**Grant No. 40**

**143 - Ministry of Agriculture**

**Medium Terms Expenditure**

(Taka in Thousands)

|  |  |  |
| --- | --- | --- |
| **Description** | **Budget****2020-21** | **Projection** |
| **2021-22** | **2022-23** |
| Operating Expenditure |  |  |  |
| Development Expenditure |  |  |  |
| **Total** |  |  |  |
|  |
| Recurrent |  |  |  |
| Capital |  |  |  |
| Financial Asset |  |  |  |
| Liability |  |  |  |
| **Total** |  |  |  |

**1.0 Mission Statement and Major Functions**

**1.1 Mission Statement**

Making agriculture profitable by enhancing crop production and productivity, crop diversification, nutrient enriched safe crop production and developing modern market system as well as ensuring nutrition and food security for all.

**1. 2 Major Functions**

* + 1. Agricultural research and education program;
		2. Agricultural extension and training;
		3. Production, standardization, certification, preservation and distribution of quality seeds;
		4. Soil survey and examination of the quality of soil, and recommendations;
		5. Preservation and marketing of agricultural products;
		6. Agricultural support and rehabilitation;
		7. Collection, distribution, innovation, procurement and management of agricultural inputs and machinery;
		8. Minor irrigation programs.

**2.0 Medium Term Strategic Objectives and Activities**

| **Medium-Term Strategic Objectives** | **Activities** | **Implementing Departments/Agencies** |
| --- | --- | --- |
| **1** | **2** | **3** |
| 1. Increased production and productivity of crops
 | * Innovation of high yielding varieties of different crops, and technologies
 | * Bangladesh Rice Research Institute
* Bangladesh Institute of Nuclear Agriculture
* Bangladesh Agricultural Research Institute
* Bangladesh Agricultural Research Council
* Bangladesh Jute Research Institute
* Bangladesh Sugarcrop Research Institute
* Cotton Development Board
* Bangladesh Wheat and Maize Research Institute
 |
| * Innovation of technologies and varieties of rice and other crops tolerant to salinity, drought, water submergence and other adverse conditions.
 | * Bangladesh Rice Research Institute
* Bangladesh Institute of Nuclear Agriculture
 |
| * Increasing the use of innovated varieties and technologies by farmers through training, publications and exhibitions/fairs/rallies/seminars/workshops
 | * Department of Agricultural Extension
* Bangladesh Agricultural Research Institute
* Bangladesh Agriculture Development Corporation
* Bangladesh Rice Research Institute
* Bangladesh Institute of Nuclear Agriculture
* Bangladesh Jute Research Institute
* Bangladesh Sugar-crop Research Institute
* Seeds Certification Agency
* Cotton Development Board
* Agriculture Information Service
* Barendra Multipurpose Development Authority
* Bangladesh Agricultural Research Council
* National Agricultural Training Academy
* Bangladesh Wheat and Maize Research Institute
 |
| * + Providing e-agriculture information services
 | * Department of Agricultural Extension
* Agriculture Information Service
* Bangladesh Rice Research Institute
* Bangladesh Agricultural Research Institute
* Soil Resource Development Institute
* Bangladesh Wheat and Maize Research Institute
 |
| * + Increasing awareness about food value and nutrition through publications, meetings and workshops
 | * Bangladesh Institute of Research and Training on Applied Nutrition
* Agriculture Information Service
* Department of Agricultural Extension
 |
| 1. Increased supply and availability of agricultural inputs
 | * Ensuring supply of fertilizers and other inputs at administered prices
 | * Department of Agricultural Extension
* Bangladesh Agriculture Development Corporation
 |
| * Procurement of irrigation and other agricultural machineries and increasing their availability
 | * Bangladesh Agriculture Development Corporation
* Barendra Multipurpose Development Authority
 |
| * Expansion of minor irrigation coverage by encouraging optimal use of surface water, and increasing the area of arable land by reducing water logging and sub-mergence
 | * Bangladesh Agriculture Development Corporation
* Barendra Multipurpose Development Authority
 |
| * Production, certification, preservation and distribution of breeder, foundation, certified and truthfully labelled seeds
 | * Department of Agricultural Extension
* Bangladesh Agricultural Research Institute
* Bangladesh Agriculture Development Corporation
* Bangladesh Rice Research Institute
* Bangladesh Institute of Nuclear Agriculture
* Seed Certification Agency
* Bangladesh Jute Research Institute
* Cotton Development Board
* Bangladesh Sugar-crop Research Institute
* Barendra Multipurpose Development Authority
* Bangladesh Wheat and Maize Research Institute
 |
| * Production, certification, preservation and distribution of breeder, foundation and truthfully labeled seeds with adaptability to adverse environment (salinity, draught and water submergence)
 | * Bangladesh Rice Research Institute
* Bangladesh Institute of Nuclear Agriculture
* Seed Certification Agency
* Bangladesh Agriculture Development Corporation
* Department of Agricultural Extension
* Bangladesh Agricultural Research Institute
* Bangladesh Jute Research Institute
* Cotton Development Board
* Bangladesh Sugar-crop Research Institute
* Bangladesh Wheat and Maize Research Institute
 |
| * Ensuring standardization of seeds
 | * Seed Certification Agency
 |
| * Meetings, seminars, fairs and exchange of technology to encourage participation of the private sector in production and development of seeds
 | * Bangladesh Agricultural Research Institute
* Bangladesh Agriculture Development Corporation
* Bangladesh Jute Research institute
* Cotton Development Board
* Seed Certification Agency
* Bangladesh Wheat and Maize Research Institute
 |
| * Marketing and ginning of cotton seed
 | * Cotton Development Board
 |
| 1. Development and maintenance of agricultural land resource base management
 | * Identification of soil and land resources through soil survey and classification of land and soil resources in terms of their productivity
 | * Soil Resource Development Institute
 |
| * Extension of soil test facilities to Upazilla and Union levels
 | * Soil Resources Development Institute
 |
| * Popularizing the use of organic fertilizer, green manure and microbial fertilizer among the farmers
 | * Department of Agricultural Extension
* Agriculture Information Service
* Bangladesh Institute of Nuclear Agriculture
* Soil Resource Development Institute
 |
| * Popularizing sustainable soil management technologies among the farmers
 | * Soil Resources Development Institute
 |
| 1. Support in supply, processing and effective marketing of agricultural products.
 | * Publicity and preservation of information on agricultural marketing and development
 | * Cotton Development Board
* Department of Agriculture Marketing
 |
| * Development and maintenance of market infrastructure and provide other supports
 | * Department of Agriculture Marketing
 |
| * Providing technological support and technical assistance to agricultural entrepreneurs and encouraging their investment in agro-processing and agro-business
 |
| * Coordination among concerned public and private departments/institutions for expansion of marketing facilities of agricultural products
 | * Secretariat
 |

**3.0 Poverty, Gender and Climate Change Reporting**

**3.1 Impact of Medium Term Strategic Objectives on Poverty Reduction, Women's Advancement and Climate Change**

**3.1.1 Increased production and productivity of crops**

**Impact on poverty reduction:** Innovation and extension of different varieties of high yielding paddy, wheat and other crops, tolerant to saline, draught and water submergence, and transfer of technologies, providing agriculture related information through e-agriculture, and higher education and training for agriculture scientists, extension workers, agriculture workers, and farmers created scope for the targeted beneficiaries, particularly the 30-60% small and marginal farmers to be involved in production of high value crops and thereby enhance their earnings. These measures contribute to alleviation of poverty.

**Impact on women’s advancement:** 30% of adult women belonging to about 1.51crore farming households are directly/indirectly involved in crop production. Production of high value crops will create employment opportunities for women. Further, through targeted programs, women and children will get access to nutritious food. Women’s participation in management of different targeted activities such as homestead fruits and vegetable gardening, crop yielding activities as well as production and preservation of seeds will promote their employment potential, increase their income level and social status.

**Impact on Climate Change Adaptation and Mitigation:** To cope with the negative impacts of climate change, salinity, drought and flood resistant rice, wheat and other crop varieties are being developed and cultivated. As a result, productivity of crops continues to increase despite negative climatic impacts. Integrated pest management activities are also reducing negative impacts on the environment.

**3.1.2 Increased supply and availability of agricultural inputs**

**Impact on poverty reduction:** Production has increased due to availability of agricultural inputs and increase of agriculture credits and as such, opportunity of farmer’s income is being enhanced. Income and production including opportunity of employment generation are increasing for the poor people. This will make direct contribution to the alleviation of poverty.

