (revised)	1-4
Unapproved project	
1. Strengthening of Research Programmes of Cotton Development Board	2,4,7
Probable Programmes	
1. Cotton Seed Production and Extension Programmes	1-4

Probable Projects	
1. Integrated Pest Management for Cotton	4
2. Upgrading of Research Farm of CDB	4
3. Production of Quality Seed of Upland and Hill cotton	7

## 5.12 Agricultural Information Services (AIS)

**5.12.1 Recent Achievements:** During the last three years, 16,20,000 copies of “Krishi Katha” (Agricultural Information), 36,000 copies of Extension News, 5 lakh Booklets, 10 lakh leaflets, 20 lakh folders and 15 lakh copies of posters were printed and distributed among the farmers. 2,520 documentary were shown in remote villages using mobile cinema vans. 312 agriculture related programmes “Mati O Manush” (Earth and human) were transmitted through Bangladesh Television. Agriculture related daily programmes are transmitted through radio at national and regional levels. 72 and 50 talk shows were transmitted through Radio and BTV respectively. 12 audio and video/cinema and 20 fillers were produced. In addition, national fruits fair, World Food Day and similar programmes were observed.

### 5.12.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Publicity and extension of agricultural information and technology through the mass media	<ul style="list-style-type: none"> <li>Preparation of 50,000 copies of Krishi Katha, 30 technology dependant film, 40 agriculture filler and publication of 50 technology involved telp in mass media and exhibition of 3,000 agricultural films. Arrangement for transmission of 260 Mati and Manush in BTV, publication of 2,190 news and 80 and 60 talk shows in radio and TV</li> </ul>	1
2. Popularise use of organic fertiliser, green fertiliser and microbe fertiliser among the farmers	<ul style="list-style-type: none"> <li>Production of 75,000 booklets about organic fertiliser, 75,000 about green fertiliser and 50,000 about microbe fertiliser and free distribution among the farmers</li> </ul>	3
3. Perform agriculture marketing and development related all information and publication programme.	<ul style="list-style-type: none"> <li>Publication of 50 subjects based talks and 5,000 posters about marketing and preservation of agricultural commodities by general farmers in the” Krishi Katha” and “Samprashan Barta” (Extension News)</li> </ul>	8

### 5.12.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Monthly Subscribers to "Krishi Katha"	Number (lakh)	5,40,000	5,40,000	5,40,000	5,50,000	6,00,000	6,50,000
2. Monthly Extension Barta (News)	Number	12,000	12,000	12,000	18,000	18,000	18,000
3. Booklet	Number	1,67,000	1,67,000	1,67,000	2,00,000	2,50,000	2,50,000
4. Leaflet	Number	333,000	3,33,000	333,000	400,000	450,000	4,50,000
5. Poster	Number	6,66,000	6,66,000	666,000	650,000	7,50,000	8,00,000
6. Folder	Number	3,00,000	3,00,000	3,00,000	6,00,000	7,00,000	7,00,000
7. Documentry show	Number	840	840	840	810	850	900
8. Mati and Manush	Number	104	104	104	100	108	112
9. Talk show	Number	41	41	41	45	45	50
10. Film/cinema	Number	4	6	6	10	12	15
11. Filler	Number	6	10	10	15	20	20

### 5.12.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	6,50,27	7,21,46	6,73,87	7,93,53	8,51,03
<b>Development</b>	4,04,00	4,26,00	4,19,00	3,60,25	3,61,40
<b>Total</b>	10,54,27	11,47,46	10,92,87	11,53,78	12,12,43

### 5.12.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit (Non-development)	
Agricultural Information Service	1-3
Unapproved Programme	
1 Digitalized Extension Programme	1-4
Approved Project	
1 Intensification of Agricultural Information Services in 10 Regions	2,4,7
2 Agricultural Extension Component	2,4,7

## 5.13 Department of Agricultural Marketing (DAM)

**5.13.1 Recent Achievements:** 44 districts were brought under internet connectivity to facilitate the circulation of wholesale and retail market prices of agricultural commodities. An arrangement has been made to circulate this information through the web site of the department ([www.dam.gov.bd](http://www.dam.gov.bd)). In all, 75 markets including 15 wholesale and 60 growers markets were constructed. 500 Farmers Marketing Groups were constituted for the marketing of agricultural

commodities. Processing centres in Savar and Comilla and 1 Cooling Chamber in Narsingdi were constructed. Renovation of 116 warehouses in 35 districts was undertaken to allow for the preservation of cereal type crops grown by the small and marginal farmers and arrangement was made for the preservation of seed. Besides, Tk 146.48 crore was given as loan to 21,000 agricultural entrepreneurs.