 **Impact on women’s advancement**: Women’s involvement in income generating activities is being increased with the increase in crop production. As a result, women’s unemployment opportunities has been increased.

**Impact on Climate Change Adaptation and Mitigation:** Timely distribution and efficient delivery of agricultural inputs are creating positive impacts on agricultural adaptation to climate change impacts. Efficient use of surface water has reduced the pressure on ground water extraction for irrigation purposes. Extension of improved irrigation methods has also improved the adaptive capacity of crops in the climate vulnerable regions.

**3.1.3 Development and maintenance of Agricultural land resource base management**.

**Impact on poverty reduction:** Different activities like soil analysis and increasing popularity of balanced fertilizers such as organic, green and bio fertilizer will help small and marginal farmers of drought and famine prone areas to reduce the cost needed to protect the productivity of their land. As a result, production cost of the crops will reduce, economic solvency of the poor people will increase and thus poverty will be reduced.

 **Impact on women’s advancement**: Women’s involvement in the preparation of organic and compost fertilizers creates their employment and increases their income levels.

**Impact on Climate Change Adaptation and Mitigation:** Along with the cropping, use of organic fertilizers, green fertilizers and germ fertilizers helps improving soil health at the local level to reduce the impacts of climate change.

**3.1.4 Support in supply, processing and effective marketing of agricultural products**

**Impact on poverty reduction:** Development of agricultural marketing and ensuring fair price for agricultural products have positive impact on the economic conditions of farmers. Creation of new market places and warehouses for crops reduces the influence of intermediaries, ensures fair price for products, improves economic conditions of farmers and helps to reduce the poverty of small and marginal farmers. Through encouraging investment in agri-business and agriculture programs, different labor-intensive activities such as trading in seeds, cultivation of mushroom, fruits, flowers, cactus and decorating plants create employment opportunities for the rural labor force.

**Impact on women’s advancement:** Women are getting employed in increasing numbers through targeted agro-processing and agro-business activities. These activities promote women’s participation in the labour market and enhance their social status and rights in accessing government resource and services.

**Impact on Climate Change Adaptation and Mitigation:** By creating and reforming market infrastructure and storage facilities together with technical support provision, agricultural entrepreneurs are being encouraged to use climate resilient technology, and invest in agri-businesses and processing. In addition, in emergency situations, seeds are being distributed to the farmers at the quickest possible time by expanding agricultural products’ marketing facility and ensuring synergy between relevant government and private offices/organizations.

**3.2 Poverty Reduction, Women’s Advancement and Climate Change Related Allocation**

(Taka in Thousand)

|  |  |  |
| --- | --- | --- |
| **Description** | **Budget****2020-21** | **Projection** |
| **2021-22** | **2022-23** |
| Poverty Reduction |  |  |  |
| Gender |  |  |  |
| Climate Change |  |  |  |

**4.1 Priority Spending Areas/Programmers**

| **Priority Spending Areas/Programmers** | **Related Medium Term Strategic Objectives** |
| --- | --- |
| 1. **Conduct research activities to increase production of rice, wheat, sugarcane and other crops**

On an average, 1% of total cultivable land of the country is shrinking every year due to industrialization, urbanization and growth of population. To meet the food requirement of the increasing population, increasing food production has become crucial. In this context, agricultural research activities to increase per hectare yield of rice, wheat, sugarcane and other crops and to produce crops of short duration and relay crops have been given the highest priority.  | * Increase production and productivity of crops
* Increase supply and availability of agricultural inputs
 |
| 1. **Production of quality seeds and determination of the right standard**

The use of quality seeds is essential to increase crop yield. Production and supply of quality seeds according to the needs of farmers has therefore been given the second highest priority. |
| 1. **Activities related to extension of improved crop production technologies among the farmers (training, demonstrations, field days, rallies, fairs, media publicity)**

Extension of improved crop production technologies among the farmers is crucial to increase agricultural production. Accordingly, providing training for using improved technologies, observing field day, field demonstrations, rallies, agricultural fairs and publicity using e-agriculture information services are given the third highest priority. |
| 1. **Optimal use of the surface water**

Optimal use of surface water helps the expansion of minor irrigation infrastructure and increases availability of arable land through removal of water logging and water submergence. Hence, this sector has been given priority. |
| 1. **Supply of sufficient agricultural products by expansion of Information and Communication Technology at the field level**

Promotion of ICT applications such as e-agriculture to enable continuous and timely access to credible and accurate crop related information and advice, at the field level, has been accorded priority. | * Support in supply, processing and effective marketing of agricultural products
 |
| 1. **Optimal use of organic fertilizers in crop cultivation**

The use of organic, green and bio fertilizers is necessary to preserve soil quality, improve soil health, reduce the dependency on chemical fertilizers, and increase crop yield. In this context, the inclusion of organic fertilizers in crop production has been considered as a priority area. | * Development and maintenance of Agricultural land resource base management
 |

**4.2 Medium Term Expenditure Estimates and Projection (2020-21 to 2022-23)**

**4.2.1 Expenditure by Department/Agencies/Institutional Units**

(Taka in Thousands)

| **Description** | **Budget** | **Revised** | **Budget****2020-21** | **Projection** |
| --- | --- | --- | --- | --- |
| **2019-20** | **2021-22** | **2022-23** |
|  |  |  |  |  |  |

**4.2.2 Expenditure by Economic Group Wise**

(Taka in Thousands)

| **Economic****Group** | **Description** | **Budget** | **Revised** | **Budget****2020-21** | **Projection** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2021-22** | **2022-23** |
|  |  |  |  |  |  |  |

**5.0 Key Performance Indicator (KPIs)**

| **Indicator** | **Related Strategic Objectives** | **Unit** | **Revised****Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| 1. Innovated varieties of improved crops and technologies | 1 | Number | - |  | - |  | - | - |  |
| a. Developed Variety. | 1 | Number | 28 |  | 37 |  | 36 | 36 |  |
|  b. Developed Technology. | 1 | Number | 50 |  | 76 |  | 78 | 80 |  |
| 2. Extended coverage of soil sample testing facilities to determine soil standards | 3 | % | 12.9 |  | 13.5 |  | 14.00 | 14.00 |  |
| 3. Extended coverage of minor irrigation facilities on agricultural land and increase of arable land | 1, 2 | Hectares (lakh) | 10.85 |  | 10.98 |  | 11.00 | 11.25 |  |
| % | 14.36 |  | 14.64 |  | 15.03 | 15.34 |  |
| 4. Production of major crops  |  |  |  |  |  |  |  |  |  |
| a) Rice  | 1,2,4 | M.T. (Crore) | 3.64 |  | 3.85 |  | 3.85 | 3.85 |  |
| b) Wheat  | M.T. (Lakh | 13.00 |  | 11.50 |  | 11.55 | 11.60 |  |
| c) Potato | M.T. (Lakh) | 99.96 |  | 100.00 |  | 100.20 | 100.30 |  |
| d) Oil Seed | M.T. (Lakh) | 10.59 |  | 11.12 |  | 11.14 | 11.16 |  |
| e) Vegetable | M.T. (Lakh) | 164.59 |  | 164.56 |  | 164.78 | 164.85 |  |
| f) Maize  | M.T. (Lakh | 38.28 |  | 40.00 |  | 41.00 | 41.50 |  |
| g) Spices | M.T. (Lakh) | 37.88 |  | 38.00 |  | 38.12 | 38.23 |  |
| h) Pulse  | M.T. (Lakh | 10.50 |  | 11.00 |  | 11.20 | 11.25 |  |
| i) Jute | bel (Lakh | 74.39 |  | 80.08 |  | 80.13 | 80.22 |  |

**6.0 Recent Achievements, Activities, Output Indicators and Targets and Expenditure Estimates of the Departments/Agencies**

**6.1 Secretariat**

**6.1.1 Recent Achievements:** During the last three years (2015-16 to 2017-18) due to government policies and initiatives 1049.01 lakh MT rice, 38.61 lakh MT wheat, 93.84 lakh MT maize, 300.81 lakh MT potato and 447.04 lakh MT vegetables were produced. During this period, a total of 3.76 lakh MT seeds of different crops have been supplied and about TK. 15106.69 crore has been disbursed as subsidy on fertilizer and other agricultural inputs and about TK 379.69 crore for agricultural rehabilitation. Agricultural machineries have been supplied to the farmers at 50-70% reduced price. A total of 276 high yielding varieties and technologies have been innovated some of which are tolerant to salinity, drought and water submergence by this stipulated time.

**6.1.2 Activities, Output Indicators and Target**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Coordination among concerned public and private institutions for expansion of marketing facilities | Coordination meeting | 4 | No. | 4 |  | 4 |  | 4 | 4 |  |

**6.1.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.2 Department of Agricultural Extension**

**6.2.1 Recent Achievements:** In order to meet the demand of food of the growing population, the Department of Agricultural Extension has been able to produce rice, wheat, maize and potato bumper in the last 3 years through the transfer of advanced technology among the farmers. In the last 3 years, total production of rice was 1049.01 million metric tons. A total of 1189.32 lakh MT food grains (rice+ wheat+corn) were produced. A total of 7.22 million exhibitions have been set up for the transfer of technologies at peasant level. In the last 3 years, training programs were arranged for a total of 22.05 lakh farmers on the latest technology, among them 36%were women. A total of 3390 farmers groups/ farmers clubs have been set up to ensure safe food production, processing and marketing of products. Apart from this 22.55 lakh compost / vermi compost fertilizers have been used in the household and adjoining areas of the farm families to increase the production and utilization of biomass in the soil. In 2008 use of pesticide was 48687 MT, which was reduced to 37258 MT. in 2017. In last 3 years a number of 4,22,21,416 trees were planted to preserve ecological balance.

**6.2.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trained farmers | 1 | Number in Lakh | 7.35 |  | 7.50 |  | 7.55 | 760 |  |
| Exhibitions conducted | 1.42 |  | 1.41 |  | 1.43 | 1.44 |  |
| Field days/rallies organized | Number(in thousands) | 18.20 |  | 18.75 |  | 18.80 | 1890 |  |
| Agriculture Fairs arranged | Number | 385 |  | 415 |  | 430 | 435 |  |
| Motivational Tours conducted | 410 |  | 425 |  | 430 | 432 |  |
| Seminar/ Workshop  | 1 | Number | 140 |  | 110 |  | 120 | 125 |  |
| 1. Providing e-agriculture information services
 | ICM farmer’s groups and farmer’s clubs | 1 | Number  | 1140 |  | 1142 |  | 1145 | 1150 |  |
| 1. Increasing awareness about food value and nutrition through publicity, publication, meeting and workshop
 | Trained person | 1 | Number | 3300 |  | 3350 |  | 3356 | 3360 |  |
| 1. Ensuring supply of fertilizers and other inputs at administered prices
 | Inspection fertilizer distribution by Agri. Officers | 2 | No(Thousands) | 249 |  | 250 |  | 252 | 254 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully level seeds
 | Foundation seeds distributed | 2 | Metric Ton(in thousands) | 1.40 |  | 1.42 |  | 1.43 | 1.45 |  |
| 1. Production, certification and distribution of breeder, foundation and truthfully level seeds tolerant to salinity, draught and water submergence
 | Foundation seed of paddy Distributed | 2 | Metric Ton | 4.20 |  | 4.30 |  | 4.32 | 4.45 |  |
| 1. Popularize the use of organic fertilizer, green fertilizer and microbial fertilizer among the farmers
 | Heaps prepared at farmers’ homesteads | 3 | No. Lakh | 7.60 |  | 6.0 |  | 6.50 | 6.52 |  |
| Green fertilizer Exhibitions conducted | Number(in thousands) | 6.30 |  | 6.40 |  | 6.50 | 6.55 |  |

**6.2.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.3 Bangladesh Agriculture Development Corporation**

**6.3.1 Recent Achievements:** The remarkable achievements for the last three years are: Production of 4.10 lacs MT seed of various crops, distribution of 3.80 lac MT of the same, production of 281.53 lacs pieces of seedling and cuttings, 7.147 MT of vegetables and fruits, import of 33.86 lac MT of non-urea fertilizer and distribution of 30.03 lac MT of the same. Construction of 10 nos. of cold storages for potato seeds, 17 nos. pre-fabricated steel godown (fertilizer), 6 nos. of rubber dam, re-excavation of 1225 kms canal, establishment of 221 km Surface irrigation channels and 1216.64 kms buried irrigation channels, 1577 LLP (power pump), 574 nos. of deep tube wells, rehabilitation of 509 nos. of deep tube wells, extension of 0.856 lac hectares of irrigation coverage and construction of 1631 nos. of various types of irrigation infrastructure.

**6.3.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Persons trained | 1 | No.( in thousands) | 15 |  | 16.50 |  | 16.8 | 17.1 |  |
| Seminar Workshop | No. | 6 |  | 9 |  | 9 | 11 |  |
| 1. Ensuring the supply of fertilizers and other inputs at administered prices
 | Non-urea fertilizer distributed | 2 | Lakh Metric Ton | 11.25 |  | 11..50 |  | 11.50 | 11.50 |  |
| Distributed TSP | 3.75 |  | 3.75 |  | 3.75 | 3.75 |  |
| Distributed DAP | 2.75 |  | 2.75 |  | 2.75 | 2.75 |  |
| Distributed MOP | 7.75 |  | 5.00 |  | 5.00 | 5.00 |  |
| 1. Procurement of irrigation and other agricultural machineries and increasing their availability
 | Machinery items distributed | 2 | Number(in thousands | 0.250 |  | 0.350 |  | 0.400 | 0.450 |  |
| Rubber Dam constructed | Number | 5 |  | 3 |  | 3 | 3 |  |
| Construction of surface and underground irrigation canals | k.m | 350 |  | 475 |  | 450 | 425 |  |
| 1. Expansion of minor irrigation coverage by encouraging optimal use of surface water, and increasing the area of arable land by reducing water logging and sub-mergence
 | Expanded irrigation area | 2 | Lakh Hectare | 0.215 |  | 0.22 |  | 0.23 | 0.24 |  |
| Increased arable land | Hectare(in thousands) | 5.65 |  | 5.86 |  | 6.095 | 6.305 |  |
| Re-excavated canals | k.m | 450 |  | 470 |  | 450 | 450 |  |
| Irrigation infra-structure constructed | Number | 400 |  | 315 |  | 104 | 100 |  |
| Irrigated area | 2 | Lakh Hectare | 5.65 |  | 5.86 |  | 6.095 | 7.00 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully labelled seeds
 | Produced and distributed seeds | 2 | Lakh Metric Ton | 1.26 |  | 1.32 |  | 1.385 | 1.45 |  |
| Produced foundation seeds | M.T(Thousands) | 17.00 |  | 20.50 |  | 21.00 | 21.50 |  |
| Produced Certified seeds | 68.00 |  | 70.00 |  | 72.00 | 74.00 |  |
| Produced TLS | 47.00 |  | 48.00 |  | 50.00 | 52.00 |  |
| Distributed foundation seeds | 16.97 |  | 17.00 |  | 20.50 | 24.00 |  |
| Distributed certified seeds | 63.451 |  | 68.00 |  | 70.00 | 72.00 |  |
| Distributed TLS | 45.579 |  | 47.00 |  | 48.00 | 49.00 |  |
| Saplings produced | Number (lakh) | 335.5 |  | 362.7 |  | 394.3 | 425.90 |  |
| Sapling distributed | Number (lakh) | 335.5 |  | 362.7 |  | 394.3 | 425.9 |  |
| Vegetables and fruits produced | M.T (Lakh) | 3.14 |  | 3.47 |  | 3.68 | 3.89 |  |
| Vegetables and fruits distributed | 3.14 |  | 3.47 |  | 3.68 | 3.89 |  |
| 1. Production, certification and distribution of breeder, foundation and truthfully labelled seeds tolerant to salinity, drought and water submergence
 | Produced and distributed seeds | 2 | Metric Ton(in thousands) | 9 |  | 10 |  | 10 | 10 |  |
| Produced tolerant varieties seeds | Metric Ton(in thousands | 10 |  | 10.00 |  | 10.00 | 10.00 |  |
| Distributed tolerant varieties seeds | Metric Ton(in thousands | 9 |  | 10 |  | 10 | 10 |  |
| 1. Meetings, seminars, fairs and technology exchange to encourage participation of the private sector in production and development of seeds
 | Arranged meeting/ seminar | 2 | Number | 8 |  | 6 |  | 4 | 4 |  |

**6.3.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.4 Bangladesh Rice Research Institute**

**6.4.1 Recent Achievements:** During the last three years (2015-16 to 2017-18), total 20 high yielding varieties of rice have been developed and released. Amongst them are 1 basmoti type long slender-fine, 1 long slender-fine export quality, 2 zinc enriched and 1 medium blast resistance Boro; 2 salinity resistant, 2 aromatic, 3 tidal, 1 drought resistant, 1 zinc enriched and 1 hybrid Aman; 1 drought resistant Broadcast. Aus, 1 short duration Nerica type and 1 water stagnant Transplant. Aus. Besides, 1 USG applicator and 1 sollar light trap have been innovated. 512.00 MT breeder seeds have been produced and supplied to more than 500 governments, private, NGOs and individual entrepreneurs connected with the seed production-network. To facilitate technology transfer, training has been provided to 17,200 farmers, agricultural workers, and officials, 17,000 field demonstration, 162 seminar/workshops, 86 fairs/ rally have been organized. 300 field demonstrations have been organized to popularize the innovated agricultural machineries of BRRI. 1.70 lakh copies of 11 reports on modern paddy cultivation, rice journals, annual research reports and booklets have been published by BRRI.