### 5.13.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Perform agriculture marketing and development and publication of related information	<ul style="list-style-type: none"> <li>Despatch of one report relating to daily, weekly and monthly information on agricultural commodity prices at district and producer levels to relevant offices including television, radio and website</li> </ul>	8
2. Provide assistance to obtain fair price of agricultural commodities	<ul style="list-style-type: none"> <li>Provide assistance to obtain 20-30% proper prices at producer, wholesale and retail levels</li> </ul>	8
3. Development of existing markets and construction of new markets	<ul style="list-style-type: none"> <li>Development of 128 agriculture market at Upazila level and 30 at district level.</li> </ul>	8
4. Formation of Farmers' Groups, Farmers' Clubs and Farmers' Marketing Group.	<ul style="list-style-type: none"> <li>Formation of 500 Farmers Marketing Groups</li> <li>Formation of 20,000 Farmers' Group</li> <li>Assistance for renovation of 116 go-downs for preservation of cereal type crops.</li> </ul>	8
5. Provide technology, credit and technical assistance to the agricultural entrepreneurs	<ul style="list-style-type: none"> <li>Arrangement for Tk. 227 crore credit facilities to 28,000 agri-business entrepreneurs</li> </ul>	9

### 5.13.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Performing agriculture marketing and development and publication of related information	Number	417	417	417	417	417	417
2. Construction of central, wholesale markets and growers markets	Number	45	1	-	-	100	185
3. Formation of marketing groups, processing groups and farmers groups	Number	500	-	-	600	1500	1500
4. Agricultural entrepreneur	Number	10,000	21,000	21,000	7000	500	500

### 5.13.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	7,07,25	7,88,40	8,97,50	8,73,50	8,89,00
<b>Development</b>	91,59,00	88,27,88	5,41,00	0	0
<b>Total</b>	98,66,25	96,15,40	14,38,50	8,73,50	8,89,00

### 5.13.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit (Non-Development):	
Department of Agricultural Marketing (DAM)	1,2,3,4,5,6
Approved Projects:	
1. Bangladesh Agri-business Development Project	4,5,6
2. Strengthening Project on Bangladesh Agri-business Development	5
Un-approved Projects:	
1. Integrated Quality Horticulture Development Project (2ond Phase)	2,4,5
Probable Projects:	
1. Strengthening of Agricultural Marketing Project (Investment)	1,2,3,4,5,6
2. Determination of Production and Demand for Bangladesh Agricultural products (Technical Assistance)	1,2,
3. Development of Group Based Marketing Management of Small and Marginal Farmers of Bangladesh (Technical Assistance)	4,5,6
4. Greater Mymensing Integrated Agricultural Development Project	1,8,9
5. Extended Crops Go-down Credit Project	1,7,8

## 5.14 Soil Resource Development Institute (SRDI)

**5.14.1 Recent Achievements:** In order to ensure rational, profitable and sustainable use of gradual decreasing of land and soil resources, half-spread soil survey was completed in 110 Upazila and renewed Land and Soil Resources Use Guidelines for 90 Upazilas were printed. Under the Upazila Guidelines Renewal Programme, about 18,000 soil samples and in other pogrammes, 72,000 samples of soil, water and plants were analysed. In order to ensure rational, profitable and sustainable use of land and soil resources, District and Upazila level 1,100 officers of DAE and 300 officers of agriculture related research institutions, block level 2,200 Deputy Assistant Agricultural Officers were provided 6 days training. 30,000 farmers were given a day long training about collection of soil sample and balanced use of fertilizer. During the last three years, about 90,000 soil samples were analysed and on the basis of the test results, fertiliser recommendations cards were issued. 12,000 fertliser samples were analyzed to identify adulteration. 600 officers of DAE were given training to identify adulterated fertilizer. Booklets titled, "Land, Soil and Fertiliser Use Recommendations Guide," "System of Collection of Fertilisers Samples", "Field Level

Identification of Adulteration in Fertiliser,” and “Balanced Fertiliser Use Recommendation Manual on the Basis of Result of Analysis of Soil” were published. Farmer can now obtain balanced fertilizer use recommendations from any corner of the country through Digital System.