**6.4.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies.
 | Innovate varieties of paddy and other crops | 1 | Number | 2 |  | 5 |  | 2 | 2 |  |
| Innovate/ develop agriculture technologies | 7 |  | 9 |  | 2 | 2 |  |
| 1. Innovation of technologies and nutrient enriched varieties of rice and other crops tolerant to salinity, drought and water submergence and other adverse conditions
 | Innovate rice varieties | 1 | Number | 2 |  | 2 |  | 2 | 2 |  |
| Innovate rice technologies | 1 | Number | 2 |  | 2 |  | 2 | 2 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trained Persons/ Farmers | 1 | Number(in thousands | 5.00 |  | 5.50 |  | 5.50 | 5.50 |  |
| Transferred technologies at field level | 3 |  | 3 |  | 3 | 3 |  |
|  Demonstration established |  Number(in thousands | 6.50 |  | 6.60 |  | 6.60 | 6.60 |  |
| Seminar/ workshop arranged | Number | 50 |  | 50 |  | 50 | 50 |  |
| Varieties transferred at field level | Number | 3 |  | 3 |  | 3 | 3 |  |
| Extension officer/staffs | Number(in thousands | 1.10 |  | 1.20 |  | 1.20 | 1.20 |  |
| Innovation of agriculture machineries/ develop | Number | 1 |  | 1 |  | 1 | 1 |  |
| Number of publicity | Number | 10 |  | 10 |  | 10 | 10 |  |
| 1. Providing e – agriculture information service
 | Persons benefited | 1 | Number (Lakh | 3.00 |  | 3.00 |  | 3.00 | 3.00 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds
 | Breeder seeds produced | 2 | M.T | 100 |  | 100 |  | 100 | 100 |  |
| Truthfully labelled seed produced  | 30 |  | 30 |  | 30 | 30 |  |
| Breeder seeds distributed  | 100 |  | 100 |  | 100 | 100 |  |
| Truthfully labelled seeds distributed | 30 |  | 30 |  | 30 | 30 |  |
| 1. Production, certification and distribution breeder, foundation and truthfully level seeds tolerant to salinity, draught and water submergence and other conditions
 | Produced adverse resistant seeds | 2 | Metric Ton) | 25 |  | 25 |  | 25 | 25 |  |
| Distributed adverse resistant l seeds  | 25 |  | 25 |  | 25 | 25 |  |

**6.4.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.5 Bangladesh Agricultural Research Institute**

**6.5.1 Recent Achievements:** During the last three years (2015-16, 2016-17, 2017-18), 71 varieties of different crops such as wheat, maize, tuber crops, vegetables, fruits, flowers, pulses, oilseeds and spices were developed of which 12 varieties are drought and 3 varieties are salt tolerant. Moreover, 1040 germplasms of those crops were collected. Besides, 60 technologies have been developed on soil, fertilizer and water management, disease and insect pest management, crop intensification with new cropping patterns, post-harvest handling, processing and transportation of crops, and 9 agricultural machineries for mechanized agriculture. A total of 49,500 persons, who are scientists, extension and NGO personnel and farmers were trained up. Moreover, 7,500 persons were informed about the developed technologies through 150 nos. seminar, symposium and workshops. For the dissemination of technology, 60 publications were made and 8,000 demonstration blocks were set up. In spite of these, 3000 m.ton seeds (Breeder and TLS) of BARI developed varieties were produced and distributed among the farmers, government, NGO and other entrepreneurs. Among them, 135 m.ton seeds were for unfavorable eco-system. Moreover, 30 lakh nos. seedling/sapling/cutting were produced and distributed among the farmers, government, private, NGOs and entrepreneurs. Eighty television programs on BARI mandated crops and developed technologies were recorded and telecasted several times for mass communication. During this period, memorandum of understanding (MOU) was signed with 21 organizations for bilateral cooperation.

**6.5.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies
 | Innovated varieties | 1 | Number | 20 |  | 20 |  | 20 | 21 |  |
| Innovated technologies | 47 |  | 42 |  | 42 | 43 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Training provided | 1 | Batch(Number) | 340 |  | 350 |  | 350 | 350 |  |
| Person(in thousands) | 10 |  | 11 |  | 11 | 11 |  |
| 1. Providing e-agriculture information service
 | Benefited farmer | 1 | Persons in Thousands | 100 |  | 110 |  | 115 | 120 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully level seeds
 | Breeder and truthfully labeled l seeds Produced and distributed | 2 | Metric ton(in thousands) | 0.90 |  | 0.90 |  | 0.92 | 0.95 |  |
| 1. Production and distribution of breeder, foundation, certified and truthfully seeds of rice, wheat and other crops tolerant to salinity, drought and water submergence and other adverse conditions
 |  Produuced breeder and truthfully labelled seeds | 2 | M.T  | 45 |  | 45 |  | 45 | 45 |  |
| 1. Meetings, seminars, fairs and technology exchange to encouraging the participation of the private sector in production and development of seeds
 | Memorandum of Understanding signed with private enterpreneurs  | 2 | Number | 8 |  | 8 |  | 8 | 8 |  |

**6.5.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.6 Bangladesh Jute Research Institute**

**6.6.1 Recent Achievements:** Four high yielding varieties jute and allied fibre crops (deshi jute-1, tossa jute-1, kenaf-1 and mesta-1) have been developed in last three years (2015-16 to 2017-18). Two advanced breeding lines of deshi jute Shoshi-1, Shoshi-2 and two advanced breeding lines of tossa jute, Robi-1, Robi-2, have been developed. In order to secure intellectual property right of jute genome information, 7 patent application had been filed in different countries of the world including Europe and America. Out of which recognition of 6 patents have been received from different countries including America, Australia, Japan, South Africa, Hong Kong, Malaysia and Europe. Training has been provided to 11350 jute farmers, extension workers and jute goods producers to disseminate agricultural and industrial technologies. In last three year, 4500 kg breeder seeds and 14 tons truthfully labeled seeds have been produced and distributed to BADC and other private organizations, and farmers level. Six jute goods technologies have been developed including jute-plastic composite, jute-cotton-sheep wool blended blanket, different kinds of jute based textile products by blending jute with cotton. Jute geo textile has been included in the schedule of LGED, Water Development Board and PWD for commercial use as important construction material in specified areas (rural road construction, river bank protection and hill slope management).

**6.6.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies.
 | Innovated new varieties of jute | 1 | Number | 1 |  | 2 |  | 2 | 2 |  |
| Innovated technology | 3 |  | 8 |  | 9 | 9 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Persons/farmers Trained | 1 | Number(in thousands) | 1.50 |  | 1.50 |  | 1.50 | 150 |  |
| Extensions employee trained | Number | 120 |  | 150 |  | 180 | 200 |  |
| Report, bulleting, leaflet booklet, newsletters etc. published | Number | 10 |  | 10 |  | 12 | 12 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds
 | Produced breeder seeds | 2 | Kilogram(in thousands) | 1.50 |  | 1.60 |  | 1.80 | 200 |  |
| Produced truthfully labeled seeds | Metric ton | 12 |  | 14 |  | 15 | 15 |  |
| 1. Production, certification, preservation and distribution of seeds of rice, wheat and other crops tolerant to adverse conditions like salinity, drought, water submergence and others
 | Breeder seeds produced | 2 | kg | 60 |  | 60 |  | 60 | 60 |  |
| Truthfully labelled seeds distributed | 220 |  | 240 |  | 260 | 260 |  |
| 1. Meetings, seminars, fairs and technology exchange to encouraging the participation of the private sector in production and development of seeds
 | Memorandumof understanding signed | 2 | Number | 2 |  | 2 |  | 2 | 2 |  |
| Fairs participated | 8 |  | 9 |  | 10 | 10 |  |
| Arranged meeting-seminars | 10 |  | 12 |  | 15 | 15 |  |

**6.6.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.7 Bangladesh Institute of Nuclear Agriculture (BINA)**

**6.7.1 Recent Achievements:** During the last three years, Bangladesh Institute of Nuclear Agriculture (BINA) has released 20 high yielding varieties of different crops such as: four varieties of rice, one variety of wheat, one variety of chili, one variety of garlic, one variety of mungbean, one variety of soybean, one variety of sesame, two varieties of lentil, three varieties of tomato, two varieties of chickpea, two varieties of onion and one variety of citrus fruit (2015-16**:** Binadhan-17, Binadhan-18, Binatomato-11, Binatomato-12, Binasola-9, Binasola-10, Binatill-4, Binamasur-10; 2016-17**:** Binadhan-19, Binagom-1, Binarasun-1, Binasoybean-5, Binamasur-11, Binamoog-9, Binamorich-1; 2017-18: Binadhan-20, Binapiaj-1, Binapiaj-2, Binalebu-1, Binatomato-13). Fertilizer requirement dose has been determined for higher production of different corps. Besides, 525.64 Metric ton Breeder seed, Truthfully labelled seeds have been produced and 485.95 Metric ton seeds have been distributed among the farmers of BINA developed 102 varieties. 6140 blocks and experimental demonstrations were set up at 45 different districts of the country. 8310 farmers, 1950 officers and staffs of DAE, BADC and NGO’s were trained by BINA. A total of 1,15,000 copies of leaflets, booklets and BINA profiles were published. 15 non-commodity technologies about soil management, bio-fertilizer production, insect and diseases management, irrigation and water management, crop management and on farm research were developed.

**6.7.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies
 | Innovated varieties  | 1 | Number | 2 |  | 5 |  | 5 | 5 |  |
| Innovated technologies | 2 |  | 5 |  | 5 | 6 |  |
| 1. Innovation of technologies and varieties of rice and other crops tolerant of salinity, drought and water submergence and other adverse conditions
 | Innovated varieties) | 1 | Number | 1 |  | 1 |  | 1 | 1 |  |
|  Innovated technologies | 1 |  | 1 |  | 1 | 1 |  |
| Innovated microbial fertilizer | 0 |  | 0 |  | 0 | 0 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Persons/farmers trained | 1 | Person(in thousands) | 3.00 |  | 3.00 |  | 3.00 | 3.20 |  |
| Extensions officers trained | Number(in persons | 500 |  | 500 |  | 500 | 600 |  |
| Exibition set  | Number (Thousands) | 1.80 |  | 1.90 |  | 1.90 | 2.00 |  |
| Workshop/seminar organized | Number | 30 |  | 30 |  | 32 | 33 |  |
| Varieties transfered to DAE | 5 |  | 5 |  | 5 | 6 |  |
| Technologies transfered to DAE | 2 |  | 2 |  | 2 | 3 |  |
| Varieties transferred at field level | 10 |  | 12 |  | 12 | 13 |  |
| Technologies transferred at field level | 2 |  | 2 |  | 2 | 2 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully level seeds
 | Breeder seeds produced | 2 | Metric ton | 32.00 |  | 32.00 |  | 32.00 | 33.00 |  |
| Truthfully labelled seeds produced | 32 |  | 33 |  | 34 | 35 |  |
| Breeder seeds distributed | 31 |  | 32 |  | 31 | 32 |  |
| Truthfully labelled seeds distributed | 31.00 |  | 32 |  | 33 | 34 |  |
| 1. Production, certification and distribution of breeder, foundation and truthfully labeled seeds tolerant to salinity, draught and water submergence
 | Tolerant of adverse condition seeds produced  | 2 | Metric ton | 25 |  | 25 |  | 23 | 24 |  |
| Tolerant of adverse condition seeds distributed | 24 |  | 24 |  | 25 | 26 |  |
| 1. Popularizing the use of organic fertilizer, green fertilizer and microbial fertilizer among the farmers
 | Micro-bio fertilizer produced and distributed | 3 | Metric ton | 0.500 |  | 0.500 |  | 0.500 | 0.550 |  |

**6.7.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.8 Bangladesh Sugarcane Research Institute**

**6.8.1 Recent Achievements:** During the last three years (2015-16 to 2017-18) two sugarcane varieties, BSRI Akh 45 and BSRI Akh 46, have been released. Two varieties of tropical sugarbeet., BSRI Sugarbeet 1 and BSRI Sugarbeet 2, have been registered. A year round fruit bearing palmyra palm variety BSRI Tal 1 and a Stevia variety viz., BSRI Stevia 1 of sweetener crop have also been registered. Advanced agronomic management technology of sugarcane has been developed. Fertilizer management technology of sole cane, intercrop and ratoon for whole country have been standardized and recommended. Five agricultural tools and farm machineries have been developed including BSRI improved cane crusher for cane crushing, Paired-row trencher for cane cultivation and power weeder for efficient weeding. Sugarbeet research has been completed in 22 different areas of Bangladesh including salinity prone areas. Nipa virus free date palm juice extraction technology has been developed. 1,50,000 seedlings of date palm and 30,000 seedlings of palmyra palm have been planted around the country. Furthermore, 10,000 ton disease free clean seed of sugarcane have been distributed among the sugarcane growing farmers all over the country.

**6.8.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies
 | Innovated varieties developed | 1 | Number | - |  | 1 |  | 1 | 1 |  |
| Demonstration | No. | 340 |  | 345 |  | 350 | .55 |  |
| Innovated technologies | No | 5 |  | 6 |  | 7 | 7 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trained farmers | 1 | Person(In thousands) | 2.2 |  | 2.4 |  | 2.6 | 2.8 |  |
| Trained (Extension officer/Staffs | Number | 650 |  | 650 |  | 650 | 650 |  |
| Seminar/ workshop arranged | 14 |  | 15 |  | 16 | 17 |  |
| Varieties transferred at field level | 1 |  | 1 |  | 1 | 1 |  |
| Technologies transferred at field level | 6 |  | 7 |  | 8 | 9 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds
 | Seeds produced  | 2 | Metric ton | 2146 |  | 2408 |  | 2880 | 3352 |  |
| Seed distributed | 2146 |  | 2408 |  | 2880 | 3352 |  |
| 1. Production, certification, preservation and distribution of breeder, foundation and truthfully labelled seeds with adaptability to adverse environment (salinity, draught and water submergence)
 | Produced seeds | 2 | Metric ton | 250 |  | 300 |  | 350 | 400 |  |
| Distributed seeds | Metric ton | 250 |  | 300 |  | 350 | 400 |  |

**6.8.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.9 Barendra Multipurpose Development Authority**

**6.9.1 Recent Achievements:** During the last three years (2015-16 to 2017-18) 21500 hectares of land has come under controlled irrigation by installing 723 deep tubewells and low lift pumps, electrifying 697 irrigation equipments, and by constructing 1986 km burried pipe lines. BMDA has also activated 419 numbers of unserviceable deep tube well. BMDA has re-excavated 516.85 km canal, 128 derelict ponds, excavated 182 dug well, constructed 1 rubber dam and also constructed 89 submerged weirs across the canal to conserve surface water which cover supplementary irrigation of about 65250 hectares of land. BMDA has produced 1815 M.T seed and distributed to the farmers. A number of 6550 farmers were also trained in this regard. BMDA planted 8.12 lac fruits, medicinal and forest trees last three years. BMDA has constructed 199.00 km rural road and repair 39.00 km also. Besides these BMDA operated about 15842 deep tube wells per year which cover 5.03 lac hectares of land.