#### 5.14.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Encourage farmers to increase the use of balanced chemical fertiliser, farmyard manure and green fertiliser	<ul style="list-style-type: none"> <li>• Provision of training to 15,000 farmers every year</li> <li>• 40 demonstrations in 20 blocks of 20 districts</li> <li>• Observation of 40 field days</li> <li>• Fertiliser recommendation programme through on-line (Digital) has been introduced in 100 Upazila</li> </ul>	1
2. Identification of land and soil resources through soil survey and classification of land and soil resources on the basis of productivity	<ul style="list-style-type: none"> <li>• Completion of half-coverage re-survey in 40 Upazilas</li> <li>• Printing of 30 guidelines</li> <li>• Publication of Land, Soil and Fertiliser Use Recommendation Guide in 400 Unions</li> </ul>	3
3. Extension of soil test facilities up to Upazila and Union levels	<ul style="list-style-type: none"> <li>• Soil samples of 9,600 farmers collected through 12 Mobile Soil Test Laboratories (MSTL) will be analysed and 3 Balanced Fertiliser Use Recommendation Card will be issued</li> <li>• 50,000 samples through 16 permanent laboratories will be analysed and Balance Fertiliser Use Recommendation Cards in required cases will be issued</li> </ul>	3
4. Innovation and transfer of problematic Soil Management Technology.	<ul style="list-style-type: none"> <li>• Transfer of Hill Soil Management related technology to the farmers</li> <li>• Transfer of coastal Area Saline Soil Management related technology to the farmers</li> </ul>	3

#### 5.14.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Training	Number	10,000	12,000	12,000	7000	10,000	10,000
2. Guidelines Including Field Survey printed	Number	25	30	30	40	40	40

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
3. Farmer services programme (Fertilizer recommendation card distribution)	Number	30,000	50,000	50,000	50,000	4,00,000	4,00,000
4. Soil and fertilizer samples analysis	Number	40,000	40,000	40,000	50,000	50,000	50,000
5. Technology Innovation and transfer	number	6	6	6	4	4	4

#### 5.14.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	11,18,67	12,66,58	15,43,05	17,80,38	18,48,04
<b>Development</b>	34,00,00	29,16,00	15,00,00	43,45,50	2,75,94
<b>Total</b>	45,18,67	41,82,58	30,43,05	61,25,88	21,23,98

#### 5.14.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operation Unit (Non-Development)	
1. Soil Resources Development Institute	1-3
Approved Projects:	
1. Strengthening of Soil Resources Management, Analyses and Farmer Services Programmes	1,2,3
2. Food Security Programme-2006 Soil Fertility Component project	1,3
3. Strengthening of Laboratory for Determining Fertiliser Quality Programme	2,3
4. Strengthening of Farmer Services Programme through Soil Test in Permanent Laboratory	1,2,3
Unapproved Projects:	
1. Establishment of Soil and Fertiliser Research Laboratory and Research Centre Project	1,2,3

### 5.15 Bangladesh Applied Nutrition and Human Resource Development Board (BAN-HRDB)

**5.15.1 Recent Achievements:** Training relating to food based nutrition was given to 10,592 government and non-Government district and Upazila level officers, sub-assistant agricultural officers, school teachers (female), Union Parishad members, Imams, NGO workers and male and female farmers during the last 3 years. In order to create awareness about nutrition, 72 short stories have been transmitted through Bangladesh radio. BAN-HRDB also participated in 9

agricultural fairs, World Food Day and Nutrition Week. Nutrition issues are included and up dated in the curriculum at different stages of education. 15 workshops on preparation of National Food Basket were organised.

### 5.15.2 Key Activities, Outputs related to the Activity and related Strategic Objectives

Key Activity	Outputs related to the Activity	Related Strategic Objectives
1. Implementation of motivation programmes to develop modern food and nutrition habits	<ul style="list-style-type: none"> <li>• Training will be provided to 11,400</li> <li>• Organisation of 24 fairs and 21 work shops</li> </ul>	5

### 5.15.3 Output Indicators and Targets

Output Indicators	Unit	Actual 2008-09	Target 2009-10	Revised Target 2009-10	Medium Term Targets		
					2010-11	2011-12	2012-13
1. Trainings relating to food based nutrition	Person	3607	3700	3700	3800	3900	4000
2. Transmitting short stories through radio	Number	24	24	24	24	24	24
3. Participation in Fairs	Number	3	8	5	8	8	8
4. Organisation of Workshops	Number	1	6	7	7	8	8

### 5.15.4 Forward Budget Estimates

(Taka in Thousand)

	Budget 2009-10	Revised 2009-10	Budget 2010-11	Projection 2011-12	Projection 2012-13
<b>Non-development</b>	1,13,95	1,31,53	1,42,90	1,58,56	1,72,82
<b>Development</b>	0	0	0	0	0
<b>Total</b>	1,13,95	1,31,53	1,42,90	1,58,56	1,72,82

### 5.15.5 List of Projects, Programmes and Operational Units

Operational Unit/Project/Programme	Related Key Activity
Operational Unit (Non-development)	1
1. Bangladesh Applied Nutrition and Human Resources Development Board (BAN-HRDB)	1
Probable Project:	
1. Strengthening of training and research capacity of BAN-HRDB	1