**6.9.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | farmers trained | 1 | No.(In thousands) | 1.25 |  | 1.00 |  | 0.50 | 0.50 |  |
| Transferred Alternate wetting and drying (AWD) technology  | Plot in Hectare | 20 |  | 20 |  | 20 | 20 |  |
| 1. Procurement of irrigation and other agricultural machineries and increasing their availability.
 | Deep tube well installed and connected to electricity | 2 | Number | 15887 |  | 15897 |  | 16097 | 16147 |  |
| Irrigation canal constructed | Kilometer | 170 |  | 10 |  | 100 | 150 |  |
| Expanded irrigation area | Hectare(In thousands | 1.25 |  | 3.00 |  | 2.00 | 2.50 |  |
| Deep tube well used | Number in thousands | 15.887 |  | 15.897 |  | 16.097 | 16.147 |  |
| irrigation area coverage | Number in lac | 5.20 |  | 5.205 |  | 5.21 | 5.22 |  |
| Expanded agriable land | Hectare(In Thousand) | 0.75 |  | 0.30 |  | 0.50 | 0.60 |  |
| 1. Expansion of minor irrigation coverage by encouraging optimal use of surface water, and increasing the area of arable land by reducing water logging and sub-mergence
 | Re-excavated canal | 2 | km | 13 |  | 15 |  | 225 | 250 |  |
| Cross dams constructed | no | 2 |  | 0 |  | 5 | 10 |  |
| Ponds re-excavated  | No | 0 |  | 0 |  | 50 | 100 |  |
| Dug well excavated | No  | 100 |  | 147 |  | 50 | 50 |  |
| Use of power pumps | No  | 15887 |  | 15897 |  | 16097 | 16147 |  |
| Area covered under complementary irrigation | Hectare (Thousands) | 68 |  | 68 |  | 70.00 | 72.00 |  |
| 1. Production, certification and distribution of breeder, foundation and truthfully labelled seeds
 | Breeder, certificated and truthfully labelled seeds production and preservation | 2 | M.T | 600 |  | 600 |  | 600 | 600 |  |
| Seeds distributed | 2 | M.T | 600 |  | 600 |  | 600 | 600 |  |

**6.9.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.10 Bangladesh Agricultural Research Council**

**6.10.1 Recent Achievements:** During the last three years (2015-16 to 2017-18), the program review activities of 6 NARS institutes, the annual research program and the budget of 12 NARS institutes have been approved annually by the Executive Council of the BARC. In addition to this 115 core research programs have been approved and financed through the agricultural research organizations and their associate organizations. Development and dissemination activities of 185 agricultural technologies are ongoing through 12 agricultural research institutes and associates. About 4370 field demonstration and field days on rice and pulse crops have been organized and recommendation have been made by field level problem identification of research and technology dissemination through workshop. Foundation training of 180 agri-scientists has been arranged for human resource development. At present 19 Agri-Scientists are on study to achieve Ph.D degree. Short term trainings have been imparted to 3800 agri-scientists, extension officers and the farmers on 48 subjects to increase efficiency on research and technology dissemination and uplift the research standard. 5160 agri-scientists, extension officers and the farmers attended on the different seminars and workshops on 23 subjects.

**6.10.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies.
 | New research action plans prepared | 1 | Number | 45 |  | 48 |  | 48 | 50 |  |
| New research proposals approved | 50 |  | 52 |  | 52 | 54 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trainees | 750 |  | 800 |  | 850 | 950 |  |

**6.10.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.11 Cotton Development Board**

**6.11.1 Recent Achievements:** During the last three years (from 2015-16 to 2017-18), CDB conducted research in various disciplines (breeding, agronomy, entomology, soil science, pathology) on 52.0 hectares of five farms. At field/farmer level, on-farm trials were carried out in various disciplines (agronomy and soil science) on 5.37 hectares of land. During the last three years, 34.8 MT breeder seeds were produced by cultivating 24 hectares land and 198.8 MT foundation seeds were produced by cultivating 137 hectares of land. In Hill Cotton, 0.34 MT breeder seeds were produced by cultivating 1.5 hectares of land and 0.46 MT foundation seeds were produced by cultivating 02 hectares of land. At the same time, 84142 MT cotton fibers were produced on 128350 hectares of land in last three years. At that time, 3 high yielding varieties (hill cotton-3, CB-15 & CB-16) and 1 Hybrid variety of cotton developed by CDB was registered with the National Seed Board.

**6.11.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of different crops, and technologies.
 | Innovation of varieties | 1 | Number | 1 |  | 1 |  | 1 | 1 |  |
| Set-up trail | 29 |  | 30 |  | 30 | 30 |  |
| Participatory research/ Demonstrated plot | 900 |  | 1000 |  | 1100 | 1100 |  |
| Technologies innovated | Number | 3 |  | 2 |  | 3 | 3 |  |
| Cotton produced | Bale (Lakh) | 1.75 |  | 1.80 |  | 1.85 | 1.90 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Cotton farmers trained | 1 | NumberIn thousand | 6.00 |  | 5.00 |  | 6.00 | 6.00 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully level seeds
 | Production and distribution of truthfully labelled seeds | 2 | Metric ton | 155 |  | 100 |  | 100 | 100 |  |
| 1. Production, certification, preservation and distribution of breeder, foundation and truthfully labelled seeds with adaptability to adverse environment (salinity, draught and water submergence)
 | Seeds distributed | 2 | kg | 58 |  | 40 |  | 40 | 40 |  |
| 1. Meetings, seminars, fairs and technology exchange to encouraging the participation of the private sector in production and development of seeds
 | Workshop, Meeting-Seminar | 2 | Number | 4 |  | 4 |  | 4 | 4 |  |
| 1. Marketing and ginning of cotton seeds
 | Cotton seeds-ginned | 2 | Metric ton | 283 |  | 180 |  | 180 | 180 |  |
| 1. Publicity and preservation of information on agriculture marketing and development
 | Organized meeting/seminar/workshop | 4 | Number | 2 |  | 2 |  | 2 | 2 |  |

**6.11.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.12 Seed Certification Agency**

**6.12.1 Recent Achievements:** During the last three years (2015-16 to 2017-18) 1,27,838 hectares of seed-crop field of notified crops were inspected and evaluated. A total number of 4,32,26,408 certification tags were issued for seeds within approved standard. Purity analysis, moisture determination and germination tests of 34,595 seed samples were done in the National and Regional Seed Testing Laboratories. Amount of certified seeds was 3,87,585 metric tons. A total number of 2,669 farmers & seed dealers and 1,116 officers and staff were trained on seed production, processing & preservation and seed legislations. Numbers of new crop varieties released/ registered on the basis of Value for Cultivation and Uses (VCU) tests and Distinctness, Uniformity and Stability (DUS) tests conducted by this organization were 66 for rice (23 inbreeds and 43 hybrids), 4 for wheat, 2 for jute, 18 for potato, 1 for mesta, 1 for kenaf and 2 for sugarcane. During the last three years 3,320 rice samples, 783 wheat samples, 429 jute samples and 789 potato samples from certified seed lots were evaluated through pre-post control grow-out tests. Protein-zinc fortified 1, zinc fortified 1, drought tolerant 1, salinity tolerant 3, tide tolerant 2 varieties of rice, heat tolerant 2 varieties of wheat, heat tolerant 1 & salinity tolerant 1 varieties of potato and flood-drought-salinity & stagnant water tolerant 2 varieties of sugarcane were released during this time.

**6.12.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trained farmers | 1 | Person | 1980 |  | 2100 |  | 2200 | 2300 |  |
| Seminar/ workshop arranged | 11 |  | 20 |  | 21 | 22 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds
 | Field visit of breeder, certified, foundation and Truthfully labeled (rice, wheat, potato and jute) | 2 | Hector (Thousnds) | 40 |  | 50 |  | 52 | 54 |  |
| Production of breeder, foundation and certified seeds (Rice, wheat, potato and jute) | M.T (Thousands) | 137 |  | 140 |  | 145 | 150 |  |
| Sample of breeder, foundation and certified seeds rice, wheat, potato and jute tested | Number | 5200 |  | 5300 |  | 5350 | 5400 |  |
| 1. Production, certification, preservation and distribution of breeder, foundation and truthfully labelled seeds with adaptability to adverse environment (salinity, draught and water submergence)
 | Production of breeder, foundation and certified seeds (Rice, wheat, potato and jute | 2 | Hector (Thousands)) | 6 |  | 10 |  | 12 | 15 |  |
| Sample of breeder, foundation and certified seeds rice, wheat, potato and jute tested | MT (Thousands) | 9 |  | 25 |  | 32 | 36 |  |
| 1. Ensuring the standardization of seeds
 | Sample experiment at farmer’s level (rice, wheat and jute) | 2 | Number | 4000 |  | 4500 |  | 4700 | 5000 |  |
|  Examination of standardization through Marketing monitoring, sample collection experiment | 1800 |  | 2500 |  | 2700 | 3000 |  |
| Variety evaluated (DUS, VCU experiment) | 230 |  | 250 |  | 260 | 265 |  |
| 1. Meetings, seminars, fairs and technology exchange to encouraging the participation of the private sector in production and development of seeds.
 | Developed private entrepreneurs for the production of certified seeds | 2 | Number | 250 |  | 160 |  | 280 | 300 |  |

**6.12.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.13 Agricultural Information Services**

**6.13.1 Recent Achievements:** In the last three years, nearly 21.07 lac copies of “Krishikotha”, 41,000 copies of “Samprosaronbarta”, 10.6 lac Leaflets, 7.00 lac Booklets, have been printed and distributed among the farmers and related stakeholders. In the same period 2730 number of agriculture related documentaries have been displayed by mobile cinema vans. Moreover, 970 Episodes of “Mati o Masush”, 1095 Episodes of “Banglar Krishi” has been telecasted through BTV. Both the national and regional stations of Bangladesh Betar, agriculture related programs were broadcasted 14 hours daily. Talk shows, 6200 in number, have been broadcasted on BTV in the last 3 years. Twenty-two films and 47 fillers have been made. Training for182 batches and workshop for 65 batches were arranged in the last 3 years. Besides agriculture information service plays a vital role on behalf of Ministry of agriculture to arrange national fruit fair, world food day and other National/International days related to agriculture. Krishi radio at Amtali upazilla under Barguna district, 52 agro-based E-book, Krishi call center (16123), 499 number of AICCs were established/launched in the given period.

**6.13.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trainees | 1 | Number(in thousands) | 2.20 |  | 2.30 |  | 2.40 | 2.50 |  |
| Poster | 220 |  | 225 |  | 230 | 235 |  |
| Booklet | 100 |  | 105 |  | 110 | 115 |  |
| Leaflet | 80 |  | 85 |  | 90 | 95 |  |
| Krishikotha published | 650 |  | 700 |  | 750 | 800 |  |
| Extension barta published | 14 |  | 15 |  | 16 | 17 |  |
| Agriculture dairy | 12 |  | 12 |  | 15 | 16 |  |
| 1. Providing of E-agriculture based information services
 |  | 1 | Number |  |  |  |  |  |  |  |
| Benefited from AICC | 1580000 |  | 1600000 |  | 1680000 | 1700000 |  |
| Films/filler documentary made | 12 |  | 12 |  | 15 | 15 |  |
| TV, radio, advertisement  | 12 |  | 12 |  | 15 | 15 |  |
| Cinema show | 120 |  | 125 |  | 230 | 235 |  |
| Online Argil. Technology transferred | 1500 |  | 1550 |  | 1600 | 1650 |  |
| Agriculture information service at fingers touch (online kiosk) | 4 |  | 4 |  | 4 | 4 |  |
| E-book | 25 |  | 26 |  | 30 | 30 |  |
| Mati O Manush programme broadcasted | 330 |  | 330 |  | 330 | 330 |  |
| Talk show | 60 |  | 65 |  | 70 | 75 |  |
| 1. Increasing awareness about food value and nutrition through publications, meetings and workshops
 | Film Filler | 1 | Number | 6 |  | 8 |  | 15 | 15 |  |
| Video footage | 6 |  | 8 |  | 10 | 12 |  |
| Poster | Number(in thousands) | 70 |  | 75 |  | 80 | 85 |  |
| Booklet | 40 |  | 45 |  | 50 | 55 |  |
| Leaflet | 40 |  | 45 |  | 50 | 55 |  |
| Cinema show | Number | 960 |  | 970 |  | 970 | 980 |  |
| 1. Popularizing the use of organic fertilizer, green fertilizer and microbe fertilizer among the farmers
 | Documentary prepared | 3 | Number | 6 |  | 7 |  | 8 | 9 |  |
| Fillers prepared | 6 |  | 7 |  | 8 | 9 |  |

\* No projection in the future years has shown because a project regarding this activity has completed.

**6.13.3 Medium Term Expenditure Estimates by Institutional Unit, Schemes and Projects**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.14 Department of Agricultural Marketing**

**6.14.1 Recent Achievements:** Over the last three years (2015-16 to 2017-18), collection & dissemination activities of market information through the website of Department of Agricultural Marketing (DAM) has been extended to 64 District offices and 4 Upazilla offices. 21 Wholesale Markets, 60 Growers markets and 1 Central Market at Gabtoli, Dhaka with all kinds of modern amenities including 1 truck and 7 Cool vans have been launched to ensure fair prices of agro-produces. To promote marketing & value addition activities of agro-produces five Office Cum training centres have been constructed at Comilla, Narsingdi, Rangpur, Khulna & Chuadanga respectively. Under different projects, 18 Assemble centres have also been constructed in some selected districts. A total of 1730 Farmers Marketing Groups (FMGs) have been formed and motivational tours have been arranged for 3800 farmers. A total of 50,801 farmers have been provided trainining on processing, marketing, value addition activities etc. Under the Crops Storage Credit expansion program 21,130 metric ton crops have been stored in 81 store houses in 27 districts. An approximately 2563 lac taka loan has been disbursed among the stakeholders against the stored crops. Moreover, loan of tk 258.89 crore has also been disbursed to 33,432 entrepreneurs under Bangladesh Agri-Business Development Project (BADP). To store potato at a cheaper rate at household level 40 potato storage have been constructed. In addition to those 30 Zero Energy Cool Chambers have also been constructed in four districts of Sylhet division. Moreover 10 electronic display boards have been installed in 5 districts including Dhaka for online prize monitoring.

**6.14.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Publicity and preservation of information on agricultural marketing and development
 | Publish market price in Website | 4 | Number | 20000 |  | 20000 |  | 20000 | 20000 |  |
| Publish Bulletin | 4000 |  | 4000 |  | 4000 | 4000 |  |
| Published Report | 300 |  | 300 |  | 300 | 300 |  |
| 1. Development and maintenance of market infrastructure and provide other supports
 | Construction of Assembling Centre | 4 | Number | 0 |  | 2 |  | 2 | 2 |  |
| Stored crops in crop storage  | 3500 |  | 3600 |  | 3800 | 4000 |  |
| Formation of farmers group | 100 |  | 200 |  | 250 | 300 |  |
| Motivational tour | 500 |  | 100 |  | 600 | 650 |  |
| Farmer trainees | Number (in thousands) | 1.75 |  | 3.00 |  | 5.00 | 7.00 |  |
| Loan provided against storage crops | Taka(in lakh) | 260 |  | 280 |  | 290 | 300 |  |
| 1. Providing technological support and technical assistance to agricultural entrepreneurs and encouragingtheir investment in agro-processing and agro-business
 | Agri-business entrepreneurship created (male & female) | 4 | Number (person) | 600 |  | 1000 |  | 1500 | 2000 |  |
| Establish training cum agro-processing center | Number | 300 |  | 500 |  | 600 | 700 |  |

**6.14.3 Institutional Unit, Programs and Projects Wise Medium Term Estimated Expenditure**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.15 Soil Resource Development Institute**

**6.15.1 Recent Achievements:** In the last 3 years (From 2015-16 to 2017-18), a total of 95 ‘Upazila Land and Soil Utilization Guide’ have been updated, printed and distributed in the respective upazilas. About 71,500 soil, water and plant samples have been analyzed and 67,250 fertilizer recommendation cards have been distributed among the farmers through static and mobile soil testing laboratories. 30,500 farmers have been trained on ‘Soil Sample Collection Technique’ and ‘Soil Test Base Balanced Fertilizers Use’. 500 agriculture officers; 1,700 sub-assistant agricultural officers have been trained on ‘Use of Land and Soil Utilization Guide’. 10,700 fertilizer samples have been analyzed to identify adulterated fertilizers. Six Hundred of agricultural extension workers, fertilizer dealers and public representatives were provided training on ‘Identification of adulterated fertilizer’ in field level. 380 nos. of ‘Union Land, Soil and Fertilizer Recommendation Guide’; 23,000 booklets on ‘Soil Sample Collection Technique’ and 12,500 booklets on ‘Adulterated Fertilizer Identification Methods’ have been printed and distributed. SRDI introduced ‘Offline Digital Fertilizer Recommendation System’ simultaneously with ‘Online Fertilizer Recommendation System’ launched throughout the country.

**6.15.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Provide e-agriculture information service
 | Online services received | 1 | Number (person) | 12500 |  | 13000 |  | 13500 | 13500 |  |
| 1. Identification of soil and land resources through soil survey and classification of land and soil resources in terms of their productivity
 | Field survey | 3 | Number | 50 |  | 50 |  | 40 | 40 |  |
| Upazilla directories printed | 50 |  | 50 |  | 40 | 40 |  |
| Union wise land, soil and fertilizer recommendations materials published | 130 |  | 130 |  | 150 | 150 |  |
| 1. Extension of soil test facilities to Upazila and

Union level | Soil samples analyzed | 3 | Number (Thousands) | 18.50 |  | 19 |  | 19.5 | 19.5 |  |
| Farmer’s soil sample analyze and fertilizer recommendation card distributed in MSTL | Number | 5600 |  | 5600 |  | 5600 | 5600 |  |
| Fertilizer recommendation card printed and distributed  | 17500 |  | 18000 |  | 18500 | 18500 |  |
|  Fertilizer sample analyze | 4000 |  | 4000 |  | 4200 | 4200 |  |
| 1. Popularize among the farmers the use of organic fertilizer, green fertilizer and microbe fertilizer
 | Farmers training | 3 | Number | 12000 |  | 12000 |  | 12000 | 12000 |  |
| Exhibition of innovated technologies on soil and fertilizer set  | 42 |  | 42 |  | 42 | 42 |  |
| Farmers meeting/ field day | 42 |  | 42 |  | 42 | 42 |  |
| 1. Popularizing sustainable soil management technologies among the farmers
 | Soil preservation and water diversification management technology  | 3 | Number | 5 |  | 5 |  | 5 | 5 |  |

**6.15.3 Institutional Unit, Programs and Projects Wise Medium Term Estimated Expenditure**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.16 Bangladesh Institute of Research and Training on Applied Nutrition**

**6.16.1 Recent Achievements:** A total no. of 17029 District/Upazila Level GO & NGO Officials, Sub-Assistant Agriculture Officers (SAAO), Field Workers of Women & Children Affairs, School Teachers, Social Workers, UP members, Imam/ Other Religious Leaders & the Farmers were trained on Food Based Nutrition (Applied Nutrition) during the last 3 years (2015-16 to 2017-18). Seventy Two Radio Short Stories were broadcasted in order to increase awareness among the mass people. Twenty-six Agricultural fairs, World Food Day and Nutrition week were observed. Beside this, a total nos. of 26 campaign/ workshops (Day long) were organized on the Nutritional activities. A total nos. of 1400 Upazila Agriculture Officers, Agriculture Extension Officer, School/College Teachers, Sub-Assistant Agriculture Officers, Local Leaders, Imam & NGO Representatives and students of Girls' High School were participated in these workshops.

**6.16.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increasing awareness about food value and nutrition through training publications, meetings and workshops
 | Number of trained persons | 1 | Number | 15000 |  | 26760 |  | 32100 | 32100 |  |
| Workshops | 40 |  | 50 |  | 60 | 60 |  |
| Short stories transmit through Radio | 55 |  | 75 |  | 75 | 80 |  |
| Participation in fair | 15 |  | 20 |  | 20 | 24 |  |

**6.16.3 Institutional Unit, Programs and Projects Wise Medium Term Estimated Expenditure**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.17 National Agricultural Training Academy (NATA)**

**6.17.1 Recent Achievements:** In 2015-16, NATA organized 8 training courses for 450 officers in 15 batches (8 technical and 7 management aspect), three seminar/workshops and implemented seven field demonstrations. NATA hosted two batches (N-60th and N-61st) of six months long foundation training course of nine cadre’s officers comprising 72 participants as an extended programme of the BPATC. In 2016-17, NATA trained 764 officers (NATA funded 18 batches of 532 officers and sponsored 9 batches of 232 officers), arranged three seminar/workshops and established seven demonstrations. In the year 2017-18, NATA arranged training programme of 725 officers in 25 batches and organized 3 seminar/workshops. NATA also completed training courses for 23 scientists in one batch and 580 1st class Officers in 23 batches successfully as sponsored program.

**6.17.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Increase the use of innovated varieties and technologies by farmers through, training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Trainees | 1 | Number | 690 |  | 750 |  | 810 | 840 |  |
| Exhibitions | 3 |  | 3 |  | 2 | 2 |  |

**6.17.3 Institutional Unit, Programs and Projects Wise Medium Term Estimated Expenditure**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |

**6.18 Bangladesh Wheat and Maize Research Institute**

**6.18.1 Recent Achievements:** The Bangladesh Wheat and Maize Research Institute was established by enactment of the "Bangladesh Wheat and Maize Research Institute Act’ 2017" on November 13, 2017 which was notified by Gazette on 22 November 2017. Prior to this, the related activities were conducted from the wheat research center and maize section under Bangladesh Agricultural Research Institute. In the last three financial year (2015-2016 to 2017-18), three disease tolerant and heat tolerant wheat varieties and 4 high yielding varieties of maize were invented and released by the then wheat research centre, maize section and newly created Institute. A total of 9809 germplasms of wheat and maize have been collected and evaluated from own arrangement and CIMMYT. Apart from this, six technologies have been developed on soil and fertilizer management, pest and insect management, new crop formulations for crop intensification. In the last three years, 9403 persons including scientists, extension and NGO activists and farmers were trained. Apart from this, a total of 4340 persons have been informed about new technologies through 52 seminars/workshops/field days. To disseminate invented technology, 7 publications and 3360 exhibition blocks have been set up. A total of 312 metric tons of breeder and truthfully labeled seeds of wheat and maize were distributed among farmers, government, NGOs and individual entrepreneurs. Among them, 300 metric tons of seeds were adaptive to adverse climatic condition. A total of 15 TV programs related to wheat and maize varieties and technology have been aired in last three years. Besides, a bilateral agreement has been signed with private organization for producing and promoting hybrid maize seeds.

**6.18.2 Activities, Output Indicators and Targets**

| **Activities** | **Output Indicator** | **Related Strategic Objectives** | **Unit** | **Revised Target** | **Actual** | **Target** | **Revised Target** | **Medium Term Targets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1. Innovation of high yielding varieties of wheat and maize, and technologies
 | Innovated varieties | 1 | Number | 2 |  | 2 |  | 2 | 2 |  |
| Innovated technologies | 3 |  | 3 |  | 3 | 3 |  |
| 1. Increase the use of innovated varieties and technologies by farmers through training, publications and exhibitions-fairs-rallies-seminars-workshops
 | Training provided | 1 | Batch(Number) | 70 |  | 70 |  | 70 | 75 |  |
| Person(in thousands) | 3.0 |  | 3.0 |  | 3.0 | 3.5 |  |
| 1. Providing e-agriculture information service
 | Benefited farmer | 1 | Persons in Thousands | 0.08 |  | 0.10 |  | 0.10 | 0.15 |  |
| 1. Production, certification and distribution of breeder, foundation, certified and truthfully level seeds
 | Breeder and truthfully labeled seeds Produced and distributed | 2 | Metric ton(in thousands) | 0.103 |  | 0.103 |  | 0.103 | 0.105 |  |
| 1. Production and distribution of breeder, foundation, certified and truthfully seeds of rice, wheat and other crops tolerant to salinity, drought and water submergence and other adverse conditions
 |  Produuced breeder and truthfully labelled seeds | 2 | M.T in thousand  | 0.09 |  | 0.09 |  | 0.09 | 0.09 |  |
| 1. Meetings, seminars, fairs and technology exchange to encouraging the participation of the private sector in production and development of seeds
 | Memorandum of Understanding signed with private enterpreneurs  | 2 | Number | 1 |  | 1 |  | 1 | 1 |  |

**6.18.3 Institutional Unit, Programs and Projects Wise Medium Term Estimated Expenditure**

(Taka in Thousands)

| **Name of the Institutional Unit/Scheme/ Project** | **Related Activity** | **Actual****2018-19** | **Budget** | **Revised** | **Medium Term Expenditure Estimates** |
| --- | --- | --- | --- | --- | --- |
| **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|  |  |  |  |  |  |  |  |